

A Visionary Extraordinaire

Dr R S Paroda



75th *Birthday*



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Dr R S Paroda



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Printed at:

Malhotra Printing House
B-6, DSIDC Complex, Kirti Nagar - 110015, New Delhi
Tel.: 011-41420246, E-mail: vinay.malhotra@gmail.com, mprin2017@gmail.com

Preface

 On August 28, 2017, Dr Rajendra Singh Paroda, Chairman, Trust for Advancement of Agricultural Sciences (TAAS) and President, Indian Society of Plant Genetic Resources (ISPGR) completes 75 years of age. This book is a compilation of messages, memories and wishes from a few friends, colleagues and relatives of Dr Paroda, to commemorate this milestone day. We had started this project as a small token of love and affection for Dr Paroda, to mark the day. By the time it was completed, we realized that it had turned out to be an excellent collation of historical account of agricultural research, education and extension development at national, regional and global level, where Dr Paroda has been associated in his long and illustrious career. It has woven together the poetry of his life, its peaks and valleys, triumph and losses, blessings and hardships. Importantly, it brings out the enormous wealth of love and affection that he has garnered in his journey of life, by relating to a multitude of people from varied backgrounds.

We are overwhelmed at the tremendous response received from over 200 contributors to this book. To each one, we place on record, our sincere gratitude. The opening remarks are by Prof. M.S. Swaminathan, followed by messages placed in alphabetical order of the first name of contributor. While some editing has been done for sake of brevity or language, the onus of the text lies with each contributor. Also, due to the paucity of time, we refrained from copyediting very critically! A few authors have contributed multiple photographs to reminisce their association with Dr Paroda, all of which could not be accommodated in the book. We thank you all for the efforts, and request indulgence of the contributors for any lacuna in editing. It is also pertinent to say that the book is not an exhaustive compilation of the near and dear ones of Dr Paroda. He has touched lives of so many people, and due to the space constraint, only a small cross section were approached. The others, are no less important.

A few people who have directly or indirectly helped in this unique compilation need to be specially thanked. These include Dr N.N. Singh, Secretary, TAAS, Ms Simmi Dogra, Assistant TAAS, Mr Abhay Sharma, Photographer, ICAR-NBPGR, and Ms Renu, Project Assistant, ICAR-NBPGR. Assistance provided by Mr Sunil Bhardwaj and Arup Das (ISPGR), is appreciated. The ISPGR and TAAS are gratefully acknowledged for support in compilation and publication of this volume.

We extend our warmest and heartfelt thanks to the family of Dr Paroda for their very kind cooperation and support. Dr (Mrs) Shashi Paroda, wife of Dr Paroda, who has been the proverbial pillar of support, needs a special mention for the tremendous love and hard work in digging out memories. We thank all the children (Anju, Sonal and Prashant), their spouses (Victor and Shipra) for sharing their memoirs and all the grand children (Vikrant, Nishi, Mohak, Yashi, Ariana and Amaira) for the joy they brought in the lives of parents and grandparents.

Finally, we thank and salute the star of this book - Dr R.S. Paroda. Sir, thank you for being you. We wish you the very best on your 75th birthday. It was our endeavour to present you with an unforgettable gift, as a small token of appreciation for all that you have achieved in your blessed life. We hope this compilation about you and your achievements would be a source of inspiration for generations to come!

Editors

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Introduction

There is a famous quotation by a former US President -"Men make history and not the other way around. In periods where there is no leadership, society stands still. Progress occurs when courageous, skillful leaders seize the opportunity to change things for the better".

This in essence describes succinctly the personality of Padma Bhushan Dr Rajendra Singh Paroda - a visionary leader, agricultural research scientist, architect of several research institutions, policy advisor, educator, networker and above all, a very humble human being. Presently, he is Chairman, Trust for Advancement of Agricultural Science (TAAS) at New Delhi, which has the goal to link science with society.

Born on August 28, 1942 at Ajmer, Rajasthan, he is the eldest of the five siblings of his parents, late Shri Ram Karan Singh and late Smt Indira Devi. He obtained his school education in village Saradhna and in Government High School, Ajmer. Then he pursued B.Sc. (Ag.) from DAV College, Ajmer. Later, he moved to Udaipur to get his Master's degree in Genetics and Plant Breeding in 1964. For his Ph.D., he got selected at the prestigious Indian Agricultural Research Institute (IARI), where he worked under the able guidance of late Dr A.B. Joshi, on genetic architecture of wheat. After obtaining his doctorate degree in 1968, he went to University of Wales, Aberystwyth, U.K. on a Commonwealth Post-doctoral Fellowship (1968-70). One day while he was working in the glass house, a Gardner, who used to water his plants, commented, "If persons of your calibre will move out of India, how will your country progress in agriculture?". This he took very seriously and decided to return and work for his country, despite good job offers that he had. Indeed, Dr Paroda did serve India with great class and finesse!

Dr Paroda ably spearheaded and modernized the national agricultural research system (NARS) in the country as Director General, Indian Council of Agricultural Research (ICAR) and Secretary, Department of Agricultural Research and Education (DARE), Government of India during the period 1994-2001. During his leadership of ICAR, more than 30 new institutions were created in different sectors of agriculture like crops, horticulture, livestock, natural resource management, fishery, agricultural engineering and social science. The prestigious National Agriculture Technology Project (NATP) of the World Bank was conceived and developed by him to reorient agricultural research, education and extension system to meet new challenges. Dr Paroda is well known for initiating and strengthening many visionary programs at the national level like: i) special hybrid research program leading to new hybrids of rice, single cross maize, *rabi* sorghum, pigeonpea and castor, ii) special food grain production program leading to an increase in the national food grain production

by five million tons annually, iii) initiation of new seed policy to promote public-private partnership, iv) drafting for enactment of Protection of Plant Varieties and Farmers' Rights Act, and vii) promotion of biotechnology, including Bt cotton, tissue culture in banana, sugarcane, potato and citrus, and promotion of IPM through official procedure of release of biopesticides.

He has the unique distinction of being the main architect of one of the world's largest and most modern National Gene Bank, second largest in the world today, which houses invaluable germplasm of different crop plants numbering more than 420,000 accessions. The most impressive state-of-the-art National Agricultural Science Centre (NASC) Complex, located at Pusa Campus, was built mainly due to his vision, initiative and dedication. He has made significant research contributions in the field of plant breeding and genetic resource management, as evident from release of 10 improved crop varieties at the national level, 250 research papers in journals of repute, 10 books and more than 25 proceedings of national/international conferences/expert consultations held in different parts of Asia-Pacific, Europe and Latin America.

International Crop Research Institute for Semi-Arid Tropics (ICRISAT), Patancheru and Agriculture Research Institute of Kazakhstan have named their Gene Banks after Dr Paroda in recognition of his notable contributions in the field of genetic resource management. In fact, he is often called a "Genebank Guru" by his friends and admirers!

Dr Paroda has received several national/international awards and recognitions, including the most prestigious PADMA BHUSHAN in 1998. Other awards conferred on him are: Rafi Ahmed Kidwai Memorial Prize (1982-83), ICAR Team Research Award (1983-84), FICCI Award (1988), Om Prakash Bhasin Award (1992), Asia-Pacific Seed Association Special Award (1995), CGIAR Award for Outstanding Partnership (2000), Life Time Award by Association of Agricultural Scientists in America (2001), Dr Harbhajan Singh Memorial Award (2001), Dr B.P. Pal Memorial Award (2003), Borlaug Award (2006), ISCA Gold Medal for Excellence in Science (2006), Gold Medals from Ministry of Agriculture of Armenia (2006) and Vietnam (2012), Life Time Achievement Award of 'Agriculture Today' (2008), Dr A.B. Joshi Memorial Award (2012), Prof. Kanniyar Memorial Award (2012), and Krishi Shiromani Samman by Mahindra and Mahindra Ltd. (2013).

He has been conferred Fellowship of several National Science Academies like, Indian National Science Academy (INSA), National Academy of Agricultural Sciences (NAAS), National Academy of Sciences, India (NASI) and was elected as General President of the prestigious Indian Science Congress in 2000-2001. Among international recognitions, he was elected as Fellow of Agricultural Academies of Russia, Georgia, Armenia, Tajikistan and the Third World Academy of Sciences (TWAS). He had also been the President of more than a dozen Agricultural Scientific Societies. Both American Society of Agronomy and the Crop Science Society of America had conferred their prestigious 'Honorary Membership' on Dr Paroda in 2001.

Dr Paroda has been conferred honorary D.Sc. by 15 academic institutions including Ohio State University, Indian Agricultural Research Institute, Scientific Council of Agricultural Academy, Republic of Azerbaijan and State Agricultural Universities at Pantnagar, Kanpur, Jorhat, Coimbatore, Hyderabad, Udaipur, Srinagar, Meerut, Bhubneshwar, Ludhiana, Dharwad and BHU, Varanasi.

Dr Paroda has been acknowledged internationally for his scientific leadership. He has served as founder President of Global Forum on Agricultural Research (GFAR) from 1988-2001. He also served for more than two decades as Executive Secretary of Asia-Pacific Association of Agricultural Research Institutions (APAARI), a well known regional forum, fostered by him for long, to strengthen regional research collaboration. He had served as Chairman (the only Indian so far) as well as Vice-Chairman of ICRISAT Governing Board, member of Board of Trustees of IRRI, member of WMO High Level Task Force on Climate Services, member of Advisory Council of Australian Center for International Agricultural Research (ACIAR), member of Finance Committee of CGIAR, a member of the Governing Board of the Commonwealth Agriculture Bureau International (CABI) and currently, he has been made a member of Strategic Impact, Monitoring and Evaluation Committee (SIMEC), an Apex Committee of CGIAR.

Till recently, Dr Paroda worked for the overall benefit of farmers as Chairman, Farmers Commission of Haryana, Chairman of Working Group on Agriculture and member of Rajasthan Planning Board. He was mainly responsible for the drafting and release of State Agriculture Policies both in Haryana and Rajasthan.

He had the foresight to bring together diverse range of leaders, thinkers and scientists to promote dialogue and strengthen partnership amongst stakeholders in agricultural research. He has organized in the capacity of either Chairman of Organizing Committee or Organizing Secretary of a number of symposia, conferences and seminars, to promote the cause of science nationally, regionally and globally. He successfully organized the 2nd International Crop Science Congress in New Delhi in November, 1996. He presided the 88th session of the Indian Science Congress (2001) as its President, wherein the then Prime Minister, Shri Atal Bihari Vajpayee, announced a Vision Statement on Food, Nutrition and Environmental Security. This resulted in the establishment of Trust for Advancement of Agricultural Science (TAAS), of which he is the Founder Chairman. He has been championing the cause of women in agriculture, as evident from the First Global Conference on Women in Agriculture (GCWA), organized by him in 2012, in New Delhi. The GCWA was graced by the then President of India Mrs Pratibha Patil. Last year in November 2016, he spearheaded the organization of a very successfully '1st International Agrobiodiversity Congress' (IAC 2016) in New Delhi, which was inaugurated by Hon'ble Shri Narendra Modi, Prime Minister of India. The 'Delhi Declaration on Agrobiodiversity Management', an outcome of IAC 2016, is being used now for defining a road map for future management of agrobiodiversity. At global level, under his chairmanship of the program organizing committee, the 2nd Global Conference on Agricultural Research for Development (GCARD 2) was held in Punta del Este in Uruguay leading to the endorsement of GCARD Road Map.

He has also been actively involved in establishing links and partnerships amongst agricultural institutions at state, national, regional and international levels. At regional level, in his capacity as Executive Secretary of APAARI, he had conceptualised and organised more than 25 regional expert consultations on highly thematic issues in different parts of Asia Pacific.

Behind every successful man, stands a very supportive family. So is the case with Dr Paroda! He is lucky to have his graceful wife Shashi Paroda as a proverbial pillar of strength all through, along with very lovely children: daughters Anju and Sonal and son Prashant.

All his colleagues, friends, well-wishers and family members join together in wishing a very happy 75th birthday to Dr R.S. Paroda. May he have a long, healthy and prosperous life and continue to remain a torch bearer for achieving highly sustainable 'Evergreen Revolution' in India and continue serving the global farming community with human face.

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I am extremely happy to place on record my words of appreciation to the monumental contributions of Dr R.S. Paroda to agricultural science, education, extension, and above all, national and global development of agriculture. I had the privilege of knowing him from his student days at the Indian Agricultural Research Institute (IARI). Even at that time, it was clear that Raj was a scholar of unusual ability, creativity and great promise. His Ph.D. thesis in the broad area of plant breeding and genetics was one of the best submitted to IARI PG School. Not only the early promise blossomed into outstanding achievements during his later life, he has made enormous contributions to national and global agricultural science by occupying many important positions in India and abroad.

While Dr Paroda's contributions to science and society are many and varied, I would like to draw attention to two of his unforgettable creations. First, is the excellent, world-famous National Gene Bank (NGB) he built at Pusa, New Delhi, under the auspices of ICAR. The NGB has now become custodian of very valuable germplasm. Secondly, he has helped to establish the very valued National Agricultural Science Centre (NASC) Complex, which has now become a mini-universe in agriculture. The NASC complex is the home of major national and international scientific institutes, particularly of CGIAR. It also provides the home for the National Academy of Agriculture Sciences (NAAS).

As Director General of the Indian Council of Agricultural Research (ICAR), he introduced many new programmes and an innovative National Agriculture Technology Project (NATP) during 1994-2001. He served FAO, Rome and Bangkok with great dedication. He has served as Chairman of the Global Forum on Agricultural Research (GFAR). He also served as the General President of the Indian Science Congress in 2001 and as the President of the National Academy of Agricultural Sciences (NAAS) from 1997 to 2000.

He is also well-known for his organizational abilities. When he was with the FAO, he organized the Asia Pacific Association for Agricultural Research Institutes (APAARI), a creation which he nurtured for 22 years as its Executive Secretary. After retirement, Dr Paroda established the Trust for Advancement of Agricultural Sciences

(TAAS), where is he currently serving as the Founder Chairman. The TAAS has been doing very valuable work, organizing discussions, and is also famous for prompt publication of proceedings of the meetings organised by Dr Paroda. The publications of TAAS are sought the world over.

Dr Paroda has made enormous contributions to genetic resources conservation and sustainable and equitable use. He saved precious genetic resources in the Middle East and the former Soviet Union and helped them to establish gene banks. No wonder, that the Gene Banks of the International Crops Research Institute for Semi-Arid Tropics (ICRISAT) and of the agriculture research institute in Kazakhstan have been named after him.

Dr Paroda's works have been widely acclaimed as national and international importance. He has been awarded Padma Bhushan in 1998. He has been the Fellow of many Academies. Dr Paroda takes pride in performance but at the same time he is very modest. The monumental contributions he has made will always remain among the brightest period in the evolution of agriculture research and education in our country. Even today, he continues to contribute through discussion, publications, demonstration and above all through ideas for the welfare of the country.

On the occasion of his 75th birthday, I pray for his long and happy life, so that he can continue to guide the growth and evolution of national and global research and food security systems, as well as public policies which will ensure the well-being of our farm and tribal families. I also wish to pay my tribute and thanks to Mrs Shashi Paroda, his wife, who is herself an outstanding agricultural scientist. She has given him full support and enabled him to accomplish what he has. Similarly, Dr Paroda's children have been pillars of support, strength and enthusiasm for his work. I salute the wonderful family and wish them a long life together.

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Respected Dr R.S. Paroda's contribution to the agricultural research for development has been so wide and impactful that it is very difficult to associate him with any one discipline of agricultural sciences.

In the field of agricultural extension, he has been one who strengthened Krishi Vigyan Kendras and gave a new mandate. ICAR constituted a High-Power Committee on Management of KVKs headed by him which emphasized a number of changes viz. a new vision, mission, and mandate of "Technology Assessment and Demonstration for its application and capacity development" which was adopted by ICAR.

One of the major contributions made by Dr Paroda was to initiate new programmes to bring science to the society viz. Institution Village Linkage Programme in the year 1995-96 and Innovations in Technology Dissemination under NATP with three segments of Agricultural Technology Information Centre on single window concept, Re-mandating 53 Zonal Research Stations to function as KVKs and strengthening of Directorate of Extension and Zonal Coordination Units.

The contributions of Dr Paroda in the field of agricultural extension became even more evident after relinquishing the Government services in the capacity of President, TAAS; Chairman, Haryana Farmers' Commission, contribution through APAARI and GFAR. His recent contribution in association with the Extension Division of ICAR was immensely meaningful when he organized a National Dialogue on 'Innovative Extension Systems for Farmers Empowerment and Welfare' during 17-19 December 2015. The output of the dialogue explored the need for a new extension system and enabling institutional mechanism. Dr Paroda broadened the horizons of ICAR by establishing National Research Centre for Women in Agriculture at Bhubaneswar and holding First Global Conference on Women in Agriculture in New Delhi in the year 2012. We, the fraternity of the scientists and officials working in the field of agricultural extension are indebted to Dr Paroda for his contributions for facilitating in bringing science to the society; integrating research, education and extension system; and strengthening KVKs in the country.

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I deem it to be a rare honour to share some of the memorable moments that I spent with Dr R.S. Paroda, Former Director General, Indian Council of Agricultural Research (ICAR) & Secretary, Department of Agricultural Research and Education (DARE), Government of India. In fact, to meet and work with a charismatic personality like Dr R.S. Paroda has not been a mere coincidence but a life time experience for me.

Being a part of the National Agricultural Research and Education System and also being the Director and Vice-Chancellor of ICAR – National Dairy Research Institute (NDRI) Karnal, I had several opportunities to interact closely with Dr Paroda. He is not only a doyen of knowledge in Agricultural Sciences and astute research administrator but also an equally compassionate and accomplished human being. When he became the Chairman of Haryana Kisan Aayog, he convened the first meeting of Aayog for “The development of Livestock Sector in Haryana” at NDRI, Karnal. On that occasion, for the first time I had an opportunity to understand his vision on livestock sector. As Chairman, Haryana Kisan Aayog, he took a number of initiatives for the benefit of farmers of Haryana such as strengthening the farmers’ clubs and developing them as knowledge centers.

As a trustee of TAAS, being headed by Dr Paroda, I have always learned from him. He always discusses the burning issue of Agricultural System. I have found that he has a solution to every problem and is a great motivator for the youngsters. He also provided me with an opportunity to present a lecture during APAARI conference in Islamabad. I was very closely associated with him in steering the farmer welfare related activities of NDRI through organisation of Kisan Divas and Melas. The organisation of 12th Agricultural Science Congress on ‘Sustainable Livelihood Security for Small Holder Farmers’ at ICAR-NDRI, Karnal in February 2015 was a herculean task, which I could very ably manage only under the esteemed guidance of Dr Paroda. He also mentored ICAR-NDRI whole-heartedly through his innovative ideas and much valued counselling through his active participation in many of its important events such as National Symposium on “Climate Change and Livestock Productivity” (October 7-8, 2010) and Conference on “National Priorities in Agricultural Statistics and Informatics” (November 27-28, 2013).

I was so inspired by his personality and knowledge that my very first meeting with him made me follow his work and way of working very closely. He has immensely contributed to the development and strengthening of national agricultural research system (NARS) in India. The monumental infrastructure that he has given in the form of NASC complex would be cherished and remembered for the decades to come. Several awards and distinctions like Rafi Ahmad Kidwai Prize, ICAR Team Research Award, FICCI Award, Om Prakash Bhasin Award, B P Pal Gold Medal, Borlaug Award, Mahendra Shiromani Award and the prestigious Padma Bhushan awarded by the Government of India, speak volumes about his passion, zeal and his laudable contributions to Indian Agriculture. He continues to remain active with his current assignments as Chairman of the Trust for Advancement of Agricultural Sciences (TAAS) and President of the Indian Society of Plant Genetic Resources (ISPGR), New Delhi, India. He is a great visionary. I have found him dwelling on the future agricultural challenges that people in India and across the globe are likely to face in the coming decades. In recognition of his immense contributions and expertise, he was conferred Dr D Sundaresan Memorial Oration Award by ICAR-NDRI on 10 February 2012. On this occasion, he sensitised the NDRI faculty and the students on 'Emerging Challenges of Indian Agriculture'. The equanimity and exuberance with which he is working and contributing to the growth and development of Indian agriculture, is exemplary and worth emulating. I wish him many more years of continued success and active service to the nation.

A N Mukhopadhyay

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Consider it a great privilege and honour to write about a remarkable person like Padmabhusan Dr Rajendra Singh Paroda whom I have known for decades. Dr Paroda's scientific leadership as Director NBPGR, Dy Director General I.C.A.R and finally as Director General and Secretary DARE will be remembered for all the time to come. His vision and efforts to develop NASC speaks volume of his foresightedness to boost agriculture research infrastructure and facilities in the country.

During his tenure as Director General I.C.A.R, the Agriculture Universities and Institutes received significant boost which helped these universities and institutes to maintain international standard. Dr Paroda's actions spoke louder than words. He always had a deeprooted concern for human resource development and promoting young scientific leaders.



Dr Paroda during his visit to Assam Agricultural University in 1997 alongwith Governor of Assam and Vice Chancellor Prof. A.N. Mukhopadhyay

Numerous national and international awards and honours were conferred on him for his outstanding contribution to develop and promote Indian agriculture. Dr Paroda will be remembered as the most dynamic and visionary Director General of I.C.A.R. May god bless Dr Paroda and his family with good health, happiness, peace, and prosperity for all the years to come.

A S Faroda

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I have a 59 years long close association with Dr Rajendra Singh Paroda, former Director General, Indian Council of Agricultural Research (ICAR) & Secretary, Department of Agricultural Research and Education (DARE), Government of India. My first introduction with Dr Paroda was in July 1958 when both of us joined B.Sc.(Ag.) at D.A.V. College, Ajmer. We studied together and completed B.Sc. (Ag.) from University of Rajasthan, Jaipur in April 1962. In July 1962, both of us took admission in M.Sc.(Ag.) at Rajasthan College of Agriculture, Udaipur. I did Masters in Agronomy while Dr Paroda did his in Plant Breeding and Genetics. After Masters, I joined service and Dr Paroda joined Ph.D. at Indian Agricultural Research Institute (IARI), New Delhi. After completing Ph.D. in 1968 from IARI, Dr Paroda went to United Kingdom (U.K.) for post-doctoral program. He returned to India after completing Post-Doctoral Program in 1970.

Dr Paroda started his service career as Forage Breeder at Chaudhary Charan Singh Haryana Agricultural University (then Haryana Agricultural University), Hisar. In December 1974, I also joined as Agronomist in the same University. At Hisar, we worked together for several years. Dr Paroda worked at Hisar as Professor and Head, Department of Plant Breeding and later as Additional Director of Research. Then he joined ICAR and reached the highest position of Director General, ICAR and Secretary, DARE from 1992 to 2001. While I joined ICAR as Director, Central Arid Zone Research Institute (CAZRI), Jodhpur and later held the positions of Vice-Chancellor, Maharana Pratap University of Agriculture and Technology and Chairman, Agricultural Scientists' Recruitment Board, New Delhi.

Dr Paroda is a genius. As an accomplished plant breeder and geneticist of international repute, he has made significant contributions to crop improvement and worked towards strengthening the National Agricultural Research System (NARS) in India as well as in Central Asian Countries and the Caucasus.

He has developed several varieties and hybrids of forage, grains and other crops. He has published hundreds of research papers in national and international journals of repute. He has also published many books, bulletins, etc.

Though, several volumes can be written on the achievements of Dr Paroda, I will restrict only to some of his very significant contributions made as Director General,



ICAR & Secretary, DARE. He has the unique distinction of being the main architect of one of the world's largest and most modern National Gene Bank in New Delhi. Under his directions as Director General, ICAR, & Secretary, DARE, the council attained new heights with massive expansion of infrastructure, formulation of long term priorities and programmes in the form of vision documents and management.

The National Agricultural Research Information System (ARIS) was an important infrastructural system that was conceptualised and established under his charge with the objective of increasing the productivity of the system and meeting the challenges of emerging trade regimes under the World Trade Organisation (WTO) dispensation. While implementing ARIS, Dr Paroda was instrumental in conceptualising and initiating a major World Bank funded National Agriculture Technology Project (NATP), a key component of which was the computerized networking research units and agricultural Universities across the country. Krishi Anusandhan Bhawan II and National Agricultural Science Center (NASC) are other major infrastructure development projects to his credit.

Another big achievement of Dr Paroda was the establishment of Agricultural Technology Information Centres (ATICs) in all the ICAR institutes and agricultural universities so that farmers could get the information and seeds, plants and products produced by these institutes under one roof. During his regime, many crops specific, species specific All India Coordinated Research Project Units, National Research Centres, Project Directorates and Institutes were established.

According to Dr Paroda, the road to success is never an easy one. He faced many obstacles but his attitude, dedication, zeal, enthusiasm, and commitment towards work kept him moving forward. He is always open to ideas and suggestions. He has always motivated young scientists to work as a team. The foundation stones for a successful life are honesty, character, integrity, faith, love, loyalty, good relationship and punctuality and Dr Paroda has all these qualities.



To me, a leader is the one who knows the way, goes the way and shows the way. Leadership is the capacity to translate the vision in to reality. Dr Paroda has all these qualities.

Dr Paroda has received numerous awards and recognitions like Rafi Ahmad Kidwai Prize, ICAR Team Research Award, FICC Award, Om Prakash Bhasin Award, B.P. Pal Gold Medal, Borlaug Award and the prestigious Padma Bhushan awarded by the Government of India.

Dr Paroda is fellow of almost all Agricultural Science Academies of India and some International Academies. He has been conferred with D.Sc. (Honoris causa) degree by several universities in India and abroad including Ohio State University, Columbus University. The International Crop Research Institute for Semi-Arid Tropics (ICRISAT), Hyderabad has named its Gene Bank as 'Rajendra S. Paroda Gene Bank'.

The new age scientists should imbibe the following from Dr Paroda:

- Self-confidence and self-motivation are the key to achieving goals.
- Not to choose an easy path always to reach the destination, sometimes go for a challenging path. It gives the power, strength, and experience to make you better.
- Work hard and not depend on luck.
- Treat every person as the most important person. You can learn something from everybody.
- The foundation stones for success are punctuality, honesty, character, good relationship and positive thinking.

At the age of 75 years, Dr Paroda is still very active and is associated with several organisations in India and abroad. I wish he 'keeps going' and 'keeps growing'.

In the end, I pray to Lord Almighty to grant a healthy, happy, productive and progressive long life to Dr Rajendra Singh Paroda so that he can continue to serve the people of the globe.

Adel El-Beltagy

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It is my pleasure to write and share some glimpses of interactions I had with Dr Raj Paroda. Both of us come from the Dry Areas - Egypt and Rajasthan and we have related to University of Wales, Aberystwyth, U.K. I met him while he was the Director General of the Indian Council of Agriculture Research (ICAR) and the Secretary of the Department of Agricultural Research Education (DARE). We were introduced by the late Dr Hamdi Eisa, who led the World Bank programs of India. At that time, I was heading the Agriculture Research system in Egypt and we were keen to enhance the cooperation with Indian institutions.



I have found Raj to be a pleasant and decisive person with great understanding for what Agriculture could offer for small farmers and the economies of developing countries. My first impression during that time was that he will contribute a lot nationally, regionally and internationally. His vision to link a national system through a networking platform has led him

to establish the Global Forum on Agriculture Research (GFAR). He worked continuously for two decades as Executive Secretary of Asia Pacific Association of Agricultural Research Institutions (APAARI) with numerous successful programs not only for Asia, but to extend the relationship between different members of GFAR globally.



As a friend and admirer of Indian Agriculture Research system for 40 years, I have appreciated the input of Raj in different agro-ecology regions of India building on the wonderful achievement of leaders before him. I attended the inauguration of the Indian Gene Bank which was established under his pioneership. On my frequent visits to India, I visited the Gene Bank several times and realised its value in conserving genetic resources of not only India but different agro-ecologies of Asia. He managed to link



the young research workers with the wisdom and experience of senior leaders and created a synergy with great impact.

As Chair of the Central Asia and Caucasus (CAC) of the Consultative Group for International Agriculture Research (CGIAR) program, I invited Raj to lead the (CAC) program which he very ably did from 2001 to 2007. During this period, we travelled together and visited the political and research leaders of different countries. I have witnessed



his high level of performance and dedication to connect the Research systems in CAC with global activities and institutions which resulted in the empowerment of the national systems. His keen interest to modernize and optimize performance of the whole system (R4D) is remarkable.

The great support which Raj has enjoyed from his wonderful wife and family was the



best blessing to enable him to endure many difficulties which pioneers face to implement visions and dreams for better future.

I treasure my friendship with Raj and wish him continued success in all future activities.



Alisher A Tashmatov

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Dr Raj Paroda is one of the international scientific leaders who have had tremendous organizational institutional contribution to the CAC regional agricultural research for development activities during his work as Head of the CGIAR Program for CAC and Regional Coordinator, ICARDA.

He was the initiator for the establishment, organizing and strengthening CACAARI, a similar Forum as that of APAARI. This was done to bring best practices of work for implementing in CAC region as APAARI has done for Asia-Pacific by catalyzing, coordinating and synergizing the role of AR4D process among the NARS of the region.

Thanks to the mechanisms and methods of work performed and adopted by Dr. Raj Paroda, now our regional Forum CACAARI is well known as a unique voluntary, membership-based, apolitical and multi-stakeholder organization in the Central Asia and South Caucasus region, that promotes and strengthens agri-food research and innovation systems through partnerships and collaboration, capacity development and advocacy for sustainable agricultural development in the CAC region. With deep honesty and warm memory, our colleagues note the fact that CACAARI organization was built under the direction of Dr Raj Paroda in 1999-2000 and we highly value and appreciate his invaluable contribution to this process from very beginning.

Also, as mainstream of the work was the Regional Program for Sustainable Agricultural Development in Central Asia and Caucasus, which was well organized and operated under his able leadership as a consortium of eight National Agricultural Research Organizations, eight Centers of the Consultative Group for International Agricultural Research (CGIAR consortium members) and three additional advanced research institutions (non-CGIAR consortium members).

In a short span, good results were accomplished in partnership with the CAC NARS in the areas of germplasm improvement, plant genetic resources, soil and water management, integrated feed and livestock production, capacity building and human resource development, who expressed appreciation to ICARDA for long-term cooperation and assistance in research for development of sustainable agriculture in countries of Central Asia and the Caucasus. Dr. Raj Paroda with high professionalism

and experience accelerated activities in the region and specially helped in building Genebanks in all eight countries in CAC region. Recognizing his unique efforts, one of the Genebank in Kazakhstan was named as Raj Paroda Genebank.

Babur, a descendent of famous Amir Timur (Great Tamerlane), was the founder of Mughal dynasty in India and a great emperor. The man who shook the earth in his times, his work as testimony in reflected through an Arab proverb: "If you want to know about us, examine our buildings."

In the same context, if you would like to know who Dr Raj Paroda is, please visit the NARS of the CAC region and hear for yourself what he had done to strengthen AR4D through his dedicated efforts and close partnership with NARS leaders. Also, you must look at the buildings which were built under his supervision. A perfect symbolic comparison for the evaluation of activities as he is specially known for creating the National Agriculture Science Complex (NASC) in New Delhi, a modern architectural wonder, a unique campus which houses complete AR4D infrastructure like scientific societies, Academy, conference halls, meeting rooms, educational training halls, auditoriums, offices for all CG Centers and an agricultural science museum. It also has a Guest House of 100 rooms and excellent space for outdoor events. This complex is known today to be the best example for modernization of NARS. We have dreamed to have such a unique complex in our Central Asian region, since it is a "Hidden Gem for Knowledge Dissemination". It must be visited by our young generation to acquire wealth of knowledge and information. This centre today is a dream for many NARS to have in their countries but unfortunately so difficult to be built, unless you have people like Raj Paroda as national leaders to execute.

Today, the level of success of the agricultural research in Asia-Pacific, especially the best of all in India, is mainly due to the dynamic leadership of Dr Raj Paroda, who tried to get new ideas and have them implemented in his country. For example, when he visited the famous museum of agricultural history in Egypt, he immediately decided to have an agricultural science museum created at the national Agricultural Science Centre (NASC) in New Delhi, which I consider to be one of the finest agricultural museums. He is known as a committed leader to do something significant for the future generations.

He is known to be an institute builder. In this context, his creation of the national Genebank at NBPGR, New Delhi is yet another major contribution for posterity.

Based on many such achievements, he is recognized globally for his sincerity of purpose and the hard work that too with human face. God may give him strength to continue his mission as Ambassador for promoting and supporting global AR4D.

On behalf of CACAARI, we wish Dr Raj Paroda good health, energy and long life, so that he continues his mission being a great visionary with ability to execute ideas with urgency and perfection, as we know him.

We wish him all the good luck and success for those tasks which are still planned but unfinished.

Amir Kassam

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Dr Rajendra S. Paroda: A Committed Agricultural Scientist and Administrator with a Vision and a Sharp Eye for Sustainability

Dr Paroda's many enduring accomplishments and contributions to agricultural science and development as well as to agricultural administration are well known in India and internationally. These include the modernization of the national agricultural research system during his term as the Director General of ICAR and Secretary, DARE, Government of India, when he was responsible for leading and facilitating the development of more than 30 institutions across several agricultural disciplines including staple crops, horticulture, livestock, fisheries, natural resources management, agricultural engineering and social sciences.

The prestigious National Agriculture Technology Project (NATP) of the World Bank was designed by Dr Paroda to reorient agricultural research, education and extension system to meet new challenges. Dr Paroda is well known for initiating and strengthening many visionary programs at the national level like: i) special hybrid research program leading to new hybrids of rice, single cross maize, *rabi* sorghum, pigeonpea and castor, ii) special food grain production program leading to an increase in the national food grain production by 5 million tons annually, iii) initiation of new seed policy to promote public-private partnership, iv) drafting for enactment of Protection of Plant Varieties and Farmers' Rights Act, and vii) promotion of biotechnology, including Bt cotton tissue culture in banana, sugarcane, potato and citrus, and promotion of IPM through official procedure of release of biopesticides.



Dr Paroda has the unique distinction of being the main architect of one of the world's largest and most modern National Gene Bank housing invaluable germplasm of different crop plants numbering more than 400,000

accessions. The impressive National Agricultural Science Centre (NASC) Complex, located at Pusa Campus, was built mainly at his initiative and direction. He has made significant research contributions in the field of plant breeding and genetic resource management, as evident from release of a number of improved crop varieties at the national level, his many research papers and books as well as several proceedings of national/international conferences/expert consultations held in different parts of Asia-Pacific, Europe and Latin America. International Crop Research Institute for Semi-Arid Tropics (ICRISAT), Patancheru. In fact, the Agriculture Research Institute of Kazakhstan have named their Gene Banks after Dr Paroda in recognition of his notable contributions in the field of genetic resource management.

For his many contributions and services to agricultural science, education, development and for his unfailing leadership and counsel, Dr Paroda has received several notable and prestigious national and international awards and recognitions, including honorary DSc from many universities, both in India and abroad. Dr Paroda has been acknowledged internationally for his scientific leadership. He served as founder President of the Global Forum on Agricultural Research (GFAR). He also served for more than two decades as Executive Secretary of Asia-Pacific Association of Agricultural Research Institutions (APAARI), a well-known regional organization fostered by him to strengthen regional research collaboration. Dr Paroda served as Chairman as well as Vice-Chairman of ICRISAT Board, member of Board of Trustees of IRRI, member of WMO High Level Task Force on Climate Services, member of Advisory Council of Australian Center for International Agricultural Research (ACIAR), member of Finance Committee of CGIAR and a member of the Governing Board of the Commonwealth Agriculture Bureau International (CABI).

Equally remarkable about Dr Paroda's many accomplishments are his contributions directed to benefit farmers in his capacity as Chairman of the Farmers Commission of Haryana, Chairman of Working Group on Agriculture, and member of Rajasthan Planning Board. He had been responsible for the drafting and release of State Agriculture Policies both in Haryana and Rajasthan.

The story of Dr Paroda's commitment to humanity and to improving the quality of life does not end here. Indeed, Dr Paroda continues to take on greater responsibilities to address complex challenges faced by humankind. These include: the need to move away from the unsustainable conventional tillage-agriculture to sustainable agriculture based on Conservation Agriculture which is considered to be the new agricultural paradigm capable of offering maximum productivity with minimum of external inputs, of harnessing ecosystem services needed by society, of adapting to climate change, of attracting youths to engage in sustainable agriculture and natural resource management, in reversing the agricultural land degradation trends and mitigating soil erosion and degradation caused by tillage-based agriculture, and rehabilitating agricultural wastelands. Consequently, Dr Paroda is the current Chairmen of the Trust for Advancement of Agricultural Sciences (TAAS), with a goal of strengthening the link between science and society.

For me, the most important challenge Dr Paroda has taken upon himself is that of making agriculture in India truly sustainable by promoting a systems approach to agricultural development based on the interlinked principles and integrated practices of Conservation Agriculture, which

is already being practiced on some 1.5 M ha in India. The day before the opening of the IV International Agronomy Congress held in New Delhi in November 2016, Dr Paroda kindly invited me to see him privately in his office. He conveyed to me his concerns and worries regarding the exceptionally high level of soil and landscape degradation that was being caused by conventional tillage agriculture in India, and that the area of severely degraded and abandoned agricultural land had doubled since India became independent. He congratulated me for my commitment to promoting Conservation Agriculture globally and moderating the Global Platform of Conservation Agriculture Community of Practice (Global CA-CoP) for so many years. He stated that he was determined to facilitate the acceleration of adoption and spread of Conservation Agriculture in India in the coming years. He thought that this new agricultural paradigm was sustainable, pro-poor, climate-smart, more profitable and ecologically meaningful, and be applicable to all types of farmers and farm sizes, and land use systems including rainfed and irrigated, annual and perennial cropping, rice-based systems, agroforestry systems and mixed systems with livestock. He also felt that the Conservation Agriculture approach to agricultural commercialization would help to attract youths into practical farming and into various disciplines of agricultural research, education and development for their livelihood.



During the IV International Agronomy Congress, I could see Dr Paroda taking a special and keen interest in the presentations and discussions dealing with Conservation Agriculture. Dr Paroda also kindly invited me to Co-Chair with him a special session with youths to mark the 10th Anniversary of YPARD (see photo 1).

It is very satisfying for me to see that Dr Paroda's interests in Conservation Agriculture are serious enough for him to participate in the Seventh World Congress on Conservation Agriculture held in Rosario, Argentina, in early August. I was fortunate to moderate a panel discussion session on lessons learned from different continents on successes with scaling of Conservation Agriculture (see photo 2). Dr Paroda actively participated in the panel discussions and expressed his conviction that the future of sustainable and profitable agriculture will depend heavily on the extent to which nations adopted Conservation Agriculture, and how quickly this was achieved.

It has been a special honour and a great privilege to have known and worked with Dr Paroda as a colleague and a friend over several decades. In my eyes, Dr Paroda has been an exceptional leader who has been responsible for many of the strategic scientific, institutional and policy innovations for agriculture development in India at a time when they were most needed to achieve the spectacular progress in agriculture production. However, not all leaders in India realize the urgent need to move away from conventional tillage agriculture. Dr Paroda is an exception, and he is totally correct to now turn his full attention to transforming agriculture in India from the old agricultural paradigm to that of the new paradigm of Conservation Agriculture. I am absolutely delighted and overjoyed to have been invited to offer a few words to commemorate Dr Paroda's extraordinary life of 75 years.

Amit Kar

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I joined the National Centre for Agricultural Economy and Policy Research (NCAP), ICAR in the year 1998 from Viswa-Bharati University, Santiniketan. Dr R.S. Paroda was the then DG, ICAR and Secretary, DARE. I found all the ICAR institutes to be very systematic and disciplined. At that time, the modernization of facilities and infrastructure in ICAR was being taken up in a big way. The magnificent NASC came up with many international offices.

I found Dr Paroda to be a very dynamic administrator with so many achievements to his credit such as bringing World Bank funded project-NAIP for ICAR due to which infrastructure, research and foreign visits of the scientists became possible; supervising ICAR cadre review committee; implementation of sixth pay commission for scientists, etc. His detailed achievements can be seen in any online search engines and are very impressive.

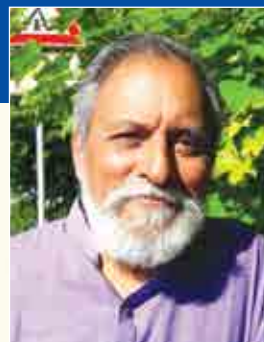
His unmatched personality, leadership, intelligence along with a handsome look made him a very popular DG of the ICAR. Every evening after hectic work schedule at ICAR, he would listen to and solve problems of the scientists and other staff of not only ICAR institutes but also scientists of other SAUs. Many of these problems had persisted for a long time and were difficult to solve. He would speak to directors of other institutes and try to solve the problems. In simple words, he was a very good administrator as well as a real guardian figure to all the staff of ICAR, which was not an easy job. Usually it is difficult to get access to the DG, but everyone could approach him easily every evening at ICAR.

I have heard a lot of good things about Dr Swaminathan as DG, ICAR, but I was not fortunate enough to experience them since I joined ICAR late. But after I joined ICAR, no doubt I found Dr Paroda to be a genius and truly the architect of modern ICAR. His contribution will always be remembered by many.

I pray for a long and healthy life for him and his family.

Anil Gupta

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Supporting, scaling up and sustaining Farmers' Innovations - A tribute to the outstanding green leadership of Dr R S Paroda

Sometime around December 1998, I had succeeded in persuading the Ministry of Finance to establish National Innovation Foundation based on the prior work of Honey Bee Network, SRISTI and GIAN during 1998-1998. In the budget speech of 1999, decision to set up NIF was announced. By Feb end, 2000, a society and trust was formed with Dr R S Paroda as one of the founding member, in his role as DG, ICAR and Dr R A Mashelkar, as the chairperson. Dr. R S Paroda, is a trustee and former member of Governing Body of National Innovation Foundation- India (NIF).

NIF scaled up the model of GIAN (Gujarat Grassroots Innovation Augmentation Network), set up in collaboration with state government, Gujarat, IIMA, SRISTI and the Network in 1997. The reduction, if not elimination of the ex ante and ex post transaction costs of the innovators, investors and entrepreneurs both social and economic was one of the major missions. The functions that SRISTI was pursuing with regard to scouting, documentation, validation and value addition, filing patents, and dissemination were scaled up by NIF at national level with much larger support from Department of Science and Technology, Government of India.

Dr Paroda not only guided the activities of the Foundation but also encouraged farmer breeders and innovators in different ways in all the roles and responsibilities that he shouldered. It was his constant passion that farmers' knowledge and creativity must find positive response from institutional science, particularly in agricultural research sector.

Known for modernizing and strengthening the national agricultural research system, Dr R S Paroda was an eminent invited speaker at the "National Roundtable on Innovations in Public Service Delivery" organized during FESTIVAL OF INNOVATION (FOIN 2017) at Rashtrapati Bhawan, New Delhi, March 6, 2017. He advocated the need for information sharing, national e-marketing with focus on responsive institutional system for better innovation and delivery of services and inputs to small farmers and workers.

Dr. R S Paroda was the chief guest at inaugural session of Workshop on Sustaining Botanical Pesticides through Innovation and Enterprise Development held at IIM

Ahmedabad during May 24-25, 2016. He stressed that research must be pursued in farmer participatory mode. Conservation agriculture needs to be blended with integrated pest management strategies, he added. Biopesticides need to be promoted, he advised, to intensify research in an integrated mode. One will need to strengthen capacity development of farmers and create market linkages for remunerative returns for agricultural produce. He advocated the research support and funding focused on reduction and replacement of chemical pesticides with botanicals in a targeted manner over the coming years.

In the leadership of Dr. Paroda, the Farmers' Commission of Haryana (Haryana Kisan Ayog) and NIF had celebrated National Level Kisan Diwas on December 23, 2011 at CCSHAU Hisar. Dr. Bhupinder Singh Hooda, Chief Minister (Haryana) felicitated the grassroots innovators and progressive farmers on the occasion. The grassroots innovators were invited to address the audience including scientists and policy makers in the seminar. It is the result of earnest efforts of Dr. Paroda that grassroots innovator Shri Dhramveer Kamboj is inducted in the Board of Management of CCSHAU Hisar.

Most recently, he again provided a platform to NIF and young scientists like Dr Vipin Kumar, Director, NIF, Ms Anamika Dey, a Ph.D scholar and CEO of GIAN, numerous other scientists of NIF, farmer breeders and Honey Bee Network collaborators at World Agrobiodiversity Conference, NAAS, New Delhi, 2016, to present their work, and contributions in this field.

Most farmer innovators are humble, people of limited means and are often not aware of the protocol about registering their varieties at PPVFRA, or depositing their seeds at NBPGR, or persuading scientists to validate and value add their knowledge and innovation claims. NIF with the help of volunteers of the Honey Bee Network and valued mentors like Dr R S Paroda extends such a hand-holding support to grassroots innovators. After setting up of TASS (Trust for Advancement of Agricultural Sciences), Dr Paroda continued to involve the Foundation in various regional and global meetings organised by TAAS.

I must also mention the debt I owe to him, personally which I cannot ever repay. He was my teacher at Hisar when I was doing my UG and PG studies way back in the late sixties and early seventies. I have received his blessings and guidance in many major endeavours. He was kind to grace a National Seminar on sustainable agriculture organized by CMA, and NIF in collaboration with IPFT, New Delhi and Ministry of Agriculture at IIM Ahmedabad. Similarly, we got his unstinted support at Festival of Innovation, hosted by the office of the President of India, during 2015-2017, Rashtrapati Bhavan, New Delhi. As the grassroots innovation movement started gathering support, and more and more linkages needed to be forged on behalf of knowledge rich, economically poor people. His every ready support and guidance was always available.

I cannot thank Dr Paroda enough for all the support the Honey Bee Network and its affiliated institutions have received. I wish him a long, a very long innings ahead to support all the efforts to empower farmers and workers to make Indian agricultural economy sustainable and prosperous.

Ann Tutwiler

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Dr Paroda is one of the towering figures of Indian agriculture. His contribution is not just limited to India but encompasses the development of agriculture across the globe from central Asia to south Asia to south-east Asia. If there is a someone who personifies agro-biodiversity, plant genetic resources, conservation and utilization, he is Dr Paroda.

He was the Director General of the Indian Council of Agricultural research and served as an international expert in Bangkok and Central Asia. I must appreciate his dynamism which is not purely limited to research. He is tech savvy, something worth admiring considering his age. Though we find in our midst several persons who are good scientists contributing in different spheres, only a visionary can think on development of sustainable agriculture for the benefit of the rural mass especially rural poor in developing countries through conservation of Plant genetic resources and agrobiodiversity. He played a key role in highlighting the importance of agro-biodiversity index, a parameter which will have a significant say in coming years.

The National Agricultural Science Complex that Dr Paroda visualized reflects his forethought that the CG centres should be in one block so that they can very effectively and scientifically interact with the national agricultural system. This is a testimony to his vision and forethought. I would also like to appreciate, the way the first Agrobiodiversity Congress was organized in India. The scientific, technical, administrative, and visionary support extended by him was exemplary. I consider him to be a pillar of strength in conservation of agro-biodiversity and especially to Bioversity International.

My association with him has been rather brief, but what I heard of him from persons across the globe and spectrum is commendable. He is a very amicable person, always smiling and delivers whatever is in mind through words of wisdom.

His team of dedicated followers admire him for all his noble characters. I consider myself fortunate to have known and to be associated with him. I look forward to his many more years of long, healthy and happy life which I am sure will contribute to the development of sustainable agriculture across the globe. On this occasion of his 75th birthday I take this opportunity to wish him all good things in life.

Anupam Varma

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I am very happy to learn that the Indian Society of Plant Genetic Resources (ISPGR), New Delhi is celebrating Dr R.S. Paroda's 75th Birthday. First and foremost, I wish Dr Paroda a very happy 75th birthday and send our best wishes for a healthy, active, productive and enjoyable long life, and wishing him to continue to maintain his positive lifestyle and contributions for societal development.

It has been a great pleasure and also a privilege for me in being closely associated with Dr Raj Paroda for over three decades. He is one of the most decorated and internationally acclaimed agricultural scientists of the country. His monumental contributions in strengthening and creating world-class infrastructure for the NARS will be remembered and reflected for a long time. It is difficult to articulate all what he has done to improve Indian agriculture. He is instrumental in planning and building of over 30 institutes to meet the diverse requirements for agricultural research and education of the country. In particular, development of academic programmes and infrastructure of the National Bureau of Plant Genetic Resources, which has become the world's leading institution for conserving plant genetic resources, and building of the 'National Agricultural Science Complex (NASC)' are landmark contributions. NASC was initiated as small project to house the 'National Academy of Agricultural Science (NAAS)' – hence popularly known as the NAAS Complex, but Dr Paroda's vision turned the NAAS initiative into a mega national project to provide the country an excellent convention centre with facilities to hold large national and international conferences and congresses. The interest he took in planning minutest details of multifaceted buildings was amazing. NASC is admired and envied internationally.

Dr Paroda is a great visionary. I, as a resource person, admired his zeal, interest and energy with which he took the nearly a year long exercise in mid 1990s to prepare Vision 2020 documents of all the ICAR institutes; the Vision 2020 documents of individual institutes will remain valuable reference for a long time for planning and assessment. He is also a perfectionist. An outstanding example is the Millennium Indian Science Congress he organized in 2001 as General President of the Indian Science Congress Association (ISCA), which raised the bar for ISCA meetings to greater heights. In this meeting, he outlined the "Panch Sutra" strategy, to realize

India's vision of freedom from poverty, hunger and malnutrition. He not only organised a memorable Science Congress, but in his own style also metamorphosed the infrastructure and functioning of ISCA Office at Kolkata.

I'd also like to take advantage of this opportunity to thank him for readily accepting IARI's proposal to establish the Advanced Centre for Plant Virology (ACPV), and even more importantly allowed us to pick the best infra-structure builders of the time – the IRCON, for building ACPV, paving way for marked improvement in subsequent infrastructural developments of NARS.

On a personal note, it has always been a pleasure to have academic discussions with him as reason and logic always triumphed, and I take this opportunity to extend warm thanks for his continued valuable personal and professional support.

Thank you, Dr Tyagi for kindly inviting me to put my thoughts about Dr Raj Paroda. I wish the event a grand success.

Anuradha Agrawal

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It has been my extreme good fortune to have got an opportunity to work with Dr R.S. Paroda, for the past few years now, under the banner of the Indian Society of Plant Genetic Resources (ISPGR), New Delhi. In fact, in the early 2015 we approached him with the request to once again become President of ISPGR, a society he founded in 1987. He very graciously agreed, albeit with one condition. He wanted the ISPGR to host an international meet, with the objective to generate a fresh roadmap of re-prioritised activities on genetic resource management, keeping in view the contemporary policies and development agendas. He had warned that it would be a challenging task and that we needed to be prepared to do a lot of hard work. We happily agreed, and the new Executive Council of ISPGR took charge under his Presidency, in May 2015.

Immediately after assuming charge, Dr Paroda started envisioning and planning the mega-event, which finally took shape as the very successfully organized "1st International Agrobiodiversity Congress" (IAC 2016), held from November 6-9, 2016 at New Delhi. But it is the period between the concept and the culmination of IAC 2016, that has been an enormously enriching and enlightening experience for me, as I came to appreciate first hand, the greatness of Dr R.S. Paroda as a scientist, leader, teacher, planner and human being!

In fact, when I had joined NBPGR as a scientist in 1994, all my seniors would regale me with endless stories about the dynamic leadership of Dr Paroda during his short, but very effective tenure, as Director, NBPGR during 1985-87. Naturally, it generated a lot of awe for him, which increased during his period as Deputy Director General (Crop Science) as well as Director General, ICAR. The thrust and funding for plant genetic resources (PGR) activities got great impetus under his leadership, as NBPGR flourished with establishment of state-of-the-art National Genebank and many mega projects during that phase. I remember feeling a little unlucky, of not having had the chance to work with him directly. Little did I know that my regret would convert to an opportunity!

As General Secretary of ISPGR (2010-14), I occasionally got to meet with Dr Paroda, to invite him for functions of the Society. But it was only after I became Treasurer, ISPGR, in May 2015, did I get to interact with him on a regular basis, to plan and organize

the IAC 2016. And this is when I experienced first-hand, all qualities that sets him apart from the crowd. He is a truly a Great Leader, setting forth a vision, living up to it and communicating with clarity and inspiring all team members to meet the goals. He truly cares for the people who work with him and suitably delegates responsibility to complete tasks in time-bound manner. He is immensely forward-looking, competent, intelligent, and broad-minded. What I also keenly observed was that he would generously praise publicly,



Group photo of joint meeting of the International Advisory Committee and National Steering Committee of IAC 2016

and when required, criticize or reprimand in private! Three qualities of his amaze me the most. First is his elephantine memory. He never forgets any task, decision or name, once discussed. Second is his extreme savvyness in adoption of communication technologies. I do not remember any phone call, sms or email remaining unanswered from his side, in spite of his extremely busy schedule. And third is his enormous energy level. He never ever showed signs of fatigue, whether in town or during his frequent travels, both inland and abroad. Twice during the IAC 2016 he fell ill. Once when he went to Egypt and USA during September 2016 and was inflicted by viral infection. On his return, he was very weak. But his commitment was such, that he called members of the core organizing committee to his residence (as he could not come to office) for giving guidance for the several unfinished last moment task. But he showed real grit during the Inaugural Function of IAC 2016. Dr Paroda became very seriously ill about a couple of days before the event, and was advised hospitalization. The inaugural function of IAC 2016 was being graced by Shri Narendra Modi Ji, Hon'ble Prime Minister of India. As Dr Paroda was to give the welcome address, we had developed a contingent plan for the inaugural function. But Dr Paroda overcame his physical discomfort (by sheer mental strength, I believe) and attended the function, with his usual charm and happy disposition. I do not think anyone in the audience, including the dignitaries, realized the amazing feat that he exhibited that day! Such is the tenacity of his character.

It is my earnest wish that leaders like Dr R.S. Paroda are given their due recognition, as a reward for their continuous quest to serve human kind.

Coming back to IAC 2016, I would just like to simply say - Thank you Sir! The experience gained working with you has helped my personally and professionally, and I really do not have words to describe how lucky I feel. I join the rest of your vast circle of friends, admirers, associates and family in wishing you a very happy 75th birthday. Your persona is akin to good wine - something that improves with age! Wishing you many more productive and healthy years ahead.

Anwar Alam

Former VC, SKUAST-K, Srinagar
Former DDG (Ag Engg), ICAR
Former VC, IGKV, Raipur
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My association with Dr R S Paroda has been a long one, spanning several decades. It started when he came to ICAR as Director (NBPGR) and I was ADG (Agri Engg). We both lived at Krishi Vihar, Masjid Moth, New Delhi. Soon after coming to ICAR headquarters, his scientific and management leadership came to the fore. He was known as a thinker, effective speaker and excellent strategist. He associated and appreciated the allied disciplines that made him dear amongst the colleagues. He made some solid contributions and became DDG (Crop Science).

I had worked hard and developed Agricultural Engineering programmes to a level that Division of Agricultural Engineering was created under the aegis of ICAR. Everyone thought that I should have got the post of newly created DDG (Agri. Engg.), but it did not happen. Though ASRB recommended S-6 for me but ICAR denied. It had become difficult to work and I realized it was time to get out of ICAR for some time. As luck would have it, FAO had advertised P-5 post of Chief Technical Advisor IJO-FAO Regional Project on Improved Retting and Extraction of Jute. A circular in this regard came to ICAR headquarters but it did not reach me for unknown reasons. A friend of mine at IJO casually inquired if I had applied for this post, I pleaded my ignorance and said I had not. I enquired from IC division and discovered that a circular had come and a nomination had already been made. People in IJO who were familiar with my work as a short-term consultant thought I would be a good choice. I shared this piece of information with Dr Paroda then DDG (Crop Science). He could see the operating factors, he immediately called for the concerned file from IC Division, DARE and proposed my name saying Jute and Allied fibres are very much his concerns too. Against a tough competition, out of 150 CVs I was placed at number one. Hindrances cropped up, but eventually I got the position. It would not have been possible but for Dr Paroda's sharp intellect which analysed the situation and seized the initiative by nominating me.

In the meantime, FAO hired Dr Paroda for FAO Regional Office Bangkok. I was on inspection trip to Indonesia and on the way, I dropped for a briefing at FAO Regional Office and thus had an opportunity to meet Dr Paroda. He shared that he had been offered the post of Director General, ICAR which required that he should

immediately quit his international assignment and take this national assignment. I shared my perception that he could get equivalent international assignment any time. Post of DG is very prestigious and the organization would prosper under his leadership and the country would benefit. He gave up his FAO assignment and took over the challenging task of DG, ICAR. ICAR prospered leaps and bounds under his leadership in spheres of activities including teaching, research, extension, infrastructure development and as a mouthpiece for the cause of agriculture and rural life. People still remember his contributions and the infrastructure that he built up. ICAR institutes, laboratories including SAU's were given a modern look and picked up momentum in R&D.

After completing my assignment with FAO, I was back to ICAR, people had managed a shunt route for me. I realized the move was not professionally motivated, but had ulterior motives behind it. I shared my concerns with Dr Paroda, he could visualize the situation and changed the work assignment offering me the position of ADG (PIM & TC). I readily accepted and rendered valuable services with 100% planned fund utilization for ICAR. While serving as ADG (PIM & TC) I got the offer for Vice Chancellor, Indira Gandhi Krishi Vishwavidyalaya, Raipur. I was keen to avail it as I had been an ADG for too long. I was given permission to take up the assignment without lien and therefore in desperation I resigned, briefed Dr Paroda, the then DG and sought my early relief. He was kind to oblige me. Thus, I joined as VC, IGKV, Raipur. The new Minister of Agriculture and President, ICAR society granted me lien and I am thankful that Dr Paroda catalysed this change.

Later, ASRB selected me as DDG and I returned from Raipur, handing over the charge midway to take up the new assignment. I served for a little less than a term under Dr Paroda. Dr Paroda was full of initiatives and inspired us. Ambitious projects were handled and executed under his leadership. I have very fond memories of association and working with Dr RS Paroda till he left for the CGIAR assignment in Uzbekistan. He is recognized nationally and internationally as leader in the field of agricultural sciences and rural life as its visionary spokesperson. Scientific community feels proud of him and looks for his guidance in initiatives. I wish and pray for his continued scientific leadership and a happy, healthy and prosperous life to him and his family members.

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Dr Paroda and myself were in different institutions when I was studying in my university days. But coincidentally my interaction with him started in an indirect manner when I was about to complete my PhD from Banaras Hindu University (BHU). At the time of my PhD viva voce examination in 1983, I was told to see a report from none other than Dr Paroda. It was a great honour for me to learn this and also to see the brilliant questions that immensely added to my knowledge. With him being a thesis evaluator, it was very natural that my viva voce examination took double the time than normally required. Like this incident, I got another honour, which came to me as a pleasant surprise, to be the master of ceremony of a convocation at the Institute of Agricultural Sciences, BHU in which Dr Paroda was honoured with the *honoris causa* doctorate degree. I still remember his words ‘thank you’, which he spoke to me and shook hands immediately after the end of the session. Sometimes a minor incident has a long-lasting effect. This was one of those rare occasions. During an informal chat with him recently, I mentioned the two incidents and he responded with a gracious smile.

Following my PhD and then initiation of my professional career at Banaras Hindu University, the interactions with Dr Paroda continued with me being a learner in a series of meetings at Indian Council of Agricultural Research (ICAR) and other institutions. In a way, when I was learning the ABC of agriculture, Dr Paroda was leading the agricultural research and education of our country. This process continues even today when we eagerly look for an opportunity to interact with him on different occasions. My present assignment at CIMMYT is in no way different in this respect. Despite working with different institutions in different capacities throughout my career, I continue to see him as my mentor and guide. Dr Paroda has been instrumental in contributing to the growth of CIMMYT and Borlaug Institute for South Asia (BISA) by enlightening our research vision and also in designing research projects of competitive nature, which offer many learning opportunities and new innovations. Recently, his presence at the 50th anniversary celebrations for CIMMYT was a motivating factor for us to bring CIMMYT and BISA activities in India and South Asia to the fore front of global agriculture.

Arvind Kapur

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My association with Dr Paroda dates to 1990-91 when we met in Hybrid Seed Conference in Hyderabad. He was then DDG (Crop Science) and I was heading operations of Proagro Seed Company. We started sharing the views on role of private sector in hybrid seed development in close coordination with public sector. I learnt a lot during my close association with Dr Paroda. He is the best science manager and a very good administrator. He is a major contributor in my career growth in seed sector. When he became DG, ICAR, he promoted the concept of Private Public Partnerships (PPP) model and arranged many discussions on this subject. He brought both the sectors together to work on common issues. He encouraged private sector to develop performing seeds to help Indian farmers to harvest better yields and earn profits. The most important facet of Dr Paroda's personality is that he is the best people manager, a good teacher and the best friend. He nominated me in GFAR (FAO) board as private seed Industry nominee from Asia. We both contributed significantly not only in prioritizing the research projects in CGIAR systems but also emphasized



on the increasing role of regional chapters like APAARI. I travelled with Dr Paroda to attend many forums where we presented our views on various topics like biotechnology, increasing productivity through hybrids and other interventions. Dr Paroda, during his FAO position in Bangkok, initiated the idea of Regional Association of Seed Industry in Asia. The first meeting of the Asia Pacific

Seed Association (APSA) took place in 1994 in Changmai under the chairmanship of Dr Paroda. In that meeting, a big contingent of stalwarts from Indian seed industry participated. I still remember when we discussed with him the role of Indian seed industry in India and Asia; he forecasted the future that one day Indian seed industry will play a big role to promote the cause of agriculture and agriculturists in India and Asia. Today his foresight has come true and Indian seed Industry is the fourth largest seed industry in the world after USA, China and France.

I feel honoured that I worked closely with Dr Paroda. When I was heading Proagro-PGS a joint venture and brought the first transgenic seed of mustard containing Barnase Barstar in India, he was very much interested to commercialize these technologies to improve the yield of oilseeds in India. He supported us not only in getting the regulatory policies in place but also getting the trialling procedures established in public sector for transgenic crops. When Monsanto brought Bt Cotton seed in India in 1995-96 with Mahyco, Dr Paroda tried his level best to Introduce Bt cotton by taking Bt genes from Monsanto to public sector. Due to some reasons, this did not materialize and the gene came to India via Private- Private collaborations.

Dr Paroda remained champion of promoting technologies in Agriculture. He represented the pro technologies group in a court case. He always believed that in every sphere of life, new technologies were helping then why technologies were denied in agriculture where our farmers were suffering from many stresses in cultivating crops.



Dr Paroda's contributions in Indian Agriculture are immense. I can really refer to him as "A MAN WHO SAW TOMMORROW". What he predicted during his tenure as DG, ICAR & Secretary, DARE, today most of the predictions are coming true. He predicted that hybrids in most of the crops would change the productivity in many crops and also role of Private sector in producing and distributing good seed in enhancing farmer's profitability.

As the Director of NBPGR, he not only encouraged the Indian breeders to collect lot of diverse germplasm but also made available good accessions to all breeders from both private and public sector. Dr Paroda has also created lot of Infrastructure for germplasm storage and also for other activities of ICAR.

Dr Paroda's role in creating PPV&FRA is significant. After WTO put conditions that every country should create IP protection system, based on the UPOV 1978 system, India started creating a system and the PPV&FR Act was passed and rules were made operational in 2007.

When I was heading one of the vegetable seed companies of Bayer, he encouraged me to introduce vegetable seeds which are resistant to diseases and have better shelf life. I never disappointed him and now many of the vegetable seed companies have very good hybrids which are helping both farmers and consumers to get best quality vegetables.

During my tenure as Secretary General of Seed Association of India (SAI), he suggested that the three associations for seeds should be merged and instead there should be one voice of the seed Industry. According to his wishes and foresight, we merged all the associations and become single association NSAI.

I still remember when I joined Rasi Seeds Pvt Ltd after leaving Bayer; we had inaugural function of the vegetable division of Rasi Seeds under the brand name of HyVeg. Dr Paroda was the chief guest along with many honoured guests like Ambassador of Netherland, Dr Nagarajan, Chairperson of PPV&FRA, etc. In his inaugural address, he told Dr Ramasami, Chairman, Rasi Group that the moment they had taken me on board, half the work of establishing new company had been achieved. I really owe my gratitude to Dr Paroda and worked hard to establish the new brand HyVeg in vegetable seed industry and today this brand is one of the top seven brands including multinational brands. Dr Paroda has a unique personality that encourages people by placing a lot of trust in them.

During my association with Dr Paroda in the last 27 years, I learnt a lot and followed the footsteps of his working style and science management. You rarely find great leaders like him. I wish Dr Paroda achieves much greater heights and leads a healthy and joyous life.

Ashutosh Sarker

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On this auspicious occasion of 75th birthday of Dr R. S. Paroda, a living legend in agricultural research and development in India and globally, known for his life-time contribution to food and nutritional security and alleviating poverty in the entire developing world, we the ICARDA-South Asia & China team, and I personally congratulate him and wish him a long and healthy life!

Recognized nationally and internationally for his outstanding contributions to agricultural science and policy, and practical application for modernization of agriculture, and enhancement of food production, he stands out with the rare distinction in global scientific community. The World has recognized him as the **“Present-Day-Leader”** in agriculture through numerous contributions, awards and positions that he held.

His tremendous contribution in combating hunger, poverty and mal-nutrition through application of science and technology under his dynamic leadership as a scientist, as the topmost policy maker in Indian agriculture as the Secretary, DARE & Director General of ICAR; Chairman of Haryana Farmers’ Commission and Chairman, TAAS is known nationally. Additionally, his involvement at the global level, as the long-time Executive Secretary of APAARI, President GFAR and Chairman, GCARD, and in many other international fora are highly appreciated and recognized as remarkable achievements of his visionary leadership. He is at the forefront of international



and Indian successes in agriculture, and their translation into better lives for the poor and marginalized are well known. He is a living legend and a role model for younger generation of researchers to follow his path, contribute to food and nutritional security, and elimination of hunger from the mother earth.



We, at ICARDA, are grateful and thankful to him for his committed and dedicated contribution towards dryland farming systems. He played a significant role in establishing ICARDA's South Asia & China Regional Program in New Delhi, India in his capacity as the Assistant Director General (ICC) of ICARDA which was one of the key agendas of ICARDA's research strategy, 2006-2016 to expand its operations beyond CWANA region. On his return to India, he continued to support ICARDA in resource mobilization from within India and expansion of research in NRM for arid regions of Rajasthan, food legumes in eastern India, among others. His kind presence as the guest of honor at the auspicious ceremony of opening ICARDA's regional program on 4th November 2008 will be remembered. As the Executive Secretary of APAARI, he involved ICARDA in various fora in Asia and Pacific regions and publishing various success stories in APAARI publication series, besides publishing significant achievements in regular APAARI Newsletter. Through his constant support and encouragement, ICARDA became a prestigious institution known in Asia and Pacific regions for dry land farming systems. As the Regional Coordinator, and Head of PFU in Tashkent, Uzbekistan he always encouraged me to contribute to crop diversification by introducing food legumes in Central Asia and the Caucasus region.

Respected Dr Paroda has inspired us greatly to bring dynamism in dryland production systems through preserving natural resource base with system productivity at the highest level. We follow the path that he has showed to us! He is a great patron to the poor and hungry people and an inspiring personality to us!

Personally, my wife, Archana and I have several memories/moments with his family at various occasions including visit to his ancestral house in his village.

We wish him peaceful and long life, and hope that he will continue to guide us to contribute to international agendas related to agriculture, biodiversity, environment, poverty, hunger and malnutrition.

Asis Datta

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Dr Rajendra Singh Paroda, an agricultural scientist is an achiever, par excellence. Apart from adorning the chair of the Director General of Indian Council of Agricultural Research, he graced many prestigious chairs and held many noteworthy positions in his scientific and administrative career, till now. He received several awards including the prestigious Padma Bhushan Award by the Government of India. Dr Paroda is also Fellow of almost all the science academies of India. He has been a strong pillar of support in the GM revolution. A veritable pro GM crop, he extends his relentless support to the production and popularization of Genetically Modified (GM) crops whenever and wherever required.

We share a very close and amicable relation. We had been together in several meetings on various decision-making issues and have been members of various committees and boards. We even have organized a number of important meetings. One such noteworthy meeting which flashes my mind is the Special Session of Indian Science Congress, which was a big success and was graced by many foreign guests. I have been working on GM crops since the beginning of my career. The discovery of five novel genes, namely, AmA1, Oxalate decarboxylase, α -mannosidase, β -hexosaminidase and Desaturase genes and their use to develop transgenic crops were done by my research group. Using these genes several GM crops were produced like GM-Potato (with overexpressed AmA1 gene), GM-Tomato (with overexpressed Desaturase gene), GM-Tomato (with silenced α -D-Mannosidase and β -hexosaminidase genes) GM-Soyabean, Tomato and Grasspea (Oxalate decarboxylase overexpressed plants to reduce oxalic acid toxicity).

In a country like ours, where there is a constant tussle between the Pro-GM and the Anti-GM groups, Dr Rajendra Singh Paroda has always been a strong advocate for the production and the popularization of GM crops. An agreement on GM-Potato was signed by Dr Paroda and the then DBT Secretary, Dr Manju Sharma. As the Director General of ICAR, he gave the permission for the cultivation of GM-potato produced by my research group, in the fields of Central Potato Research Institute (CPRI).

Being an eminent agricultural scientist and an administrator, he doesn't keep distance from anybody. Because of his down-to-earth and humble nature, Dr Paroda is very close to young and old alike. Renowned for his leading role as an upholder and patron of GM crops, he continues to be a prominent visionary in the domain of Indian agriculture.

B K Sharma

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Dr R.S. Paroda: A Great Administrator and Scholar Par Excellence

It is a matter of great honour and pleasure for me to pen down memories of my association with Dr R.S. Paroda. Dr Paroda belongs to the State of Rajasthan where I was also born and brought up. This makes our association very special. Professionally, our fields are apparently different as he belongs to Agriculture and I have been teaching Physics. However, we shared very intense relationship. I always got his affection being younger to him.

I had, in fact, heard a lot about him and in particular after his elevation to the topmost position in ICAR. He has been an epitome of hard work, sincerity, commitment and uprightness. No wonder, he occupied the highest office in the domain of Agriculture. He has written very important books and papers and has left deep impact on the society through his novel ideas. He has travelled a lot and even after his retirement, he travels very frequently abroad to provide consultancy to a lot of countries. This speaks of his caliber and thoroughness.

I came in very close contact with him during 2013-14, when the Third Rajasthan Science Congress was being planned. It was to be organized at Manipal University, Jaipur during Feb. 28 to March 2, 2014. Since, I was the Dean, Faculty of Science at MUJ at that time, the responsibility fell on me. I was appointed Organising Secretary. Dr Paroda was the General President and so we had lot of personal interactions and also on telephone and internet. I found him a very amazing person. He was full of energy and would respond to everything addressed to him. He never hesitated in advising, providing solutions instantly and even going a step further by taking over the problems by himself. Whether it was an issue of finances or inviting speakers or any other matter, he was the best solution provider. In him, I found the most dependable friend, philosopher and guide. Although, he is much taller in accomplishments, he did not hesitate to descend to my level, if needed. I found it most enjoyable working under his guidance. I would always cherish those few days which we spent together during the Rajasthan Science Congress. Later also, we had a few occasions to meet and it was with the same warmth and openness. I salute him for all these extraordinary qualities and have learnt from him what leadership



truly means. I often wonder and sometimes even envy as to how could one person achieve so much academically and professionally. One incident I would like to mention - during that period, I was late in responding and I wrote a mail to him at 4.30 am and to my shock, his response came within five minutes. Such was his sense of responsibility.

I sincerely pray to God to give him good health, a satisfying and purposeful life so that he can continue to motivate young minds and serve the society for a long, long time.

B K Taimni

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I have known Dr Paroda now for over 20 years. My first contact with him was way back in mid 1990s, when as Additional and later as Special Secretary in the Ministry of Agriculture, was dealing with the Crops as well as Horticulture Divisions 'reporting' to me. As will be evident, that my job requirement required very regular and frequent interaction with ICAR, headed by none other than the most Distinguished Agriculture Scientist- Dr R.S. Paroda, who was then D.G-ICAR as well Secretary DARE, in the same Ministry.

I always considered a great pleasure and a great privilege to interact with such a knowledgeable, well-meaning and a 'positive' person. Whenever the matter reached him, a meeting was held, me representing the Department of Agriculture, and I cannot recollect a single instance, when the 'issue' was not resolved, to the satisfaction of all the parties.

Our relationship continued, even after I left the Ministry in June 1997, to join as Secretary Department of Food, in the same building and only a couple of corridor's away. This was not enough, the relationship continued even when I retired from the Service. Thanks to him I was co-opted in several committee's constituted by ICAR.

My best recollection is that when I wrote my third Book titled "AGRICULTURE IN 21st CENTURY- Perspective and Vision", and showed the copy to him, I got a call from him, after which I met him. He told me politely but in a 'firm' manner, that the Book shall be published by ICAR. This was not only done, but was also released by the then Union Minister for Agriculture at the Annual meeting / function of ICAR. I consider this a great honour, courtesy Dr Paroda.

The Great work he has done in Central Asia will be remembered for a long time at the highest level.

Our good relations continue till date. Reason lies in the affectionate PAST.

It is his commitment to keep doing something GOOD for the country, that he continues to pursue this agenda in a constructive and positive manner.

May GOD BLESS HIM WITH A LONG and HEALTHY LIFE TO ENABLE HIM TO CONTINUE THE GREAT WORK HE HAS DONE AND IS DOING NOW.

B N Mathur

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Dr R.S. Paroda – A Gleaming Star in the Galaxy of Great Achievers

Rarely, one is fortunate enough to have the privilege of having a mentor, who is a 'Visionary' with a global perspective, a dynamic leader endowed with profound knowledge and above all, a 'good human being' with a positive approach such as Dr R. S. Paroda. During the years when I held the position of the Director, National Dairy Research Institute, Dr Paroda's support as the Director General of ICAR gave me a wonderful opportunity to strengthen various research and educational programs so as to take the Institute forward. These were clearly my best years when I could effectively contribute towards strengthening research and academics activities. All this became possible only through his inspiring guidance, encouragement and support that Dr Paroda gave.

With the 'Farmer' as the focal point to serve, Dr Paroda took pragmatic initiatives to build an effective public-private partnership and bring together stake holders for policy and final togetherness. For the commercialization of mainly the post-harvest technologies developed in the ICAR, where NDRI has traditionally played a significant role, financial stake of the end-user is an important decisive factor. He recognized the need for building strong public-private partnership to increase investments towards greater use of agro- and animal biodiversity for much needed genetic enhancement that are critical for productivity enhancement. He gave excellent support towards NDRI's flagship R&D programs on 'Faster Multiplication of Superior Germplasm' through embryo biotechnology. It is the impetus received through patronizing support, that NDRI was able to produce world's first buffalo calf. All these advances will eventually lead to the development of the 'National Milch Herd' and higher productivity in the Dairy Sector. He was acutely conscious that for a wider reach to the farming community, the animal sector as a part of Agriculture should remain strongly integrated within the ICAR system. He strongly promoted setting up of National Bureaus for the Plant and Animal for the conservation of genetic resources. He initiated important programs for the propagation of factual information to the society so as have right kind of policy advocacy. He provided forums for the governments, research institutions, civil societies and the private sector so as to place more emphasis on public awareness as well as capacity

enhancement programs relating to the gene modification. He was never shy in adopting any innovation that is in the best interest of our small holder farmers and the country. The National Science Congress organized under his stewardship as the General President of the Indian Science Congress Association on the campus of IARI during 2000-2001, New Delhi provided theme for the propagation of these policies. He associated me in the team that brought out the proceedings of the Congress.

Another area where Dr Paroda made a significant impact, was in the area of modernizing the 'Management Information Systems' by harnessing technological advances in Computer Science. Such initiatives, that were mostly spelled out during the conferences of VC's and Directors of ICAR Institutes, spurred the trend for ongoing modernization of the Decision Support Systems, Networking the Intra- and Inter-Organizational communications at the global level for streamlining management and fiscal controls.

Impressed with the need for continuing with the nation's most prestigious Human Resource Development programs for the Dairy Industry, Dr Paroda took a staunch stand to dispel the disruptive forces that were vying to close down Nation's most prestigious UG program in Dairy Technology at NDRI. At such junctures, he always laid down clear policy guidelines and took strong decisions. Further, he addressed very effectively various long-standing issues of coordination in areas of research and education in the Joint Scientific Panel of ICAR-NDDB. It is through his pragmatic approach that many thorny issues could be resolved for setting up a large Dairy Plant with a milk handling capacity of 60,000 litres per day for the in-plant practical training of Dairy Technology students. With the operationalization of this unique facility, the quality of educational programs received a tremendous impetus and value of NDRI graduates is on the very top in the Nation's Dairy Industry. In taking all these decisions, he displayed tremendous inner courage by taking firm stand on rightful issues whenever the situation so demanded. Furthermore, with the objective of continually improving the standards, he also initiated several programs for the development of requisite infrastructure and accreditation of the agricultural universities and research institutes. He always emphasized on consolidation aimed at quality improvement wherever resources were being stretched too thin.

B R Barwale*

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Maharashtra Hybrid Seeds Company Private Limited (Mahyco)
Maharashtra



Even though I have known Dr Raj Paroda earlier, I came in close contact with him when he became the Director of National Bureau of Plant Genetic Resources (NBPGR) at New Delhi. I was really impressed with his futuristic ideas for creating a world class gene bank. He worked very hard, obtained resources and got the project executed. As a consequence of his efforts, we have one of the world's finest and modern gene bank.

Dr Venkat Gadwal and I visited Changsha, China to attend the first hybrid rice conference in October of 1986. Dr Paroda was representing Indian Council of Agricultural Research (ICAR) and we had numerous occasions to interact during the conference. I remember how we (most of us from India) escaped a session and visited fields producing hybrid rice seeds. We also shared an overnight train journey in the post conference tours.

I have always found Dr Paroda to be a real science person, strongly believing in science, committed to delivering science for betterment of agriculture.

Dr Paroda later on became Director General of ICAR and he consistently pushed the idea of hybrid rice while large numbers of breeders were resisting the same. Over a period of time we saw him overcoming the resistance and popularizing the concept of hybrid rice amongst the scientific fraternity and farmers.

While he was Director General, I recall an incident regarding approval of one of our cotton hybrids under the All India Coordinated Cotton Improvement Project. Our cotton hybrid was performing the best in the Western Zone however; the same was not being promoted as the concerned coordinator was blocking the same, primarily because it was from the private sector.

I went to Dr Paroda and explained the situation to him. Those were the days when public breeding was dominant and private breeding did not enjoy the respect and credibility from some segments of the public breeding system. However, Dr Paroda went into all the details and instructed the All India Coordinator and Western Zone Coordinator to

*Note from Editors: Dr B.R. Barwale left for his heavenly abode on July 24, 2017, shortly after the above thoughts.



consider the entry as per ICAR norms. As a consequence of the same, the Mahyco cotton hybrid was approved and subsequently notified. It was a great decision at that time.

After retiring from ICAR, Dr Paroda went to Tashkent and was helping Governments in those areas to plan and manage agriculture research. He even encouraged Raju to visit Tashkent in Uzbekistan and arranged for visit to Dushanbe capital of Tajikistan with particular reference to cotton and applicability of hybrid technology in those areas.

While busy with all these activities, Dr Paroda very enthusiastically tried to develop co-operation among nations of South East Asia on agriculture research. I remember having attended a meeting in Thailand for this cooperation.

After his assignment in Uzbekistan, he came back to Delhi and established Trust for Advancement of Agricultural Sciences (TAAS); right from formation of the trust I have been associated with it. With his persuasion and follow up, he has been able to establish the trust very well. The Trust has instituted an award in the name of Dr M.S. Swaminathan to be bestowed upon an agricultural scientist every year. The same is being done over the last eight years.

I have enjoyed the association with Dr Raj S Paroda both professionally and personally over the last 30+ years.

We convey our greetings to Dr Paroda and his family on this occasion and wish him health, happiness and prosperity in the coming years.

B S Dhillon

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Dr R.S. Paroda – An Outstanding Administrator and Researcher

It was my good fortune to come in contact with Dr R.S. Paroda and receive from him many a lesson on various aspects of life, besides numberless insights on agricultural research and management. Wide and rich experience at national and international level imparts a unique quality to his mentoring. He is a rare combination of a thinker, worker and organizer, which enabled him to create space and design valuable strategies for agricultural growth in India. I first met him when Dr G.S. Sandha, Professor (Triticale Breeding at PAU) and myself (then Maize Breeder at PAU) visited Haryana Agricultural University (HAU), Hisar in the 1980s. Dr Paroda was then Head, Department of Plant Breeding at HAU. He was gracious to spend one full day with us, showing various activities of the department with great vigour and zeal. We were pleasantly astonished by the attention and importance we, two plant breeders, received.

During 1998 to 2005, I had an opportunity to work very closely with Dr Paroda, initially as Assistant Director General, ICAR and then as Director, National Bureau of Plant Genetic Resources (NBPGR). I always got valuable hints and advice from Dr Paroda on managing the work and clearing files. He would often not send back the files with his comments but with required corrections. The day I was to leave as Assistant Director General and join as Director, NBPGR, my courtesy visit to Dr Paroda became a path-charting interaction.

He asked me to have a chair and offered me a cup of tea. During a very brief discussion, Dr Paroda advised that though the positions of Assistant Director General and Director, NBPGR are equivalent, I must understand that at ICAR headquarters, I was one of more than 30 ADGs, but at NBPGR, I would be the only Director, the father figure, for those working at the Bureau. He added that



His Excellency, the Governor of Punjab and Chancellor, PAU, Ludhiana Shri Shivraj Vishwanath Patil Ji conferring degree of Doctor of Science (honoris causa) on Dr R.S. Paroda.



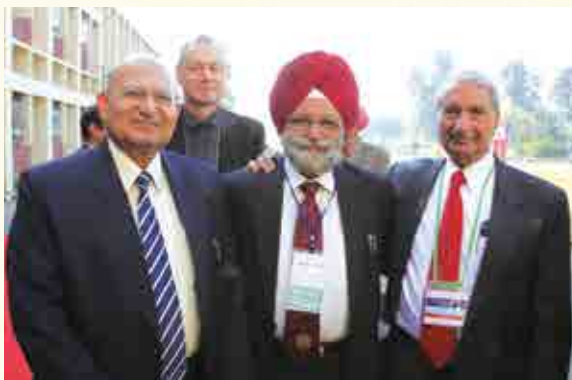
Dr R.S. Paroda honouring Dr B.S. Dhillon with Dr Harbhajan Singh Memorial Award (2009-10) of Indian Society of Plant Genetic Resources, New Delhi

everyone would be looking or rather observing the way I work and conduct myself. This was one of the memorable advice that I got from my mentor and it proved to be of great help in discharging my duties in an efficient manner.

Dr Paroda's outstanding organizing ability was more than evident when he held the Indian Science Congress at Indian Agricultural Research Institute (IARI), New Delhi as its General President. I was closely associated with the arrangements. Everything was very meticulously planned and executed. As a result, the funds he generated proved to be more than required. Out of the savings, he gave a part to IARI and with the rest, established the Trust for Advancement of Agricultural Sciences (TAAS). I had the fortune of being founder treasurer of the Trust. Working with TAAS proved to be an amazing experience. TAAS has organized numerous discussions and in the process has developed an independent think tank on matters of agricultural importance.

As Director, NBPGR, Dr Paroda built the new campus, which used to be considered as the most elegant building of ICAR. In fact, Dr A.B. Joshi, Former Director, IARI and DDG (CS), referred to this building as the "Red Fort" of ICAR. I had good fortune of working at NBPGR and sitting in that building for about five years. Dr Paroda established the National Gene Bank in NBPGR, which now has the second largest holding of germplasm accessions in the world. His services to plant genetic resources were honoured by various institutions, of which I would like to mention International Crops Research Institute for Semi Arid Tropics (ICRISAT) and Agriculture Institute of Kazakhstan, both these institutes named their gene banks after Dr R.S. Paroda. PAU also had the honour to confer the honorary degree on Dr Paroda in 2012.

He is also the person who perceived, conceptualized and gave practical shape to the impressive and much needed National Agricultural Science Complex (NASC) at Pusa Campus, New Delhi. As usual in our society, when NASC was under construction there was some criticism, but all those critics became great admirers once the building was completed. He took so keen interest that one day he discussed the type of taps to be installed in NASC. I was lucky to be one of the early occupants of the residential complex adjoining the main building. It is a world class facility and the days are not far off when it will also be recognized, beyond its current utility, for its architectural elegance and design. I salute Dr Paroda for his contributions to the nation and wish and pray for his long, healthy and productive life.



Dr R.S. Paroda along with Dr G.S. Khush and Dr B.S. Dhillon

Balraj S Parmar

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Dr Rajendra Singh Paroda - A man of action

Recognized internationally for his contributions in agricultural research and research management, Dr Rajendra Singh Paroda is a known, respected and distinguished name amongst the scientific fraternity, the world over. In view of his national and global achievements, it is befitting that a book is being published to mark his 75th birth anniversary. I feel honoured for being asked to contribute to the publication based on my personal associations with him.

Dr Paroda's achievements including the various decorations, awards and other recognitions are well known. I anticipate their reporting in this book in various forms. To avoid repetition, I will confine this write up to the personal association / anecdotes with him.

I met Dr Paroda for the first time ever in 1965 when I joined the Indian Agricultural Research Institute (IARI) as a PhD student in the Division of Soil Science and Agricultural Chemistry. IARI being a residential campus, the students were housed in various post-graduate hostels of the institute. Dr Paroda was my senior doing PhD in the then Division of Botany (now the Division of Genetics). That year he contested election to the Post-Graduate School Students' Union (PGSSU) for the position of General Secretary. To seek vote and support for his candidature, he was meeting the students individually. He met me too in this context and sought my vote and support for his candidature. Impressed by his mannerism and cultured conduct, it was my spontaneous decision to vote for him. The result of the election showed that it was the opinion of a majority of the students and he won the election. His performance as General Secretary of PGSSU was appreciated by one and all and the Union maintained excellent rapport with the authorities and the students during his tenure. Solutions to several problems confronting students including improvement in hostel facilities resulted.

Dr Paroda completed his PhD in 1968 and proceeded to U.K. to pursue post-doctoral work. There was no contact for quite some time, till it was learnt through professional colleagues that he was posted at Haryana Agricultural University (HAU), Hisar as a plant breeder. In 1992, Dr Paroda took over as Deputy Director

General (DDG, Crops), Indian Council of Agricultural Research (ICAR). During 1980s, IARI decided to form IARI Alumni Association. It was a commendable decision taken during the tenure of Dr N N Goswami as Dean of Post-Graduate School, IARI. The Association suffered from dwindling fortunes during the formative stage; particularly due to poor finance management and alumni location constraints. There was no record in PG School to enable finding out current locations of the alumni both at the national and international levels. In 1989, I was asked to take over as General Secretary of the Association with Prof. V L Chopra as the President. Prof. Chopra's leadership and vision enabled streamlining the working of the Association and take it out of the red. Activities such as topical seminars / symposia, dinner in honour of outgoing degree recipient students at the IARI convocation, etc. were introduced / streamlined. Still, the problem of enrolment of alumni as members of the Association persisted. In 1991, Dr Paroda took over as President of the Association. He not only carried forward the legacy of Prof. Chopra with increased zeal and vision but also addressed the problem of locating the alumni vigorously. Several alumni were located and enrolled as members. A significant step was publication of IARI Alumni Directory which, though an approximation, formed the basis for future guidance and improvement. I recollect that when this Directory was under finalization; Dr Paroda had changed job and taken over as Regional Plant Production and Protection Officer, FAO-RAPA, Bangkok, Thailand. His concern for the commitment was apparent when he mailed from Thailand enquiring about the publication status of the Directory. When informed that the material was ready and the only hesitance on our part (the directory was compiled jointly by me and Dr S S Tomar, Senior Scientist, Division of Agricultural Chemicals, IARI, who was also the Assistant Secretary of the Association) to publish it was the lack of authenticity of the whole information. He appreciated our constraint and signalled his consent to publish it in its current form. We finalized his preface through mail and brought out the Directory before the end of the financial year to avail the grant sanctioned by IARI for its publication.

One of the key assignments during Dr Paroda's illustrious career was the position of Executive Secretary, Asia Pacific Association of Agricultural Research Institutions (APAARI) from 1993 to 2014. The Association organized an international 'Expert Consultation on Biopesticides and Biofertilizers for Sustainable Agriculture' at Taiwan Agricultural Research Institute (TARI), Taichung, Taiwan from October 27 to 29, 2009. I had the privilege of serving as Technical Consultant for planning and organizing this consultation, and identification of international and national participants. It was another opportunity for working in close association with Dr Paroda. He planned and executed the minutest detail for the event meticulously and Dr J. L. Karihaloo (office incharge APAARI, in Delhi) and I strove to our utmost to give shape to his vision. The Consultation was attended by top experts in the field and was a grand success. I remember that at the conclusion of the conference when we were still in the conference hall of TARI, he walked up to me and said 'You have done India proud!' What better acknowledgement of the effort could anyone anticipate? It also reflected his consciousness in presenting to the world the potential and prospect of the Indian research effort in its true perspective.

Fellowship of the National Academy of Agricultural Sciences (NAAS) is another forum where we often met as fellows. In lighter vein, I derive satisfaction from the fact that NAAS Fellowship Directory is one document which places me ahead of him. Our names appear in succession with mine ahead of him. What a way to derive consolation? I have heard Dr Paroda speak at NAAS forum several times and observed him often hitting at the head of the problematic nails. As an example, in one of the speeches he brought out how scientists in different laboratories under the national agricultural research system (NARS) have put up the list of requirements of becoming NAAS fellow in front of their sitting tables so that they can focus on achieving the goal. With the result, they were working on research subjects whose results could be published in foreign journals rather than addressing issues of concern to Indian agriculture. This became a malady rather than an asset in NARS since several paper tigers were identified on the basis of publications published by them and made fellows of the Academy, even though the real problems confronting Indian agriculture remained unaddressed. To a considerable extent, this has led us to look towards foreign lands to seek ways to achieve the oft talked about 'next green revolution' or the 'ever green revolution'. NAAS has already initiated corrective measures to stall the malady.

I have another pleasant memory of my experience with Dr Paroda. In 1995, we published a book "Pesticides, Crop Protection and Environment", S.Walia and B.S.Parmar (eds), Oxford and IBH Publishing Company Private Limited, p.600. We requested him to write the foreword of the book and met him with a draft write up. He trusted the correctness of our draft write up to such an extent that he asked his office to type it on his letterhead and gave us the same hand to hand. We remain obliged to him for this gesture even today.

Dr Paroda, with his deep understanding of agricultural research and education needs, has been always appreciative and supportive of meaningful research and other contributions. He has been often vocal in praising such efforts and achievements. His support for our work on neem, superabsorbents (hydrogel), biopesticide formulations, etc. has been monumental and enabled promotion and commercialization of several of the technologies. The recognition has come through routine official channels with no personal pursuance. I believe that identification of good work and good worker should be in-built in the research and education management system of any organization, and not based on personal contacts or self propagation. Dr Paroda showed glimpses of a believer in this trait.

There are several instances on record that reflect and define his personality and character. To cite a few, his commitment to revive and improve the decaying infrastructure in the NARS during the 1990s was exemplary. Creation of National Agricultural Science Complex (NASC), Krishi Anusandhan Bhavans, National Bureau of Plant Genetic Resources at PUSA campus, etc. were his brain child. All these steps infused the much-needed fresh leash of life in the NARS.

I have observed him to be a man of few words who stands by you in the thick and thin. As a colleague, he is sincere and reliable. I salute his personality and pray for his long and healthy life.

Bhag Mal

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I take this opportunity to express some of my feelings and impressions about Padam Bhushan Dr Rajendra Singh Paroda. I had been very fortunate to have been associated with him for over four decades and had the privilege to work under his able guidance in different capacities and institutions. I learnt a lot from him and in fact he had been my role model throughout my professional career. When I look back, I find that that he had been the most important single person and a great motivating force behind my professional accomplishments for which I will remain ever grateful to him.

His vision, foresight, zeal, enthusiasm, team spirit, organizational ability, intellectual capability, leadership quality, research and administrative acumen, and personal traits of an excellent human being are par excellence. He had been a hard task master and never compromised with quality work and timelines but at the same time he is good at heart and always willing to listen and solve the problems which are brought to his kind notice. His outstanding contributions and significant achievements in the field of agricultural research, education and extension at the national, regional and global level had been exemplary and left an indelible mark which will always be remembered by the scientific community, farmers and the society at large not only in the country but globally. He earned a very high recognition through a large number of prestigious awards nationally and internationally and deserves many more such laurels of still higher order.

My association with Dr Rajendra Singh Paroda dates back to 1970s when he was the Head of Forage Section in the Department of Plant Breeding at Haryana Agricultural University (HAU) Hissar and I was a plant breeder at the Indian Grassland and Fodder research Institute (IGFRI). Jhansi. My first interaction with him was as a member

of Technical Committee constituted under his chairmanship for writing the proceedings and recommendations of the Forage Workshop in 1972.

Dr Paroda has an excellent quality of creating new opportunities and it reminds me of an instance when I was



National Coordinator of All India Coordinated Research Project (AICRP) on Underutilized Crops and Dr Paroda was the Director Of National Bureau of Plant Genetic Resources (NBPGR). The Commonwealth Science Council, London (UK) and Overseas Development Agency (ODA) jointly organized an International Conference on Underutilized



Crops in 1987 and Dr Paroda was invited to attend. He discussed with me and asked me to write to the organizers that India having national coordinated programme on underutilized crops, should be invited to make presentation and the organizers should meet the cost of participation. Accordingly I wrote to the organizers and our request was instantly agreed. Subsequently, he sent me to present the paper highlighting significant achievements of the programme which was well taken and I was identified as one of the five speakers to be interviewed by BBC for broadcasting in its field programme. Similarly, he convinced the Commonwealth Science Council to organize an international workshop on life support species in collaboration with NBPGR which was successfully organized and the proceedings were brought out in the form a book entitled, "Life Support Species" edited by Drs R.S. Paroda, R.K. Arora and Bhag Mal.

Towards the end of 1987, he was appointed as the Deputy Director General (Crop Sciences) and within a short period of a few months, he realized that status of breeder seed production in all major crops was highly unsatisfactory. One day he called me on phone and asked me to prepare a detailed status report on crop-wise breeder seed production in the State Agricultural Universities during the past 5 years. I prepared and provided the status report to him and he was highly disappointed about the poor efforts made by SAUs. He then called a meeting of all Vice Chancellors and Directors of Research of all SAUs and expressed his dissatisfaction and gave them targets of seed production which resulted in significant improvement in breeder seed production and consequently the grain production in the country. Subsequently, he got me transferred to ICAR headquarters and was instrumental in providing me the opportunity to work as ADG (Seed) and later as ADG (Food and Fodder Crops).

As ADG (Seed), I once represented ICAR in a meeting convened by the Additional Secretary, Department of Agriculture and Cooperation which was attended by Joint Secretary (Seed), Director (Seed) and the General Managers of most of the private sector seed companies. All participants from the seed companies were criticizing ICAR's role and I was the lone defender from ICAR side but I boldly and frankly defended the role and contributions of ICAR which was not only highly appreciated by the Additional Secretary but he also informed Dr Paroda about my performance in the meeting. Dr Paroda then congratulated me and asked me not to let ICAR down on technical matters in all such meetings and assured me of his full support. This is an excellent example of high degree of trust he has in his colleagues.

I also had an opportunity to work closely with Dr R.S. Paroda in the Institute building activities when he made me the Head, Project Implementation Unit of USAID Project at NBPGR, New Delhi and



was responsible for implementing the project activities and organizing monthly meetings under the chairmanship of Director NBPGR and quarterly review meetings under the chairmanship of Dr Paroda when he was DDG (Crop Sciences), ICAR. The project resulted in the construction of new NBPGR building including national genebank for long-term conservation and various laboratories, medium-term conservation facilities at 30 active germplasm sites and

training of over 100 scientists and technicians in different US laboratories.

I would like to cite an interesting instance of his hard attitude and at the same time his helping and supportive nature if convinced. In 1997, when Dr R.S. Paroda was DG, ICAR and I was the Director, IGFRJ Jhansi, I sent a proposal of visit of Director along with five Heads of Divisions to UK under the Indo-UK project but he did not clear the proposal for quite some time as he was given the impression by some people at the ICAR headquarters that the Director, IGFRJ is sending so many scientists on foreign visits as a result of which institute's work suffers. One day I met and requested him to clear the proposal but he point blank refused and asked me why I was taking the crowd to UK. I then explained to him that there is a slot for scientists' visits/consultancies and if we do not provide the opportunity of short-term exposure visits to our Heads of Divisions, our counterparts in UK will send more consultants using the same budget head. So we have to decide whether to give opportunity to our own staff or allow more UK consultants to come to the Institute. He quickly understood the scenario and said why this has not come to my mind earlier and he not only approved the proposal immediately but also appreciated my thinking and approach for the welfare of scientists.

Here is yet another excellent example of Dr Paroda's vision, determination, organization and implementation/execution. During the First Crop Science Congress organized at the Iowa State University, Ames in 1992 which I happened to attend along with Dr R.S. Paroda, Prof, M.S. Swaminathan, and several other Indian Scientists, one evening when we were walking through the campus of Iowa State University, Dr Paroda remarked "what a beautiful campus and why cannot we make such a campus in India". I then responded and said "it all depends on people like you who are at the helm of affairs in ICAR". I think, at that very moment, Dr Paroda determined and started working on this idea, generated resources and executed his plan to achieve the goal and as a result what we see today is the National Agricultural Sciences Centre (NASC), a beautiful complex housing a large number of CG Center offices, national institutes/centers, scientific societies, with excellent facilities of symposium hall, conference hall, committee rooms, scientific museum and international guest house. This world class complex is a great contribution of Dr R.S. Paroda.

There are numerous other such instances/examples which exhibit his personal traits as an able administrator, outstanding researcher, institution builder and a great human being. On this grand occasion of his 75th birthday, I congratulate him and wish him a very long, happy, healthy, peaceful and prosperous life.

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I dream to become Dr Raj Paroda one day!!

As a young agriculture student in mid 1990s, I used to hear one name that was a hope for all of us. A hope that he would create jobs for us, a hope that he would get funds for our research, a hope that he would develop state-of-the-art research infrastructure and a hope that he would lead us and transform Indian agriculture into 21st Century. This is how I and other young agriculture students knew Dr Raj Paroda!

Hope continued to resonate in my mind and for the first time I saw this towering personality sitting right beside Hon'ble Prime Minister of India Sh Atal Bihari Vajpayee during the opening of the 88th Indian Science Congress held at the Indian Agricultural Research Institute (IARI), New Delhi in 2001. I happened to participate in the congress in New Delhi while I was researching on the potential of biotechnology in agriculture as a fellow scientist of the Council of Scientific and Industrial Research (CSIR), New Delhi. The congress was the first mega event that I attended after I completed my post-graduation in innovation management from abroad. In the past, like me, hundreds of young agricultural students were beneficiary of Dr Paroda's ambitious National Agricultural Technology Project (NATP) that created massive jobs opportunities at different laboratories of ICAR National Agricultural Research System. Decentralized implementation of NATP research in mission mode mini-projects allowed all of us to contribute enormously to research outputs at local and national level. India's contribution to global research outputs spiked to a peak during that period!

Another mega milestone of his leadership was to introduce all of us to the realm of the virtual world in agriculture. He was the first to deploy a massive information technology infrastructure at all ICAR institutions and State Agricultural Universities (SAUs). IT enabled services in agriculture research and extension transformed the way in which we used to access research findings, peer reviewed journals, technology advancement and networking with global scientific community. It allowed us to reach out to farming community easier, faster and effective through KVKs. Setting up of new programs, construction of laboratories and modernization of infrastructure were his top priority that either retained trained researchers or

attracted many young scientists to ICAR institutions. The integration of ICAR and SAUs became a reality with the lateral entry of young scientists from SAUs to ICAR institutions resulting in the formation of a true National Agricultural Research System (NARS).

Not only Dr Paroda attracted young students to agriculture research but also nurtured them as astute researchers, scientists and professionals through a planned career advancement scheme introduced for first time in the history of ICAR system. He overhauled the curriculum for graduate and post-graduate students, shifted the focus of academia from the class room to compulsory work experience, allocated higher weightage to practical work, revamped the recruitment of agricultural research services (ARS) and introduced compulsory leadership training for ARS in agriculture research management. His passion and commitment for a trained and skilled manpower and human resources development in agriculture is reflected in his July 1999 foreword in ICAR publication “Academic Regulations and Curriculum for Degree Program in Fisheries Science”, which I quote *“we have given emphasis not only to new and emerging areas but also shifting the focus from know-how to do-how so that our under-graduates, after coming out of the universities should become job providers rather than job seekers”*, envisaged Dr R.S Paroda, Secretary DARE and DG ICAR and Chairman of Accreditation Board.

Leveraging globalization of agriculture through WTO Agreement on Agriculture (AOA), Sanitary and Phytosanitary (SPS) measures and the agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs), Dr Paroda seamlessly safeguarded India’s vast genetic resources by establishing the national gene bank, equipped India with trained manpower in the emerging areas of IPRs and helped the country with legislative frameworks such as PPV&FRA 2001, the National Biological Diversity Act 2002, International Treaty on Plant Genetic Resources for Food and Agriculture 2002 and the Patents (Amendment) Act 2005.

Dr Paroda also harnessed new partnerships in technology development by cementing public private partnership (PPP) and strengthening strategic collaborations with international institutions such as FAO, International Plant Protection Convention (IPPC), World Organization for Animal Health (OIE), Codex Alimentarius and CGIAR institutions and special programs to internationalize Indian agriculture research in line with 21st century agricultural research culture. His quest for research establishments at national and international level resulted in creation of the Trust for the Advancement of Agricultural Sciences (TAAS), the Asia Pacific Consortium on Agricultural Biotechnology (APCoAB) and the Asia Pacific Association of Agricultural Research Institutions (APAARI). I personally benefitted from these new institutions and international training programs conducted under his leadership through newly created the Global Forum on Agricultural Research (GFAR), Global Conference on Agricultural Research for Development (GCARD) and Young Professionals for Agricultural Development (YPARD).

Advancing seeds through innovation and entrepreneurship was core to Dr Paroda’s professional life. As a little contribution to his philosophy on improved seeds, I penned down a publication “Trust in the Seed” that captures the significance of seeds and new crop technologies,

which was released by Dr Paroda in the presence of late Dr BR Barwale during the seminar on “Achieving Self-sufficiency in Agricultural Production and Nutrition” organized by the Indian Merchants’ Chamber on 20 December, 2008 in Mumbai. Dr Paroda reminded all of us the power of an improved seed that spurred unprecedented growth of agricultural production from 50 million tons in 1950 to 272 million tons in 2016. It was Dr Paroda’s reign at ICAR in 2000 when India for the first time achieved food production of 200

million tons. As of today, India’s quest for food and nutritional security emanates from the seeds that Dr Paroda sowed during his tenure at ICAR, which is also reflected in his thoughts that he shared during Mumbai seminar in 2008 that I quote “to feed our growing population, we would need to have growth of an additional 5 million tons of food grains every year, a difficult task in the context of diminishing natural resources, rising soil salinity and lowered soil fertility, which I firmly believe we will achieve through agricultural R&D for our people”, alluded Dr Paroda.



My affinity with Dr Paroda grew to an unprecedented professional and personal level in the last two decades. I closely followed Dr Paroda’s journey post retirement from ICAR to ICARDA in Tashkent, to APAARI in Bangkok to APCoAB and TAAS in New Delhi. My obsession for Dr Paroda’s optimism and his drive for innovation and entrepreneurship compelled me to follow the path of agricultural entrepreneurship that led me to introduce quality protein maize (QPM) hybrids developed jointly by

CIMMYT and CCS HAU Hisar in the tribal belt of Banswara district of Southern Rajasthan from 2009 to 2013. Subsequently, I ventured into another farm innovation developed by IARI that allowed me to introduce India’s first zero erucic mustard seeds and zero erucic mustard oil branded as ‘LifeGard’ in India. I was so fortunate to receive guidance, support and mentorship of Dr Paroda in my quest to turn myself into an agriculture entrepreneur.

Bhanwar Singh Rana

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My Reminiscences of a legend and indomitable icon of Indian Agricultural Research

A mere coincidence, I have seen Dr R. S. Paroda ji from formative life to his ionic, charismatic professional journey, that made him a legend and doyen of Indian agricultural sciences occupying the well-earned, challenging and most honourable position of DG & Secretary DARE. I do remember my initial active association with him when he was commanding Forage Crops Division in HAU including Forage Sorghum improvement programme but also prior to it, as a talented Ph.D. student in IARI, when he looked a person of impressive and bold personality, destined to shine one day. At HAU, he, as the foremost forage breeder and his team made outstanding achievements that brought laurel by winning two ICAR awards namely “ICAR Award for Team Research in Agriculture” and “Rafi Ahmed Kidwai Award” for the biennium 1983-84. I still remember evolution of an outstanding widely performing GAUR variety and another outstanding and still popular multicut forage Sorghum variety SSG 59-3, among many other research contributions.

Based on very visible achievements and recognition, he was rightly placed for a bigger role as Director NBPGR where he has shown his forward looking managerial merit beyond any body imagination to conceptualize, plan and successfully implement a novel idea of establishing a world best GENE Bank to conserve the extensive germplasm and make available novel genes for posterity. This indeed brought him a great laurel and admiration as a top innovator, forward looking and a successful research manager. His good will, visibility and glory spread everywhere, creating many International linkages, and a beginning of golden era for NBPGR and recognition of its role in national and international contexts.



Dr R.S. Paroda, Secretary DARE and DG, ICAR keenly observing the new products from sweet sorghum



Dr R.S. Paroda, Secretary, DARE and DG, ICAR appreciating the grain quality of newly bred rabi genotypes

enhanced the investment, equipping farm and laboratory facilities, increased manpower under Hybrid programme, that enthused the crop improvement teams creating a great happiness and delivering quick results. “Management of Change in Coordinated Project” enabled him to refine the approaches practiced in those projects. We still remember his inspired guidance.

Later with few years of International stint in FAO at a Senior position in Bangkok, and capturing a broad global outlook and vision, Dr Paroda ji richly deserved and earned the most coveted position of DG (ICAR) & Secretary Dare. Government reposed faith in him to guide the destiny of Indian agricultural research and education in NARS and meet the country’s future challenges in globalization era. My feeling is that to his wisdom and heart, he wanted to transform the system making it more vibrant and responsive, fundamentally design the policies like legacies, streamline policies and procedures and make them efficient, uniform and sustainable as key elements to ensure their success in dynamic environment. First, he initiated the process to bring a change in mind set of manpower, administration and policy makers to get the paradigm shift in their way of thinking to harness the global standard and prepare country for future challenges and compliant to global policies. The way I looked, he meticulously put un-tiring enduring efforts in capacity building; make people future ready; upscaling the skills; creating inspiring leadership at various levels; enhanced investment and liberally renovate research facilities and old infrastructure (for us a ‘now or never situation’); emphasis on evolving cutting-edge technologies; redefining of operational efficiency and compliance; upswing in accountability, transparency and corporate governance; way forward in policy making and ultimately put Indian Agric. Research in a strong, dominant position in global context. His every moment of time, immense sincere efforts were devoted in creating a new era in NARS and future ready Indian Agriculture including ‘Climate Change’ theme.



Dr R.S. Paroda, Secretary DARE and DG, ICAR reviewing the progress made in rabi breeding programme

In addition to many, Dr Paroda's impactful, credible and more fruitful initiatives were: "Morals and Ethics in regulation and governance; Digitalization and Virtual connectivity (equipping and learning); Preparing system for globalization, IPR, germplasm registration and Biodiversity regulations; Preparation of Vision-2020 document (A road map of goal setting and execution of research, Education & Extension activities in the form of a Prospective Plan) encompassing futuristic approaches; Redefined management skills and putting processes and procedures in place; implementing inter-institutional NATP project to bridge the gap between research and extension; International Cooperation and creative partnership; creating synergy to harness power of scientific cooperation among themselves and with global peers in upright direction; Providing enabling environment to everyone; Provision of sabbatical, for the first time, for upgrading the expertise and skill level; Granting recognition to Scientist's ARS Forum to bring the harmonious and coherent working of scientific manpower and administration". The win-win situation created everywhere. He kept every initiative relevant signifying the triumph of his intelligible vision, brilliance and execution competence.



Director General, ICAR and Secretary, DARE, Dr R.S. Paroda listening to salient features of SPH-723, newly identified kharif hybrid

With respect to his ability, intrinsic values, inspired trust, unwavering focus, ability to deliver, he prepared and connected NARS for "New Millennium" - the 21-century that made perfect for his credibility, glory and reputation ever remembered as celebrated leader with reverence. His scientific pursuit and valuable contributions and services are recognized through many awards including Padma Bhushan (Govt. of India award), FAO World Food Day Award and many other awards, recognitions and International positions. He left behind an inspired trust, motivated team, scientific temperament, idea of intent of scaling, sustainability, process of enduring success and indelible imprints and legacy. He commands one of the highest reputation and trust among the scientific community in India and abroad, but still remained a beloved person of warmth, kindness at heart, humble and helpful to all. An example of his broad thinking at heart and kindness, but a bold administrative initiative was 'Granting permanency status to poverty stricken labour force'. We were thankful to Dr Paroda ji but Almighty God knows how many times these labourers have prayed for his wellbeing. Post retirement, through his Trust "TAAS", his spirit and passion continued to contrive improvement in Agricultural research, education and improving the lives of millions of farmers.

Dr Paroda ji's speech in "Globalization of Plant Breeding meeting" in USA (Governance of NARS by CGIAR centres), has a quote "See my Indian Sorghum Improvement programme which could not be overtaken by International centre". This was a strong justification to negate the intention of external forces. This gave a great pride to every Indian and his ever-memorable best compliment to we, the Sorghum workers. My family and myself have very high reverence and lavish admiration for him, his dedicated wife, Mrs. Shashi Paroda ji, and affectionate children. Wishing them sound health and a long happy glorious life.

Bikram S Gill

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Raj Paroda: Advancing Agricultural Sciences and Protecting Plant Genetic Resources

I, along with a number of NRI US-settled scientists, met Dr Paroda in New Delhi when he was DG of ICAR. Dr Paroda came across as a dynamic and visionary administrator who wanted to modernize and strengthen the national agricultural research system (NARS) in India. He wanted Indian scientists to be connected (electronic communications system) and compete with agricultural scientists as a part of global agricultural community. Recently, I attended the 1st International Agrobiodiversity Congress (IAC) held in New Delhi (6-9 November 2016) at the kind invitation of Dr Paroda, the Co-Chair of IAC. Later, Dr Paroda took the lead in formulating the “Delhi Declaration on Agrobiodiversity Management” ratified by 900 participants from 60 countries. The biggest world food security issue is the threatened loss of animal and plant biodiversity that underpins world food supply. Dr Paroda has dedicated his life to this noble cause. Whenever I visit the National Gene Bank in New Delhi, a treasure trove of Indian crop biodiversity, it is a reminder of the great legacy and the vision of Dr Paroda.

At 75 years of age, Dr Paroda is still burning midnight oil as Chairman of the Trust for Advancement of Agricultural Sciences (TAAS) and President of the Indian Society of Plant Genetic Resources (ISPGR). Whenever, I send a message to Raj, it may be day or night, I receive a prompt response! I was kidding Raj, do you ever sleep? Happy birthday, Raj! I look forward to celebrating 100th birthday in the year 2042!

Bishamber Lal

Sr. P.A. to Dr RS Paroda
ICAR-NBPGR



Dr RS Paroda joined as Director, ICAR-NBPGR in 1985 and I had the opportunity to work with him as his Sr. P.A. The ICAR-NBPGR was then located in its old building. The open area in front of the building was used by the Food Corporation of India (FCI) for parking their trucks laden with wheat gunny bags which gave very dirty look. Drivers and cleaners of the trucks were seen loitering here and there. Dr Paroda, known as a very good administrator, lost no time in getting done the boundary line construction and the area around ICAR-NBPGR building was converted into a beautiful complex.

The two blocks, adjacent to the main building were occupied by the workers unions of FCI and they were not prepared to vacate them. It was Dr Paroda who, not only got them vacated but also converted into a beautiful place to work. One of these blocks was given to ICAR-NBPGR for running their office and the other was used as library of ICAR-NBPGR.

There was a proposal to shift the location of ICAR-NBPGR from IARI to some other place. He not only managed to get the land from IARI to retain the ICAR-NBPGR campus at IARI but also got the land to construct staff quarters and bungalow for the Director.

Dr Paroda had several meetings with officials of USAID to raise funds for construction of new building and the Genebank. It is with his sincere efforts that a magnificent new building of ICAR-NBPGR stands on the main road near Inderpuri. As is known, Dr Paroda is a very hard task master. Apparently, he appears to be very strict and strong but in the heart of hearts, he is very loving and respects those who work hard.

Dr Paroda, as I know is very popular amongst the scientific community. Everyone in ICAR Institutes or Agricultural Universities, knows him personally. Last but not the least, he is very affectionate and loving personality. May God the almighty bless him with a long life so that he continues to do good for the nation.

Bitore Djumakhanov

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Memories of the leader!!!

Dr Raj Paroda is widely known in Central Asia and Caucasus. Despite being the regional coordinator of ICARDA-CAC for a short period of time, he has done a lot for the development of this region. From his initial days at ICARDA, he paid great attention to the training of young scientists, as well as to the conservation of plant genetic resources in the region.

Knowing that Central Asia and Caucasus is one of the centers of origin for genetic resources of cultivated crops, he studied the situation of genetic banks in the region. Understanding the role of genetic resources for the future generation, he urgently made decisions to improve the state of genetic banks in the region. With his personal assistance, genetic banks were built and modernized in all 8 CAC countries. Taking into consideration the agrarian science of Kazakhstan, one of the genetic banks is named in the honor of Dr Raj Paroda.

What he could achieve in a short tenure as the Head is unimaginable! However I would like to share some achievements - 8 gene banks of plant resources created by the policy initiative and the support of Raj Paroda are now successfully functioning in the region; 42 varieties of crops were released in the region, thanks to which farmers are receiving income to this day; over 120 young scientists from the region were trained for English course at different levels in Asia, Europe and America and currently, many of them successfully work in the development of national programs. All this was achieved by Dr Raj Paroda through his leadership skills and organizational ability. Despite his position, he was easily accessible to all his colleagues.

In my life, Dr Raj Paroda played an important role as a mentor in the literal sense of the word. I had joined ICARDA as a young scientist from the national program and did not have any experience of working in an international organization. He would sometimes come to my office and during discussions, he would organize my pens, notebooks and books neatly on the table. He would subtly say "If the desk is in order, then the work is in order", laugh and leave. I never saw him getting annoyed or raising his voice. Every time I went to him, I was amazed at how his desk was

always organized so neatly. Since then, I also make sure to organize my desk as it makes it easy to work the whole day.

I was educated during the Soviet time when it was considered that if a scientist spends more time at work then he is a good scientist. So as a scientist, I used to spend a lot of time at the workplace and would carry work home too. However, Dr Raj Paroda's views on work were absolutely in contrast. He believed that a scientist could contribute only if he/she was organized and used time effectively. He always dissuaded us from carrying work home. Once he told me "To achieve success one should be able to manage time, assess the situation, identify most important events among the important ones and most of all be a man to take responsibility." For me, these words have become the law of my life to this day.

Under the leadership of Dr Raj Paroda, our office in Tashkent turned into an international center under the umbrella of ICARDA in a very short time and hosted other offices (IPGRI, IWMI, Bio saline Agriculture, and AVRDC). Our office became a coherent, workable team of like-minded people who quickly made decisions and implemented them. All the visiting scientists from all over the world appreciated our team and in 2005, we were selected as the best team of year.

Dr Raj Paroda always paid great attention to family members of the employees. He used to encourage the involvement of the families of team members in social events and ensured special prizes for children and family members. He even knew the names of family members of all the employees and tried to communicate with them in Russian.

In December 2006, I was responsible for organizing the New Year's party. He came a little earlier than everyone and walked around the restaurant, looked at the decorated tables and drew attention to an extreme table that was different from the rest of the tables. He wanted to know why that table was different. On learning that it was for the drivers, he said that the drivers will not be made to sit separately. He shared that employees were coming to celebrate the New Year and it was not a place of work where people should be distinguished based on their official status. I was in a state of shock! This was a revelation and for me, it was a lesson learnt for life. That evening Raj Paroda showed that he was a man with a great soul, very amiable, empathetic, someone who mingled with everyone and cared for everyone around him.

There is a saying: "A person, being in the mountains, will not be able to appreciate the height of the mountain, he is so high". To determine the height of the mountains you need to look from far away, then you can determine how high it is. With these words I want to say, when I was working with Dr Raj Paroda, I got to know him through his actions. Now, from far away I realise what a great scientist and leader he is, and even a greater human being.

I am proud to say that I have worked with Dr Raj Paroda as his team member. In all the positions that I have held till date, I have tried to be firstly a human and then a leader, just like Dr Raj Paroda.

I am proud that fate brought me to work in close association with such a great son of India, Dr Raj Paroda!

Brahma Singh

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I came to see and meet Dr Rajendra Singh Paroda, Former Secretary, Department of Agricultural Research and Education (DARE), Government of India and Director General, Indian Council of Agricultural Research (ICAR) presently Chairman, Trust for Advancement of Agricultural Sciences (TAAS), New Delhi, for first time in college of agriculture at Chaudhary Charan Singh Haryana Agricultural University, Hisar in 1974 when I joined there as Assistant Professor of Vegetable Crops where he was already serving as Associate Professor in the department of Plant Breeding. He was well known, popular and respected scientist among one and all. He moved from there to National Bureau of Plant Genetic Resources (NBPGR), New Delhi where he contributed immensely and brought the not much known bureau to limelight at national and international level. As a testimony to his contribution, plant genetic resources International Crop Research Institute for Semi-Arid Tropics (ICRISAT), Hyderabad has named its Gene Bank after him as 'Rajendra S. Paroda Gene Bank'. Dr Paroda, being diligent and intelligent with farsightedness, a rare combination in a leader, brought the institutions to limelight by adding state-of-the-art technical facilities and infrastructure wherever he got an opportunity to serve. He is endowed with exceptional determination and dedication towards business. He believes in delivering quality he is expected of.

My association with him became intense when he took over as DG, ICAR and the then Scientific Advisor to Raksha Mantri, Secretary to Department of Defence Research and Development, Government of India and Director General, Defence Research and Development Organization, New Delhi Bharat Ratna Dr APJ Abdul Kalam, former President of India, popularly known as People's President took initiative to have "ICAR- DRDO Interface" on high altitude agricultural research and development, the program I was heading at DRDO. This interface had contributed substantially to the benefit of tribal farmers and troops in high altitudes inaccessible areas, besides scientists of both the organizations. Dr R S Paroda visited DRDO-DIHAR, Leh (at that time FRL – Field Research Laboratory, where I served as director in early nineties and luckily still voluntarily extended advice on their research and development program particularly on Seabuckthorn/ Brahmpthal) and permafrost-the facility now developed by DRDO at Chang La 17500 ft above mean sea level, near Leh.



Dr Brahma Singh explaining DRDO- FRL (now DIHAR) cold desert agro-animal R&D to Dr R S Paroda (the then DG, ICAR) and Dr K L Chadha (the then DDG- Horticulture, ICAR), during their visit to Leh- Ladakh. Dr S K Dwivedi, Scientist, FRL and Col. S K Sareen, (the then Director, FRL) are conducting the visitors.

Dr Paroda, besides other areas of agricultural research and development, has enormous interest in protected cultivation. Indian Society of Protected Cultivation had organized its maiden seminar at NASC in A. P. Shinde hall on 21 March 2013 on Advances in Protected Cultivation. Dr R S Paroda was kind enough to inaugurate it as the Chief Guest. In his inaugural address, he emphasized bringing additional 10,000ha under protected cultivation in next five years. This idea encouraged the stakeholders. The progress on protected cultivation is fast leading to covering additional 25,000 ha under protected cultivation since 2013. Present total area under protected cultivation is more than 50,000 ha. Dr Paroda is to be rightly complemented for importing greenhouse technology to India from Israel by establishing an independent unit named as Centre for Protected Cultivation Technology (CPCT) at a premier research institute, Indian Agriculture Research Institute (IARI), New Delhi. Besides developing protected cultivation technology for Indian conditions, it is engaged in much needed development of human resource by imparting short trainings to interested youth, farmers, traders, extension and research scientists and also postgraduate courses leading to PhD degree. Establishment of this CPCT, which multiplied in more than one and half dozen states in India, with active collaboration of agriculturally advanced country Israel, can be termed as milestone in fast developing protected cultivation in the country. Recent visit of honourable Prime Minister of India, Sh Narendra D Modi to Israel has also emphasized strengthening of collaboration on protected cultivation between the two countries.

When Dr Paroda took over as Chairman, Haryana Kisan Ayog, Chandigarh, he made several Working Groups on agriculture, animal husbandry, horticulture and others to prepare road map of Haryana agriculture development obviously for the benefit of farmers. He provided me an opportunity to be chairman of a working group on Haryana Protected Cultivation. It gives me great satisfaction when I find Haryana Department of Horticulture is following recommendations of this working group and becoming one of the leading states in the country to promote protected cultivation. India is proud of Dr Paroda for his contribution to protected cultivation in India - an answer not only to climate change but changing environment of agriculture from rural to urban agriculture coupled with several hi-tech farming methods like hydroponics, aeroponics, aquaponics, vertical gardens, soilless farming, jiffy plugs, portray, cateye plugs and others.

Dr Paroda was General President of Indian Science Congress, 88th session held at Indian Institute of Agricultural Sciences, New Delhi where the idea for establishment of Trust for Advancement of Agricultural Sciences (TAAS) was conceived. Now TAAS is delivering and meeting its goal mainly due to the efforts of Dr R S Paroda, the Founder President of TAAS. Further my association with Dr Paroda got intensified by my becoming a life member of TAAS. Under dynamic leadership of Dr Paroda, TAAS is playing a pivotal role in making India hunger-free by using science and technology for elimination of hidden hunger, malnutrition and accessibility to food by one and all besides auditing impact of agro-technology in Indian agriculture and suggest future guidelines on the subject. In a nutshell, Dr R S Paroda is an acknowledged renowned scientist of international repute who has very helping attitude and happily advises whoever approaches him for advancement of Indian and global agriculture research and development.

While congratulating Dr R S Paroda on his 75th anniversary, my family joins me in wishing him *“An active, creative, happy, healthy, joyful and rewarding long life”*.

Bushan L Jalali

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It is quite a delight that Indian Society of Plant Genetic Resources is planning to publish a book on Dr R.S. Paroda, to commemorate his vast achievements and passion for science and development, and subsequently slated to be released on August 28, 2017 - his 75th birthday. I am indeed quite impressed by the thoughtfulness of this prestigious Society and a vast spectrum of his well-wishers to aptly felicitate him on this eventful day.

On his 70th birthday, I had said: *‘with an element of pleasant surprise, I just can’t believe that Dr Raj Paroda is going to complete seven decades of life on August 28, 2012 - who looks even now so young and rocking (touch wood)’*. And, now five years down the line, it is quite exciting to see that even today, he continues to be so young at heart,..... and continues to rock! At this moment, I am spontaneously reminded of what Albert Einstein once said about ‘Life’, and I quote: *“Life is like riding a bicycle; to keep balance, one has to keep moving”*. This is probably what Dr Paroda seems to meticulously follow, in letter and spirit, to keep himself in a state of dynamism.

I had the unique opportunity to know him closely since early 1970s when we both started our respective professional careers at Haryana Agricultural University, Hisar. And, all through these long years, his cheerful attitude and helpful temperament endeared him to all. Over the years, it was a sheer delight to watch him serving several high-profile academic/administrative, national and international, positions with great distinction and élan. In fact, I should not sound repeating what many of his colleagues and well-wishers would chronicle about his dynamic leadership qualities, outstanding professional achievements, prestigious laurels and distinctions conferred on him. Having seen and known him closely for the last more than four decades in all his colours and perspectives, I would rather prefer to share some of my inner vibrations about this wonderful man, who not only is a doyen of Indian agriculture, a great visionary, but also the traits he should be remembered for.

He has a neat, down-to-earth way of expressing his powerful solutions for today’s most pressing issues in agriculture research, human resource development and technology transfer. He amply symbolizes the three core values: – 3 Cs, viz. Courage, Credibility and Compassion. He is a gold mine of wisdom, dynamism and profound common

sense. With these traits in plenty, he very successfully transformed the entire fabric of National Agricultural Research System (NARS) to newer qualitative heights. Highly respected leadership expert in the domain of agriculture at the global front, he is presently devoted passionately to the mission of helping national and international organizations, particularly in this period of intense change.

I am often reminded of his quote “*Change is difficult, but change we must*”. And, here is a man full of insight and wisdom, possessing that flare and passion and acumen to ‘change’ the way we see the world. He radiates positive energy.

He shall continue to be one of the most respected icons of Indian agriculture for decades ahead.

While penning down these reminiscences, I recall one of my visits to his house in Delhi, few weeks before my superannuation. In a brotherly manner, resting his arm on my shoulder, he gave me some down-to-earth tips for the *next inning of my life*, appropriately laced with his personal experiences. And at one point, he said: *people will forget what you said, people will forget what you did, but people will never forget how you made them feel*. When in introspective mood, I do nourish and nurture several such memories of our golden yester-years.

My family joins me in wishing him and the members of his family best of the times ahead. And pray that he keeps rocking to the beats of the times.

May God bless him with His love that makes each day a joy to live!

C D Mayee

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Dr Rajendra Singh Paroda: A symphony of friend, philosopher, guide and much more

Walking through life, we rarely come across extraordinary personalities who influence our thinking and life. Dr Paroda is one such person who has impacted not only my thinking but also of many like me in the field of agriculture as a true leader. I came to know of Dr Paroda at IARI when he was receiving his PhD degree and I was beginning with my doctoral studies. It took another 20 years to have second personal interaction with him in a conference on oilseeds when his in-depth analysis of the scenario of edible oil sector made the audience spell bound. My association with him grew intense when he recommended me as a candidate for Vice Chancellor despite my being just a professor for 25 years in Marathwada Agriculture University, Parbhani. As Director General, ICAR, it is only through his support I could manage the University finances because the State Government then ceased the contingent grants to all SAUs of Maharashtra. He was not only a friend, philosopher, guide but much more to me in the hours of crisis. After my term as VC, he brought me to ICAR as Director, Cotton Institute, Nagpur which gave me the opportunity to work at national level. Since 1997, he has been guiding me constantly as a friend. I shall never forget his hospitality in Tashkent when he was working there. He was known all over the countries once a part of USSR, around Uzbekistan as, 'RAJ'. The good will he gathered by being a friend, philosopher, and guide is simply exemplary and rarely unheard of.

In the end, I must say that Dr Paroda is a born leader whose qualities I have tried to emulate. Effective leaders are not about making speeches or being liked, but leadership is defined by results and not by attributes (Peter F. Drucker).

I have learnt two things from him, one is the 'Art of Giving', build platforms that spread the ideas that work and two, develop capacity to translate vision and mission in to action. Dr Paroda gave an unstinted support to biotechnology and GM crops in all his positions as he is fully aware that without the help of new technologies, it will be difficult for a populous country like ours to remain self-sufficient in agriculture production. I wish him long life to support us; the scientists, farmers and planners for the welfare of Indian Agriculture.

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Professor Rajendra Singh Paroda: An internationally renowned eminent agricultural scientist

I have had the privilege to know Dr Rajendra Singh Paroda since 1984 and ever since he has intensely affected me and many others in academics. Before that I had heard about Dr Paroda but had never met him. His name was legendary in the scientific circles of HAU, Hisar.

I vividly recall my visit to Hisar in 1984 to deliver series of lectures in the Dept. of Biochemistry. Prof. Randhir Singh introduced me to him. Despite his occupying pivotal position as Director of Research, he was gracious enough to drive me personally to show fodder germ plasm and upcoming herbal garden. I was beholden with his courtesy and ever willing gesture. His unassuming nature can be gauged from many other instances. In 1991, a delegation participated in Indo-Soviet meet on 'Advances in Photosynthesis'. Dr Paroda, who happened to be in Moscow to attend another meeting, found time and visited hotel Academia to meet the members and apprise himself about the outcome of this meet.

Dr Paroda visited Jaipur National University, Jaipur to deliver lectures in 2009 on my invitation. His lecture on the role of Biotechnology in quality and quantum of crop plants was masterpiece of clarity and exposition. He goaded young scholars to embrace new challenges and open vistas in scientific enquiry. Dr Paroda is vividly remembered not only for his science but for his class leadership qualities. During his visit to Jaipur he preferred to avail the hospitality of Dr B.P. Singh, an old colleague from IARI even though JNU, Jaipur had arranged star accommodation for him. This speaks of his warmth and affection for his 'once colleague' who had headed the National Gene Bank.

Both of us were recipient of Commonwealth Fellowship in 1962 and 1968 respectively. I completed my PhD degree under the guidance of late Prof. PT Thomas FRS at Welsh Plant Breeding Station Aberystwyth in 1964, whereas Dr Paroda was postdoctoral fellow at Botany Dept., University College Aberystwyth from 1968-70. I visited Aberystwyth, on my return from Mexico and had the good fortune to meet several agriculture scientists at Aberystwyth. Profs. H Rees, DC Cooper, Martin Borill to

mention a few, spoke of his brilliance, immense charm, and courtesy, being bestowed with open nature.

His stay at HAU was marked by brilliance in research and administration. My closer interaction with him was in 1992 as a member of Plant Physiology Biochemistry Panel of ICAR. Thereafter, as a member of newly constituted Plant Growth Regulators Committee, I gained enormously from his experience during the Panel/Committees meetings. To me, he bubbled with dynamism and energy thinking of new ideas. For a long time, fertilizers, pesticides and growth regulators had been clubbed in the same category. Realizing that Plant Growth Regulators had some specific role in crop improvement, he constituted a separate Panel FD141. Most of its meetings were held in ISI building situated adjacent to UGC. In his subtle way, he inspired generations of scientists in India and abroad. Hailing from village Saradhana (district Ajmer, Rajasthan) with rural background, he ascended to the top position of Director General of the Indian Council of Agricultural Research (ICAR) and Secretary, Department of Agricultural Research and Education (DARE), Government of India. Though he received early education from the village school, to his credit he later moved to the best institutions in India and abroad (UK), mainly due to the inspiration from his mother, who though illiterate and engaged in farming profession, goaded him to pursue purposeful higher studies.

He spearheaded and modernized the national agricultural research system while serving as Director General, ICAR and Secretary, DARE, Government of India (1994 to 2001). During his tenure, in his silent and unassuming ways, he was instrumental in establishing more than 20 new institutions throughout India to strengthen horticulture, livestock, natural resource management, fishery, and agricultural engineering and social science sectors. He has many admirable qualities, none of them more pronounced than the trust he places in the next generation. He conceived one of the world's largest and most modern National Gene Bank housing invaluable 4.0 lakh germplasm collections of different crops. The impressive National Agricultural Science Centre Complex, located at Pusa Campus, New Delhi was also built under his dynamic leadership, foresight and vision.

Dr Paroda is credited for having initiated several important national programs like special hybrid research program, special food grain production program, initiation of new seed policy to promote public private partnership, drafting and enactment of Protection of Plant Varieties and Farmers Rights Act, and promotion of biotechnology, including testing and release of Bt cotton. He is also instrumental in negotiating the largest and most innovative National Agricultural Technology Project (NATP) of the World Bank to reorient agricultural research, education and extension system to meet emerging challenges. His succinct research contributions in the field of plant breeding and genetics including genetic resource management are widely recognized.

As an ardent and devoted researcher, he was associated with the release of 10 improved crop varieties at the national level, publication of more than 250 research papers in journals of repute, authored/edited 10 books and more than 40 proceedings of national, regional and international conferences, besides a number of strategy papers.

Creditably, International Crop Research Institute for Semi-Arid Tropics, Hyderabad and Agriculture Research Institute, Krasny Vodopad, Kazakhstan have named their Gene Banks after this illustrious scientist in recognition of his outstanding contributions. Dr Paroda has won several academic distinctions. His umpteen awards and recognitions have been listed and chronicled elsewhere (NAAS Year Book 2017; Int Jour Life Sciences 2017). To mention a few, General President of the Indian Science Congress Association (2000-2001); President National Academy of Agricultural Sciences (NAAS) (1998-2000), Chairman of the Global Forum on Agricultural Research (GFAR), FAO, Rome (1998-2001); for 22 years as Executive Secretary of the Asia Pacific Association of Agricultural Research Institutions (APAARI) based at FAO Regional Office, Bangkok since 1992; Chairman, Board of Trustees, ICRISAT, Hyderabad, member of IRRI Board, Los Banos, Philippines; Member of Advisory Council of Australian Centre for International Agricultural Research (ACIAR), Canberra; Commonwealth Agriculture Bureau International (CABI), London and Advisory Committee on Sustainable Agriculture, MONSANTO.

Dr Paroda is recipient of several distinguished awards, such as Rafi Ahmad Kidwai Memorial Prize (1982–83), ICAR Team Research Award (1983–84), FICCI Award (1988), Om Prakash Bhasin Award (1992), Asia-Pacific Seed Association Special Award (1995), CGIAR Award for Outstanding Partnership (2000), Life Time Award by Association of Agricultural Scientists in America (2001), Dr Harbhajan Singh Memorial Award (2001). For his passionate involvement in agriculture, President of India decorated him with the country's prestigious civil award Padma Bhushan in 1998. He also received Dr Norman Borlaug Award in 2006.

Dr Paroda is a Fellow of almost all Science Academies of India, beside Fellow of Third World Academy of Sciences (TWAS), Russian Academy of Agricultural Sciences, Tajik Academy of Agricultural sciences, Armenian Academy of Agricultural Sciences, and the National Academy of Agricultural Sciences. He is also elected Honorary Member of the American Society of Agronomy and the Crop Science Society of America.

To his credit he has been conferred honorary D.Sc. Degree by 15 academic institutions including Ohio State University. Dr Paroda has worked for the overall benefit of farmers as Chairman, Farmers Commission of Haryana; Chairman, Working Group on Agriculture and Member, Rajasthan Planning Board. He was mainly responsible for drafting and release of State Agriculture Policies in both the States. As Chairman of the Trust for Advancement of Agricultural Sciences, his present goal is to link science to society with human face.

He is remarkable in judging people for their organizing skills, human qualities and their scientific acumen. Dr Paroda is a man driven by loftier goals to improve agriculture and fate of farmers. He continues to disseminate knowledge to improve the life of farmers who constitute the just part of our society.

I hold Dr Paroda in great awe and wish him many years for guiding young scholars and policy makers.

For me it is gratifying to pray for his healthy and long life.

C R Bhatia

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My first acquaintance with Dr Rajendra Singh Paroda was sometime in early 1970s, through his publications on genetic architecture of yield, and components contributing to yield, in wheat. Late, Dr A. B. Joshi, was the coauthor. Dr Joshi, a great teacher, had taught me genetics during the Associate IARI course, and in the Post-Graduate School, for the mandatory credits required for the Ph.D. Further enquiries with friends at IARI, revealed that Dr Paroda was a student there during 1964 to 68. I had left IARI in 1962, and hence, missed meeting him as a student. Later, I came to know many good qualities of Dr Paroda, as a scientist, from Dr Joshi, and this made me follow his numerous publications. If I recall correctly, it was during a scientific meeting at IARI in 1968, that Prof. V. L. Chopra introduced me to Dr Paroda, as a rising star from the Genetics Division. In the following years, I worked with Dr Paroda in several committees, including the founding Executive Council of the National Academy of Agricultural Sciences, with Dr M. S. Swaminathan as the Founder President. Dr Paroda succeeded Dr Swaminathan, as the President of NAAS in 1997.

The Second Crop Science Congress, jointly sponsored by NAAS and ICAR, was held at New Delhi in 1996. Dr Paroda was then the Director General of ICAR and played a significant role in its organization, and in evolving the scientific program. He was invited to deliver the Dr Benjamin Peary Pal Commemoration Lecture at this International Congress, with participants from over seventy countries. He presented an excellent overview of the agricultural production in the post green revolution period in India, and the problems facing the country at that time, and likely to come up in near future. He emphasized the concern for stagnating productivity of cereals, and need to increase yield of pulses and oilseed crops. Degradation of resource base - land, water and atmosphere were highlighted.

After commercial release of insect resistant Bt cotton hybrids, in a meeting organized by the Maharashtra Hybrid Seed Company (MAHYCO), at Mumbai, he was full of praise for the initiative taken by MAHYCO in importing Bt. cotton stock from Monsanto and using the same in an accelerated back crossing program to develop local hybrids. He praised the immense advantages of Indian Bt cotton hybrids and greatly appreciated the biotechnological tools for the genetic enhancement of cotton and other crop plants. Recently, he has been a strong supporter for approval of genetically engineered mustard hybrid developed at the Delhi University. I wish Dr Paroda many more years of healthy, happy and active life. India and the Indian farmers need his understanding, imagination, inspiration and vision. I am confident that the best is yet to come.

Carl-Gustaf Thornström

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It all started -as I recall it- already in the early mid 1990s in the SAREC-funded collaborative Indo-Swedish rapeseed/mustard improvement program, where ICAR our main counterpart was coordinating the Indian side. In those days, I was the desk officer for India in SAREC and also duty desk officer for Swedish support through the CGIAR. Over the years, I served in several capacities in different committees and boards and other fora related to the CGIAR, FAO and other international R&D-institutions/organizations. This also included the CGIAR CAC-program. My work as senior desk officer required a lot of travel. And quite often I met Dr Paroda in these many different fora. I was always and still am very impressed with his strong personality and capacity to engage in a very broad agenda of international/regional and national agricultural research. In my early days as desk officer at SAREC, I of course also turned upon Dr M.S. Swaminathan who often participated in different SAREC funded seminars/conferences mainly within the CG-system. Like 'MS', Dr Paroda has contributed enormously to international, regional and national agricultural research. His strong personality, diplomatic skills and friendly appearance are highly commendable. This includes his impressive capacity to politely 'command order' when certain seminars/conferences started to derail. That demands high scientific knowledge and strong and polite social capacity. Dr Paroda fulfils all this and beyond.

Due to sudden illness, I was not able to participate in the 1st International Agrobiodiversity Congress at New Delhi in November 2016. But I have studied the reports from the conference and am convinced the "agrobiodiversity window" might be a platform to take a broader look at International Agricultural Research once again. In this context, of course the CGIAR, in my view, needs to have a much deeper self-reflection on the organization's comparative advantages in today's world as compared to some decades ago.

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Receiving a request to write on my 'interaction/ experience/ assessment/ anecdotes etc.' with Dr RS Paroda is in itself an honour, very gratifying as also worrisome for a small fry like me..... it is about writing on an institution in himself. I started seeing Dr Paroda when I was just a student of Ph.D. program at the Indian Agricultural Research Institute, New Delhi. Our generation saw the transformation in the functioning of the Indian Council of Agricultural Research (ICAR) under his devoted, dynamic leadership. I can still recall the days when the Scientists in ICAR were even short of basic stationeries, contingencies, etc. and used to roam around in Delhi for some place to halt, as and when we visited the capital city for official work. Dr Paroda took up the mantle from there to bring funds, facilities, etc. in the system. The World Bank funded National Agricultural Technology Project (NATP) was one of the several game-changers, which Dr Paroda brought to the system in ICAR that benefitted performers in a big way. Today if there is any respect for Agricultural Scientists in general in the country or more so in ICAR, it is primarily due to Dr Paroda. He also brought modernization in the laboratories, research farms apart from transparency, accountability in the ICAR system. He changed the face of ICAR by spearheading the construction of the NASC Complex of the Council that has been and shall be a symbol of pride for all Agricultural Research Scientists. Alike me, several others, both young and not so young shall be writing about many genuine contributions of Dr Paroda in this compilation, whereby the name of Dr Paroda became quite one frequently discussed name even among distant relatives of ICAR employees with passage of time.

During my tenure at the National Research Centre on Rapeseed-Mustard (now ICAR: Directorate of Rapeseed-Mustard Research) at Sear, Bharatpur, Dr Paroda laid the Foundation Stone of its Laboratory-cum-Administrative Building in May 1999, which is a pride today. Nothing came easy even for Dr Paroda. Certainly, he has been a great leader. But he too had to handle things with adequate tact and got his share of troubles as well.

During the VIII Plan period, when the Government of India appreciated the dangers of excessive use of chemical pesticides, realized the importance of Integrated Pest Management (IPM) in line with the dust raised by 'Silent Spring' (Rachel Carson), the IPM policy in other parts of the world, in 1988 the Council founded the National Centre for Integrated Pest Management (NCIPM). Realising the importance of the

institution, Dr Paroda was given the responsibility to lead the charge as the Officer on Special Duty of the NCIPM. My joining as Director of NCIPM (now National Research Centre for Integrated Pest Management), Pusa Campus, New Delhi in 2012 allowed me to get closer to Dr Paroda for his valued guidance. This opened the opportunity for proximity of NCIPM with the 'Keet Saksharta Samuh' of Jind (Haryana), who managed the cotton pests by conservation of natural enemies and for many years without use of any chemical pesticide against pests in cotton. At a time when whitefly attack triggered suicides by farmers at places, nearly 250 farmers of Jind district obtained good yield of cotton crop and that too, without using any chemical pesticide. ICAR-NCIPM in collaboration with 'Keet Saksharta Samuh' initiated research and extension activities during 2014 cotton crop season to evaluate the non-pesticide practices of farmers in *Bt* cotton. Instead of spending about Rs 12,500 per ha to manage whitefly on insecticides, the farmers in 16 villages invested Rs 1245 per ha (number of sprays: six; cost per spray: Rs 207.5 per ha). This could be due to conservation of natural enemies in fields with non-chemical practices, which in turn managed the whitefly population. In other words, these farmers of the area learnt the art of maintaining pest defender ratio in such a manner that the natural enemies could take care of the pests by not allowing pest population to cross the economic threshold level. Scientists of ICAR-NCIPM even today continue to work with the 'Keet Saksharta Samuh' of Jind, when we rejoice our association with and guidance from the institution that we respectfully call Dr Paroda.

The institution in the great persona still strives to contribute in every possible way to help the farmers and researchers of National Agricultural Education and Research System (NARES) in general and those of ICAR in particular across the vast country of ours, which he led, nurtured with indomitable commitment, courage and conviction for required revival to glory at a time, when it was most needed. Even today he continues to help the cause of NARES and ICAR, the latest being Chairing Review Committee for restructuring and revamping the Agricultural Scientists Recruitment Board. As and when a person requires help, deserves encouragement, appreciation, protection, etc., Dr Paroda has always been in the forefront to do so, which he does with no bias. Having seen Dr Paroda's leadership style succeed, I have no hesitation in stating that I tried to follow his principles of management as applicable in my small cases both at ICAR-NCIPM and now at Uttar Banga Krishi Viswavidyalaya.

In my humble opinion, every good leader has some pros and cons. Thus, as a fan of Dr Paroda's management style, I too tried to analyse his strengths and weaknesses. Thus, in my modest view, the biggest strength that Dr Paroda had was his grand networking within the country and across the globe, which he used to the fullest for bringing home advantage without compromising on needs of the ICAR or the Nation. The other advantage Dr Paroda had was his blunt ability to say 'NO' to people who tried to take advantage in exchange of providing what Dr Paroda wanted for ICAR. He used to assign task by first taking care of the problems/ hurdles so that the person did not have enough to flag for excuse when he might have failed by chance; or in other words, he used to also enable the people to complete their assignments. And his weakness: possibly his strength as well, was his blind faith for subordinates along with delegation of powers. It was his trust that made him suffer. But still, in management, you have to believe your subordinate (while noticing the BLIND spot).

Really a proud pleasure to receive a mail like the one Dr Rishi Tyagi sent..... a wonderful venture.... obvious question, why none took it up before?

Dhiraj Singh

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Professor Rajender Singh Paroda Ji

With grace of God, I got opportunity to have my first meeting with Prof. Paroda ji in 1979 when I visited Haryana Agricultural University to seek admission for pursuing my doctorate in plant breeding. That time he was Head of the Department of Plant breeding where around 200 scientists were working for different crop improvement programmes. He used to take our classes for Biometrical Genetics. We all nurtured with his deep subject knowledge and enjoyed his way of teaching. Beside great teacher, he was the great administrator in the university. He was very particular to monitor research, teaching and extension activities of the University besides, his pertinent attention to wheat and forage breeding programme. A large number of varieties were developed and notified under his able leadership. I was lucky enough to have Prof. Paroda Ji as co-major advisor during my Doctorate. He used to encourage for hard work and strong basic learning's of the subject. Under his leadership, I got the opportunity to work as Assistant Scientist Plant Breeding on Rapeseed-mustard crop improvement programme. I enjoyed my whole career as Oilseed Brassica Breeder and contributed more than ten varieties with a number of germplasm lines registered with NBPGR. He had given me some Ethiopian mustard genotypes for their further improvement. We had initiated interspecific hybridization programme and developed series of *B. carinata* genotypes incorporating earliness from *B. juncea* which were nearly thirty days early in maturity with ideal dwarf plant type. These lines are still being used for developing new breeding material possessing the high degree of resistance to foliar diseases.

I am indebted to his vision for developing me as a dedicated oilseed Brassica Researcher which is still enduring even after my superannuation as Director ICAR-Directorate of Rapeseed-mustard Research. We had developed series of resistant derivatives to white rust using Ethiopian mustard as the donor. Dr K.W. Riley who was looking IDRC programme in India and Nepal was very happy to find such progress and offered me full funding with business class to and fro air ticket, per diem and my conference registration to attend the International Genetics Congress at Toronto, Canada during 1987. However, it was subjected to the clearance from

DARE, Government of India. Prof. Paroda was holding the position of Deputy Director General (Crop Sciences) in ICAR during those days. I remember his kindness and help extended to get the No Objection Certificate from DARE. I met Prof. Paroda at his residence in *Khel Gaon* in morning hrs. He asked me to visit ICAR with him in his office Car. Although, I was hesitating to travel with him somehow, I get the strength to travel with him from *Khel Gaon* to ICAR. He used to sit on the ground floor near the main gate. He rang a call to undersecretary from his office and asked him to issue No Objection Certificate to attend the conference. In the afternoon, I was able to collect the no-objection certificate. Similarly, he helped me for my exposure visit to the USA under INDO-US Aid during 1993. During 2001, we came to know that Prof. Paroda is going to join as head CGIAR programme for Central Asia and Caucasus. We had come to see off from Indra Gandhi International Airport to Prof. Paroda from Hisar. He advised all of us to do good work in respective areas. As and when I meet Prof. Paroda, he always asks how we are doing. We were very fortunate to have Prof. Paroda as Chairman Haryana Kisan Ayog with his office at CCS HAU Hisar and seeking his guidance regularly.

In the year of 2008, I had applied for the post of Prof. and Head Plant Breeding, surprisingly he was the expert in interview board. Again he had selected me and given opportunity to work as Prof. and Head Plant Breeding and to prove my credential. His fostering came to fruitfulness when I was selected for the post of Director, ICAR-Directorate of Rapeseed-Mustard Bharatpur during 2013. Prof. Paroda visited the ICAR-Directorate of Rapeseed-Mustard on its foundation day on 20th October 2015 and delivered foundation lecture with marathon brainstorming session.

It helped the Directorate in shaping and formulating new research programmes. His contentment to the progress of the Directorate, further encouraged me in developing ICAR-DRMR as the most preferred destination for Rapeseed-mustard research and extension backed by strong infrastructure and conducive environment.

On the occasion of his 75 birthday, I am endlessly grateful to you sir for your constant support, encouragement and love. I hope that your continuous support to Agriculture Education, Research and Agriculture Policies will regularly nurture the world agriculture and farmer.



Dzhamin Akimaliev

GFAR Steering Committee

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A word about my friend Raja

At personal meetings, I often compared Dr Raj Paroda with Raj Kapoor. If R Kapoor, as an outstanding actor of Indian cinema, remained in the memory of my generation, in the hearts of the great Soviet people, R Paroda for us is a stalwart in the field of agricultural science - he is a scientist of world scale. He is one of the founders of the creation of modern genebanks of international standards. It was under his leadership that genebanks were built in all the countries of Central Asia and the South Caucasus, including Kyrgyzstan. Raj Paroda is the largest organizer of agricultural science. In our large region, where he worked as the head of the central office of the CGIAR CAC, R Paroda attached paramount importance to the reform of the National Agricultural Research Systems and thereby improved the efficiency and effectiveness of agrarian science, directly contributed to the training of modern young cadres and strengthened the material and technical base of the scientific-research institutions.

I was always amazed by the vigor and strong will of Dr R Paroda in achieving the tasks set. Every year, he visited the 8 CAC countries at least twice, and practically, on the ground, helped strengthen our scientific potential. The obvious fact is that Dr Paroda left a deep mark of his active and positive actions in the minds of scientists from Central Asia and the South Caucasus. When he came to Kyrgyzstan, he visited my house, was friendly with my family and interacted well with my sons who are agronomists. When I took the Kyrgyz national instrument Komuz into my hands, sang the folk song "Quiet Evening", his heart "stopped". In this song, there are such lines:

*Evening sunbathing over the river
Quiet over the village at this hour
I want you to be with me
Only sorry that there is no you now*

*Quiet evening, warm evening
I like these evenings
On this quiet, warm evening
For you, darling, I sing*

Time flies like a bird. I met Dr Paroda when we were young. And now my friend Raju is 75 years old. However, despite the age, we do not grow old in soul. And this is the most important thing in life. Dr Paroda can be proud of the fact that he has always worked for his people and for the prosperity of the international community of scientists. When, in the late 1990s, I met Dr Paroda in New Delhi for the first time, I was pleasantly surprised by his high stature as President of the Academy of Agricultural Sciences of India, his wisdom and vision. We have another song: "As you were, so I stayed." These words relate to Dr R. Paroda.

On the day of the glorious 75th birthday of Dr Raj Paroda, I heartily wish him long years of life and constant creativity, full well-being in work and family, strengthening and developing our fraternal ties.



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I first met Dr Paroda in the mid 1990s in Delhi when he was Director General of the Indian Council of Agricultural Research. With me, was the late Prof. S Kannaiyan from Tamil Nadu Agricultural University (TNAU), an expert on biofertilizers for Biological Nitrogen Fixation. Dr Paroda quickly captured my enthusiasm to decrease the use of synthetic nitrogen fertilisers by helping researchers in India to extend symbiotic nitrogen fixation in legumes, to cereals and other non-legume crops. But he is a realist, pointing out the vast range of Indian agricultural institutes that would need to be coordinated in such a game changing venture, more than he could visit as Director General in a year!

His supportive friendliness and enthusiasm were infectious. He encouraged Prof. Kannaiyan with his colleagues at TNAU, and also fellow colleagues in the National Academy of Agricultural Sciences to try to bring with me a greener nitrogen revolution to India, and less developed countries, to ensure agricultural sustainability as part of an evergreen revolution. Thanks to Dr Paroda for the vision which is now beginning to be realised (Agriculture and Food Security, 2017, The Greener Nitrogen Revolution, DOI : 10.1186/s40066-016-0084-2).

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I am honored to say a few words about a kind, soft-spoken giant in the international world of food security and rural development, Dr Raj Singh Paroda.

I first met Dr Paroda in 1992 when he was selected to replace another amazing officer, also of Indian Origin – Dr R.B. Singh, as our new Plant Production and Protection Officer at FAO's Asian Regional Headquarters in Bangkok. I was at that time the leader for the Field Food Crops Group in the Plant Production and Protection Division at FAO's global Headquarters in Rome. My responsibility was for the technical content and quality of support for all crop production officers of FAO. Paroda continued the exemplar quality of work being done for countries in the region. He was creative and very thorough in every thing he did. He earned the respect of everyone he worked with and for. I later had the opportunity to interact with Dr Paroda professionally following his retirement from FAO, as he continued to serve the international and national agriculture community in diverse important positions, always with the very highest level of dedication and competence. We all learned much from him. Dr Paroda, so deserves that gratitude of the global community as we strive to ensure food security and enhanced livelihoods for all. He is, still today, the inspirational leader and doer he was when he joined FAO in 1992.

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I met Raj Paroda at the annual CGIAR meeting at the World Bank in Washington, in 1995. At that moment, we were both deeply involved in re-thinking the National Agricultural Research Systems (NARS) of our two countries. Raj Paroda was leading this process at ICAR (India) and I was leading it at CORPOICA and COLCIENCIAS (Colombia). From our first conversations, we realized that we shared deep convictions with respect to the opportunities and challenges that agricultural research faced in the context of globalized knowledge-based societies at the turn of the century.

The common objectives we shared quickly led us to collaborate actively, not only in terms of exchanging insights and experiences, but also in terms of developing concrete proposals to respond to then-current challenges and opportunities. We were quite aware of four major changes taking place world-wide. (a) Profound changes in science leading to the need to re-think agricultural research, in order to integrate new areas of science based on the revolutionary progress of biological sciences. (b) Changing patterns of research organization that required deeper stakeholder involvement, to assure a closer link between research and innovation, while working directly with the agricultural producer at the farm level. (c) The increasingly important role played by research partnerships, research networks and strategic alliances in the emerging structure of global science. (d) Urgent development challenges and expanding research agendas closely related to sustainable human development objectives, while faced with decreasing public investment in R&D.

Through a very active dialogue carried out from 1995 to 1998, we worked in very close collaboration to lay the basis for the Global Forum on Agricultural Research (GFAR). During those years we met in Washington, Brasilia, Rome, Montpellier and New Delhi, or simply interacted through the electronic knowledge community that we helped to establish encompassing these development issues. Thanks to our shared strong commitment, this strategic alliance between Delhi and Bogotá, working in close interaction with colleagues in Asia, Latin America, Africa, Europe and North America, soon gave birth to the Global Forum on Agricultural Research (GFAR). The GFAR Secretariat was established in 1998 in FAO's headquarters in Rome; the First GFAR Global Conference took place in Dresden, Germany, in May 2000. Working with Raj Paroda and his team in Delhi, and with the strong support of FAO, CIRAD and the World Bank, we were able to bring together a dynamic stakeholder network of agricultural research for development: national agricultural

research systems, international agricultural research centers, advanced research institutes and universities, farmers' associations, NGOs and various representatives of civil society. Thanks to a consultative process that took place in the various regions of the world, a global participatory system was created based on the Regional Forums for Agricultural Research: APAARI in Asia, FARA in Africa, FORAGRO in Latin America and the Caribbean and EFARD in Europe.

As the result of the consultative process carried out during the year prior to the first conference, and building upon the visions of Regional Forums and categories of stakeholders, the **"Dresden Declaration: Towards a Global System for Agricultural Research for Development"** was formulated. More importantly, stakeholders around the world were involved in discussions with one another, developing a capacity for strategic thinking, and common perceptions of the type of world we are seeking to achieve, as well as the role agriculture and agricultural research play in its construction.

In November 2006, the GFAR Global Conference took place in New Delhi, and the main topic was that of reorienting agricultural research to meet the Millenium Development Goals. This first phase of constructing a global agricultural research system for development led to a second phase initiated in Montpellier, France, in March 2010. The two major global networks operating in this field (CGIAR and GFAR) came together to jointly sponsor and organize the Global Conference on Agricultural Research for Development (GCARD), a global event convened every three years. GCARD-1, "Assuring the Impact of Agricultural Research through Rural Innovation", met in Montpellier, France, in 2010; GCARD-2, "Foresight and Partnership for Innovation and Impact on Small-holder Livelihoods", met in 2012 in Punta del Este, Uruguay; GCARD-3, "No One Left Behind: Agri-food Innovation and Research for a Sustainable World", met in 2016 in Boksburg, South Africa. The GFAR approach collectively developed is similar to what recent literature on global challenges calls "Transformative Innovation Policies" (TIP), or "Territorial Agroindustrial Innovation Systems".

The construction of complex social processes, such as this one, depend on the commitment and motivation of key social actors that can envisage the world in which we want to live, and are able to inspire others to join the process. In the intense dialogue that I carried out with Raj Paroda during the years in which we worked shoulder-to-shoulder, I was inspired by his strong convictions and motivated by the many discussions we had on key aspects of agricultural research, rural innovation and its impact on improving the livelihoods of small agricultural producers. This led to many experiments related to the re-organization of NARS, improving their interaction with international research centers and advanced research institutions, and assisting the small farmer to improve his production technologies to achieve the sustainable human development objectives, as the basis for effective rural development. In doing so, we contributed to development of both South-South and North-South research partnerships. Despite geographical distances and different cultural environments, we learned from each other, and were able to build global knowledge communities that bring together institutions such as ICAR (India), ARC (South Africa), CORPOICA (Colombia) and INIA (Uruguay), to mention four examples.

And now, as the world faces increasing challenges related to sustainable human development objectives and copes with the impact of global climate change, we need the continuous inspiration and motivation that Raj Paroda brings to global development efforts.

G L Kaul

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It is delightful to learn that Dr Paroda will be celebrating Platinum Jubilee year of his life. Lalita, my wife, joins me in conveying our heartiest congratulations to him and his family on this occasion, and wishing him many happy returns of the day. We pray that he may live an active, healthy and peaceful life for years to come, and continue to contribute to the Indian Agriculture as he has done in the past.

I had the good fortune of having his association right from the time of his admission in PG School of IARI, New Delhi in 1963-64 when I was doing my Doctorate. However, we came close to each other after I joined ICAR in 1981. My first hand experience of working with him started from the time he joined as Director, NBPGR, and has continued till today. I must admit that my best period with him was when I was appointed by him as OSD, NATP in 1993-94, funded by the World Bank, with major responsibility of establishing and operating this prestigious and massive project throughout the country under his direct supervision and guidance. During this period, I had a close look at his day to day working, quality of leadership and dynamism shown by him in steering the Indian agricultural research and education to face the challenges cropping up from time to time, and initiating long term programmes in high tech research to meet the growing needs of the farming community, thus gaining international recognition and accolades. It was a pleasure to see his meticulous approach, penchant for minute details, highly analytical mind, and firmness in his decisions, besides being a well-meaning and caring boss for all those working in the ICAR and SAUs.

Dr Paroda is a man of determination, drive and self-confidence, which helped him to achieve great success in modernizing ICAR, introducing far reaching reforms, and raising the work standards in the Council. His leadership qualities and dynamism helped the Council to make major advances in agricultural research, education and extension education in the country, and in the process strengthened the National Agricultural Research System (NARS). He was successful in getting landmark projects and programmes approved and implemented. To mention a few, the Gene Bank for the country, the NATP, One-time- grant for the ICAR Institutes and State Agricultural Universities (SAU) to modernize the facilities, NASC Complex having infrastructure facilities of international standards and many more. We had an added pleasure of being his neighbour in Asiad Village, New Delhi, and found the entire family very friendly, helpful and caring. I have no doubt that credit of success achieved by him should also be given to Mrs Shashi Paroda, his devoted life partner.

We once again send our best wishes to the entire family.

Gajendra Singh

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I first got to know Dr Paroda when I joined ICAR in 1994. I worked with him for three years and have kept in contact ever since. I have a high regard for his expertise in the field of agriculture worldwide. What is most exceptional about Dr Paroda is his vision and ability to enable innovations in agricultural research. Let me give you a simple but very concrete example. When Dr Paroda became DG of ICAR, there were only a few computers – and even those were not being utilized. He tasked me with making ICAR an organization that uses technology to exchange expert knowledge, increase efficiency, and transparency. Because of his vision, I believe that ICAR achieved these objectives.

Dr Paroda is a very strong leader who bases his decisions on scientific facts and rational arguments. He does not accept proposals at face value or simply on the basis of who is proposing. He is dedicated to making the right decisions even if it means spending long hours in continuous discussions. He does not believe and neither does he support short cuts. But once he is convinced on the basis of facts, he commits himself to convincing others and to guide the process until it achieves its objective. As a result of his leadership, ICAR was strengthened by adding more specialized scientists in agriculture research systems, such as ARIS and IPR. He also led improvements in infrastructure, laboratory equipment and facilities, staff facilities, etc.

Among his colleagues and his staff, Dr Paroda has a reputation of being a hard task master, who is not only extremely hard working, but believes in putting forward the best product possible.

As a person, he is very approachable and accessible to all. He is admired and respected both within his professional community, but also those who have had the benefit of knowing him.

I feel very proud to have worked with him. I have learnt a lot from him and am certain, so have many others.

On this very special occasion, I wish him good health and happiness in all aspects of his life.

Gajinder Singh Sahni

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I first met Dr Rajendra Singh Paroda when he joined the Ministry of Agriculture, Department of Agricultural Research and Education (DARE) in 1994, as Secretary, Government of India, DARE and Director General, ICAR. I was Secretary, ICAR and Joint Secy., DARE, at that point of time. On the very first day of his joining, I noticed a sense of contentment and satisfaction amongst the scientists in the ICAR. They all knew him well from the time he was Director in an Institute in the ICAR system, as a brilliant and a dynamic scientist, who would go to any extent to modernise and strengthen the system and work towards betterment of the scientific community.

During his welcome address on the first day, he made it clear that he had joined ICAR to work towards improving agricultural research in the country and ensure higher production and productivity. What impressed me most was that he had a clear vision and was determined to achieve it. Together, we worked hard during the next three years to realize this Vision. I still recollect the day when he made a presentation in the then Planning Commission for enhancing the budget of ICAR and impressed all the members of the Commission for enhancing our Budget. For the first time ever, we got a budget of over Rs 1000 crore, which was double the budget for the previous year. That was the biggest jump any Ministry or department had got in its budget.

Dr Paroda used to base his arguments on one fact – that the institutes/ research centers under ICAR system were set up in fifties and sixties and over a period of 30 to 40

years most of the equipments, instruments and laboratories had become old and outdated. New technologies had taken over and our labs had to be upgraded if we were to meet the demand of food security in future. The sincerity of his appeal for better deal for agricultural research impressed everyone right from our Minister to the then Prime Minister.





I very soon discovered that Dr Paroda was not only a brilliant scientist, but was equally good in administration of the system that he was handling. It was during his tenure as DG that the administration of the various institutes under ICAR was delegated in the HQ to the department heads i.e. Principal Scientists/ ADGs and DDGs. He explained to us that the scientists posted in the HQ had worked as independent Directors, where they headed

the administration of the institutes and thus they could be entrusted with administration at HQ. I found this argument very convincing and in due course very effective. This also left the Secretary, ICAR with time away from routine work to devote to other important activities like initiating Work Study for ICAR system, infrastructure improvement at Institute level which required approval right up to FA level, etc. I must add here that I would get full support from Dr Paroda for the developmental activities in the system.

He would always treat his fellow scientists and colleagues in government with lot of respect and whenever we would enter his room we were greeted with a smile. One day jokingly I asked him “Doctor Sahib, where did you learn so much about administration”? His reply was simple and convincing. He said “I had been head of an institute in my younger days with no support to run the institute and that is where I learnt administration.” He surely



had the art of carrying his team with him, right through the time he was DG. He had a positive attitude and would entice us to be positive to the problems faced by the scientists, as well. But he had the courage to be tough when the situation demanded so. For example, during one particular agitation by the staff of HQ, he made it clear that he would not yield to the pressure brought by the union and refused to talk to them until the agitation was called off.

I think his greatest moment was when Prime Minister Shri Atal Bihari Bajpai came to inaugurate the prestigious National Agriculture Science Centre at Pusa, which was the brain child of Dr Paroda, and is one of the best science centres in the country. Dr Paroda was given a standing ovation by the audience for 5 minutes when he got up to speak. I was invited to the function though I was no longer in ICAR and must say that it was a proud moment for all of us who had served with Dr Paroda, to hear the shower of praises by all the dignitaries present including the Prime Minister.

On the occasion of his 75th birthday, I pray for his good health and long life. May he continue to work towards betterment of agricultural science and research for strengthening the food security in the country.

Gautam Kalloo

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Professor Rajendra Singh Paroda, a man of vision, mission, action, passion and compassion did commendable work during his service period devoted to agricultural research and development for the nation.

To my knowledge, he started his career as a Plant Breeder at Haryana Agricultural University, Hisar and further served this university as Professor and Head, and Additional Director of Research. During this period, I remember that Prof. Paroda motivated sensitized several young scientists and teachers for their work which created a momentum of scientific pursuit during that period, specially, development of number of varieties in various crops by plant breeders at the University. I was also working as vegetable breeder at the university during that period and had the opportunity to interact with him. I cannot forget the guidance, support and motivation given to me as a result of which a large number of high yielding and resistant vegetable varieties were developed by my colleagues and me that created a great impact in increasing the vegetable production and productivity in the state including the increase in farmers income.

Subsequently, ICAR appointed him as Director, NBPGR where his commitment for the management of genetic resources and infrastructure development was outstanding. He made the system of getting required genetic material easier for breeders.

During his service period as Secretary, DARE and Director General, ICAR, I had many interactions with him. I had joined ICAR as a Project Director of PDVR, Varanasi. Guidance and support from him was commendable and within a short span of time, Project Directorate of Vegetable Research was upgraded to Indian Institute of Vegetable Research. His most encouraging words for me were - "go, ahead". I remember once asking him inquisitively why he supported the institute so much. He said "I support all the institutes in a similar way but you have been able to rise to the occasion in leadership position. There is crisis for leadership. Go ahead and build the best vegetable research institute of the world." Today, Indian Institute of Vegetable Research is indeed a world class institute serving the needs of the farmers. From the depth of my heart, I appreciate the support of Prof. Paroda for this.

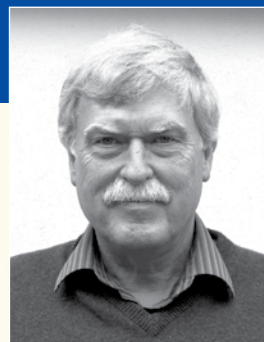
One of the outstanding contributions of Prof. Paroda is the establishment of National Agricultural Science Centre Complex. Presently, almost all the international organizations involved in agricultural research have their offices in this complex which also houses a state-of-the-art museum. Further, several activities of ICAR, NAAS and other agricultural organizations are also taking place there.

In a nutshell, I can say that my association with Prof. Paroda has been long, inspiring, deeply satisfying and fruitful. His contribution in the development of agricultural research and system in India would always be written with golden words. He has been an administrator, scientist, colleague and a human-being 'par excellence'.

My best wishes to him on completing 75 years and hope that he will be as active in the coming years as he has always been, contributing to agricultural research with an ever-smiling face.

Geoffrey Hawtin

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Dr Paroda is a very great man and scientist and it has been a real privilege and pleasure to have known and, on a number of occasions, to have worked closely with him. His support for research on genetic resources is particularly memorable and appreciated by me, especially during the period I was DG of the International Plant Genetic Resources Institute (IPGRI, now Bioversity International) in Rome, Italy. His support for the building of the CGIAR office in Delhi was especially noteworthy and valued as was his support for our work in Uzbekistan and throughout Central Asia. The CGIAR as a whole, and I personally, owe him a very great debt of gratitude and wish him all the very best for the future.

Dr R.S. Paroda: The Name is Enough

Most respected personality, legendary agriculturist, father of second agricultural revolution, renowned farmer and son of Rajasthan, Padma Bhushan Dr R.S. Paroda has always been my role model. Although I could personally meet Dr Paroda, the then Secretary Department of Agricultural Research & Education and Director General, ICAR in his Krishi Bhawan Office in 1993 however, I had been hearing about him from my mentors during my graduation course in Rajasthan Agricultural University, ever since he became Deputy Director General (Crop Science), ICAR, New Delhi.

My first meeting with Dr Paroda during my Ph.D. has blessing for planning my career in the field of Agricultural Education and Research. Since then he has never forgotten to add his precious words of motivation on various occasions as and when we met in professional events and the trend still continues in the form of his blessings, guidance and occasional presence at this centre.

A born Ajmerite, village Saradhana exactly, Dr Paroda is a down to earth person and a very professional and progressive farmer who has successfully established an orchard wherein he has grown many fruit trees like mango, sapota, citrus, aonla, ber pomegranate, karonda, guava, tamarind and date palm under extreme temperature variations of this semi-arid region. Being a farmer, Dr Paroda is deeply connected with farmers and has been making great efforts for providing solution to enhance the farmer's income.

Being the most recognized planner, executer and an architect of the modern agricultural research infrastructure, Dr Paroda had been the key person behind establishment of ICAR-NRC on Seed Spices (NRCSS) at Ajmer, an important location for seed spice growers in the heart of Rajasthan State. He had been prompting us to keep an eye on the Seed Spice grower's interest in tune with the research mandate of this centre. During his presence at professional events like seminars/symposia and workshops etc., he invariably interacted with the farmers and took initiative to know and resolve the burning issues related to seed spices growers and stake holders.

The strategic development of a Seed Spices Research Centre in the heart of Rajasthan state by Dr Paroda has proved to be extremely fruitful to the growers and other stake holders as is visible from the fact that the export of major seed spice crop cumin during last year was more than 1.5 billion USD and this has surpassed the export figures of many other spices. Rajasthan is the biggest producer of cumin, coriander and fenugreek followed by Gujarat which has the highest production of fennel. Unjha Mandi being largest one for seed spices attracts the farmers of western and southern part of Rajasthan, hence exact figure of state wise seed spice production is difficult to know as the farm produce crossing state borders is not officially accounted in the records.

There are huge challenges before farmer's community but in Rajasthan & Gujarat especially in the seed spice growing areas, there has been no untoward incident of farmer suicide, etc. in the last one and a half decade. Initial few years at ICAR-NRC on Seed Spices, Ajmer focused on establishment, infrastructural development and fundamental research, thereafter, the organization has made tremendous efforts not only in research but in technology transfer as well. Hundreds of professional trainings have been conducted for the growers, self help groups, NGO's and stake holders across the country including special programs in tribal belts of North East and Rajasthan.

Numerous field level demonstrations across the country, thousands in numbers have been successfully conducted besides, quality seed replacements adoption of scientific practices and post harvest handling of farm produce and seed processing activities and trainings to the growers have been carried out in the last decade. The area of production has almost doubled in last ten years and the productivity has increased considerably resulting in enhancing the farmer's income and social economic security in the seed spices growers' region and that was the basic purpose and vision behind starting this organization.

Dr Paroda has been a role model and front line motivator for every staff and worker of ICAR-NRCSS, Ajmer. He knows the staff members personally, guides them with his precious advice and gladly accepts our invitation to grace the occasion at professional events. Among many such events, the last was on January 21, 2017 when he along with Dr Trilochan Mohapatra, Secretary DARE and DG, ICAR, New Delhi inaugurated the first ever in an ICAR Institute, Rooftop Solar Powered Grid connected electricity generation plant. The same day, Dr Paroda gave a key note address and chaired a special session on 'Doubling Farmers' Income Through Diversification with Seed Spices' during a National Seminar on 'Seed Spices for Enhancing Farmers Prosperity and Livelihood Security' held at ICAR-NRCSS, Ajmer during January 21-22, 2017.

He is one of the most devoted agriculturists, a stalwart against all odds for the farmers, powerful source of inspiration to many, ever green positive thinker and the best advisor, I have ever seen during my professional life. I pray to Almighty to keep Dr Paroda fit and fine so as to enable him to give his best to the students, workers, researchers and finally the farming community of the country.



Dr Paroda with ICAR-NRCSS Staff



Dr R.S. Paroda planting a tree sapling at ICAR-NRCSS Campus on August 10, 2012



Dr R.S. Paroda inaugurating scientists' Training Hostel with Dr A.K. Singh at ICAR-NRCSS Campus on August 10, 2012



Dr R.S. Paroda inaugurating National Seminar on "Seed Spices for Enhancing Farmers' Prosperity & Livelihood security" at ICAR-NRCSS, Ajmer on January 21, 2017

Guram Aleksidze

President of Georgian Academy of Agricultural Sciences
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Dr Raj Paroda - an internationally renowned scientist in the field of agriculture and a public figure

Dr Raj Paroda, who served as Director General of the Indian Council of Agricultural Research (ICAR) and as Secretary of Department of Agricultural Research and Education, is an accomplished scientist, research administrator and development practitioner.

Dr Paroda is known for modernizing and strengthening the national agricultural research system in India and other countries. The government of India recognized his contributions towards the advancement of agriculture by awarding him the Padma Bhushan Award. He is the recipient of several other awards and recognitions including the Rafi Ahmad Kidwai Prize and the ICAR Team Research Award. He was also awarded the Borlaug Award by Coromandel International, a fertilizer company.

Dr Paroda was founding chairman of the Global Forum on Agricultural Research, and was president of the Indian Science Congress Association and India's National Academy of Agricultural Sciences.

He is a fellow of all science academies in India, the Third World Academy of Sciences and the Russian Academy of Agricultural Sciences. He is also an honorary member of the Crop Science Society of America and the American Society of Agronomy. He served for more than two decades as the Executive Secretary of the Asia-Pacific Association of Agricultural Research Institutions.

Paroda has also served as Chair of the Farmers' Commission of Haryana and the Working Group on Agriculture, as well as a member of the Rajasthan Planning Board. Currently, he is Chairman of the Trust for Advancement of Agricultural Sciences.

I met many scholars and public figures in my life, but never met such a high level professional and famous world acknowledged scientist as Dr Paroda.

I met him for the first time at the Global Forum on Agricultural Research, which was held at Rome. He immediately drew my attention to his remarkable remarks, in which he had his own usual laconic and diplomacy. With his direct endeavours

and support, issues concerning developing countries were in a high priority having great political and practical significance.

Dr Paroda is known internationally for his contribution towards promotion and conservation of biodiversity. He is a creator of Genebank, whose name is written in golden letters in the history of this country. We Georgians consider that Dr Paroda has a special contribution in the development of our genetic resources bank.



Dr Raj Paroda with Georgian legume breeder Dr Pasha Vacheishvili

Professor, Dr Raj Paroda whom we (scientists from Central Asia and the Caucasus region) all respect has held several prestigious portfolios and assignments at the national and international levels, such as Regional Coordinator of ICARDA in Tashkent (Uzbekistan) from 2000 to 2006, Chairman of the Governing Board of the International Crops Research Institute for the Semi Arid Tropics (ICRISAT), President of National Academy of Agricultural Sciences (NAAS), etc. During this tenure, he frequently visited the regions, which caused great mobilization and interest in us, because each of his visits was related to certain novelties.

Dr Raj Paroda was distinguished by great punctuality and demand towards employees. I recall his incontrovertible position towards any indifference that was widely spread in post-Soviet countries.

I would like to share one episode in our relationship which amuses me. At the meetings while giving a speech, Dr Raj always referred to me as Dr Guram. I thought it was a positive attitude towards me. Once the Global Forum Meeting was held in Washington, USA at the World Bank office. I met him in Dr Srivastava's room and after we had greeted each other he told me that among the Georgian delegation was Dr Aleksidze and asked me if I knew him. He was very surprised when I told him that was me.

Dr Raj Paroda is an eminent educationist, agriculturist, scientist, administrator and above all a fine human being who has become 75 years old.

I would like to congratulate him on his 75th birthday, he must be happy with the way he has lived, because he did more than one person could. Thus, he has left important trace and immortalized his name.

I congratulate you on this day and congratulate all the Indian people. Be blessed his family and his beloved nation.

Gurbachan Singh

Former Chairman, ASRB
Agriculture Commissioner (Govt. of India)
Director, CSSRI, Karnal; ADG (Agronomy, ICAR)
Founder President, Indian Society of Soil Salinity and Water Quality
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Dr. R.S. Paroda : Builder of ICAR and Promoter of Farmers Welfare

I came in close association with respected Dr. Rajender Singh Paroda ji after he became Director General ICAR and Secretary, DARE. His towering personality reflected in terms of an outstanding research manager, administrator and agricultural policy advisor continued to attract my closeness to him as advisor and member to seek guidance during pleasant and unpleasant times during my professional career. Boldness in taking decisions, frankness in giving opinion, firm stand for right cause, encouraging and motivating approach for young scientists and continued concern for the welfare of farmers place Dr. Paroda as a different personality amongst the NARS fraternity. Based upon my experience, I would like to quote three examples/instances related to the towering personality of Paroda Sahib which impressed me the most:

i. Support and encouragement to exploit and popularise edible Cactus (*Opuntia ficus indica*) in India

Under UNDP fellowship, in 1991, I had the opportunity to visit Texas A & I University, Texas, USA and to work in the laboratory of Dr. Peter Felker, Project Leader, Centre for Semi-arid Forest Resources. Dr. Felker was world authority on research and promotion of Prosopis and Cactus. While returning from US, I

brought along with me 5 carates of promising 5 clones of edible cactus being cultivated commercially in Mexico and Texas. These clones were planted in CSSRI green house/microplots/pots in February, 1992. Subsequently Dr. Paroda, as DG, paid a visit to CSSRI and as a part of his field visit, he also visited our experiments in the pot house. As a young scientist at that time, the kind of encouragement and motivational words I received



Photo 1: Cactus in fruiting in CSSRI Pot House

from Dr. Paroda Ji, not only made me a fan of his but also gave the feeling of father-son relationship. I quote Dr. Paroda's actual remarks "Gurbachan, I am happy to know that a scientist has thought of initiating this dream research. While at CAZRI, we imported several clones of edible cactus from Mexico and planted in the field, but did not get fruits. I will appreciate and also acknowledge your science if you succeed in getting fruits in these clones".

Luckily, after about 2 years of planting, profuse fruiting occurred in most clones planted in pots. There was no limit to my joy at that time. The sweet fruits were plucked and packed in trays used for storing and transporting eggs and handed over to the then Director, CSSRI, Dr. N.K. Tyagi for display during Directors' Conference at New Delhi. I also wrote a letter to Dr. Paroda ji about this success. Immediately, my letter was forwarded to Dr. K.L. Chadha ji, the then DDG (Horticulture) with the directions to initiate further research on this wonderful plant for research and promotion in arid areas of the country. This was a thrilling experience for a young scientist like me. When I was receiving the Rafi Ahmed Kidwai



Photo 2: ICAR Award Function 1999



Photo 3: Receiving 10th Sukumar Memorial Award of ICAR from Dr. Paroda Sahib

Award (1996-98), I still recall, Dr. Paroda introduced me to the chief guest Sh. Som Pal ji, the then Union Agriculture Minister with the pleasant remarks that he is our *Cactus Man*. Because of Dr. Paroda's support and guidance during last 25 years, we have several edible cactus orchards in the country and the crop is being commercially exploited in dry areas by national and international organizations including ICARDA. This kind of support, encouragement and motivation for young scientists is fading day by day in the ICAR System.

ii. Fourth International Agronomy Congress: Success attributed to Dr. R.S. Paroda

As President, Indian Society of Agronomy, I organized the IV International Agronomy Congress from 22-26 November 2016 at New Delhi. The congress was attended by more than 1000 delegates including about 130 from abroad. It was Dr. Paroda's visionary guidance and support as Chairman of the International Advisory Committee that the Congress

received such wide appreciation globally. His unparalleled credible reputation with the global scientific community and personal relationships helped us to ensure participation of so many eminent experts from abroad. His visionary suggestion of establishing a continuing committee to follow up on recommendations and making it an international event was lauded by the delegates. International Continuing Committee is now in place and next Agronomy Congress is planned outside India.



Photo 4: Inaugural Session of IVth International Agronomy Congress

iii. Dr. Paroda: A Man of Quick Actions

There is one more memory event, which I will never forget throughout my life. It was in the year 1996 when I was invited as a keynote speaker in the International Prosopis Congress in Washington, DC, USA. Dr. P.P. Bhojvaid, the then DFO and now PCCF, Haryana was working for his Ph.D at University of Toronto, Canada. Dr. Tim Setter was his main guide at Toronto and I was his co-guide (external member) to supervise his Ph.D research on Prosopis at CSSRI, Karnal. We jointly decided to have Bhojvaid's comprehensive viva examination coinciding after Prosopis Workshop in Washington to save on funds. As it usually happens in ICAR, my visit was approved at the moment only to participate in the Prosopis workshop and denied participation in the Viva-Voce Examination in University of Toronto. Next day I was supposed to fly. I was in the Krishi Bhawan corridor when fortunately, Dr. J.S. Samra the then Director, CSWCRTI, Dehradun met me and asked the reason of my frustration. He took my file to Dr. Paroda ji who was chairing very important meeting and the red beacon outside meeting room was on. To my utter surprise, Dr. Samra came out in two minutes with approval and handed over the file back to me. This is just one example of big heart, responsive and caring Director General of ICAR.



Photo 5: Dr. Paroda Sahib honouring scientists during National Symposium on Agricultural Diversification at PAU, Ludhiana

Dr. Paroda Sahib has scores of traits which make him different from other leaders in NARS. I am sure other colleagues might have penned down those in this compilation. I pray to almighty to create at least 10 personalities as that of Dr. Paroda's stature in our country so that food, nutritional, livelihood and environmental security remains safe for future generations.

Gurdev S Khush

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I am happy to learn that ISPGRI is planning to publish a book to commemorate remarkable career of my revered friend Dr R.S. Paroda on his 75th birth anniversary. Dr Paroda is a doyen of agricultural scientists. I would like to point out some of the highlights of his remarkable career.

Contributions to Teaching and Research

Dr Paroda started his career at the Haryana Agricultural University, Hisar (HAU) as a plant breeder. He developed several successful crop varieties and taught courses on genetics and plant breeding. His talents as an inspiring leader were recognized early and he was appointed successively as head of the Plant Breeding Department, as a Dean and a Director of Research at HAU.

Contributions to ICAR

Dr Paroda served successively as a Director of National Bureau of Plant Genetic Resources, Deputy Director General and Director General of ICAR. Thus, he rose to the highest position in the Indian Agriculture. As DG of ICAR, he launched a special food grains production program (SFPP) in 1996. This national initiative led to quantum jumps in food grain production in the country. Food grain production increased at the rate of 6 million tons per year throughout 1990s and the country not only became food secure but also emerged as a major food grains exporter in this century.

As an Institute Builder

Dr Paroda will always be remembered for his contribution in establishment of National Bureau of Plant Genetic Resources, one of the finest institutes in the developing world. He created a new Wheat Research Institute and National Research Centers on rapeseed, soybean and groundnut.

As a Champion of Plant Genetic Resources Conservation

Dr Paroda is the main architect of the Indian National Genebank, one of the most modern facilities for *ex situ* conservation of germplasm housing a quarter million

accessions of various crops. He also advanced the cause of biodiversity conservation by helping prepare the Act on Plant Variety Protection and Farmer's Rights enacted by the Indian government. As the Chairman of working group of FAO Commission on Genetic Resources for Food and Agriculture, he facilitated the long drawn discussions towards adoption of International Treaty on Genetic Resources for Food and Agriculture (GRFA). He carried out his passion for conservation of plant genetic resources to central Asia and helped establish gene banks in 6 Central Asian Countries where none existed before. In recognition of his outstanding contributions to the cause of plant genetic resources, gene bank at ICRISAT, Hyderabad has been named R.S. Paroda Genebank.

Contributions to International Agriculture

Dr Paroda has been a key player in the International Agriculture. He founded Asia Pacific Association of Agricultural Research Institutes (APAARI). This brainchild of Dr Paroda has provided a platform for leaders of Asian agricultural research institutes to meet and discuss problems of mutual interest. He served as an executive Secretary of APPARI for over 20 years. His international appointments include membership of IRRI's Board of Trustees, Chairmanship of ICRISAT's Board of Trustees, Regional Plant Production and Protection officer of FAO for Asia-Pacific in Bangkok, Chairman of the Global Forum on Agricultural Research (GFAR), membership of the Governing Board of Commonwealth Agricultural Bureau International (CABI) and as head of CGIAR Facilitation Unit in CAC Tashkent.

Awards and Honors

For his monumental contributions to Indian and international agriculture, Dr Paroda has received numerous honors and awards, such as Rafi Ahmad Kidwai prize, ICAR team award, Om Prakash Bhasin Award, BP Pal Gold Medal, Borlaug Award and the coveted Padma Bhushan Award. He has received honorary doctorate degrees from several universities and has been elected to the fellowship of all four National Academies of Science. He has served as President of the National Academy of Agricultural Sciences (NAAS).

It has been my honor to enjoy Dr Paroda's friendship and support for over 40 years. On the occasion of his 75th birthday I would like to convey my warmest best wishes to him for many more years of contributions for the welfare of society.

Gurinder Jit Randhawa

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Talking of Dr Paroda is like talking of the whole gamut of post green revolution expansion and consolidation of Indian agriculture. One does not know how and where to begin. His persona is intricately linked to every development in Indian agriculture over the past four decades as he had his hand and mind in almost all of these. This was the period when Indian agriculture was called upon to build massive research, infrastructure and human resource capacities to tackle post green revolution problems and to usher White, Yellow and Blue revolutions. The credit for successfully meeting such challenges goes to the exceptional vision and meticulous planning by Dr Paroda.

Some of us who were part of the first lot of NASC residents could even see him leading from the front not only in having each and every facility in place but also ensuring livability in every possible way. Even on the rainy day when he was packing to leave for his international assignment, he along with Dr Shashi Paroda found time to organize planting of *Alistonnia* saplings all around the NASC campus. These saplings are now grown into full trees extending shade and shelter to the birds,



beauty to the campus and a small sample of reflection on the kind of approach that Dr Paroda brought to bear upon everything he did and continues to do.

We wish Dr Paroda excellent health and many more decades of his visionary guidance to the Indian as well as international agriculture.

H P Singh

Chairman, CHAI
Chairman of National Council on Agriculture and Food Security of
ASSOCHAM
Former DDG (Horticulture), ICAR
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Dr Raj Paroda – A Great Leader of Time, for the Transformation of Indian Agriculture

I am privileged to write a few words about Dr Rajendra Singh Paroda, or Raj Paroda or Dr R S Paroda to most, who had been sharing few of his thought on a wide array of issues related to Agriculture and Indian Farmers which include what great leaders have in common, why Indian Farmers hold the county's future and how to build a system for transformation. Leadership of Dr Paroda can be well understood by pulling the words from his speeches, which were delivered by him to the scientists, opinion makers, farmers and policy planners over last 40 years, both at National and international level. Dr Paroda, who grew up in farming family of Rajasthan, knows pains of the Farmers and has committed himself for the transformation of agriculture through innovation and adoption of technology by the farmers, for their wellbeing. He succeeded in building infrastructure for research and development, influencing opinion makers and providing forum for the farmers

Dr Raj Paroda, former Director General, Indian Council of Agricultural Research (ICAR) & Secretary, Department of Agricultural Research and Education (DARE), Government of India, is an accomplished plant breeder and geneticist by profession and an able research administrator. He has made significant contributions in the field of crop science research. He is known for modernization and strengthening of the national agricultural research system (NARS) in India as well as in Central Asia and the Caucasus. He has the unique distinction of being the main architect of one of the world's largest and most modern National Gene Bank in New Delhi. He has received numerous awards and recognition, including Padma Bhushan. He had been the founder chairman of Global Forum on Agricultural Research (GFAR). He was President of the Indian Science Congress in 2001, President of National Academy of Agricultural Sciences, and many scientific societies in agriculture. Fifteen universities have awarded him D.Sc. (Honoris Causa) degree, including Ohio State University and Indian Agricultural Research Institute. He is fellow of all scientific Academies in India, besides Third World Academy of Sciences (TWAS), American Society of Agronomy, American Society of Crop Science and Agriculture Academies of Russia, Armenia, Tajikistan and Kyrgyzstan. He has also served on the Board/Management

committees of various international organizations such as ACIAR, CABI, IRRI, WMO, CGIAR Fund Council and was Chairman of ICRISAT Board of Trustees. He also served for more than two decades as Executive Secretary of a vibrant regional organization: Asia-Pacific Association of Agricultural Research Institutions (APAARI). Till recently, Dr Paroda worked for the overall benefit of farmers as Chairman, Farmers' Commission of Haryana, Chairman of Working Group on Agriculture and member of Rajasthan Planning Board. Currently, he is Chairman, Trust for Advancement of Agricultural Sciences (TAAS)

I have been privileged and honored to have ample opportunities to interact and work closely with Dr Paroda, a kind human, friend of friends and a leader of par excellence. For the first time, I met him in Shimla at Phagli, a centre of National Bureau of Plant Genetic Resources (NBPGR), where he had come for the celebration of the Silver Jubilee, the then Director of that prestigious Institute, being built by him. In the first meeting itself, I was so influenced that I considered him as an energetic and innovative leader. After few years, he became DDG (Crops) and every one counted on him to be the future Secretary DARE and DG, ICAR. When that turn came, all the senior officers started fighting to hold the highest position and even fight went to the court of law. Dr Paroda, calmly watched the event from abroad, as he had taken an assignment in FAO during that period. His turn came to become Secretary DARE and DG, ICAR, when the organization was in turmoil, due to scientific unrest and huge number of court cases. His arrival was like a lotus in mud, which was subsequently cleansed to put ICAR at the path of progress. It was the capability of Dr Paroda to settle the issues and make the organization responsive and vibrant. The period, when Dr Paroda was DG, was a Golden era in the history ICAR. I have not seen such a period in my long association with ICAR, before or after his tenure, in the form of scientific excellence, infrastructure, recognitions and enthusiasm of scientists to work for the organization. Through his vision he created various institutions and concept of National Research Centre to work on commodity of importance. Horticulture also got a boost by creation of more than 7 NRCs, which paid dividends subsequently, since horticulture is seen as a best diversification for livelihood, nutritional security and rural development, above all enhancing the income of the farmers. His advice as chairman of various committees including Farmers' Commission of Haryana has shaped Indian agriculture, which has made the difference in life of millions of people. With store of knowledge, kind heart and unparalleled vision, Dr Paroda is providing guidance and is building human capital which will go in a long way for Indian agriculture. We have been admirer of each other. When I had gone to the Ministry of Agriculture as horticulture commissioner, at most of the occasion, Dr Paroda said- Dr Singh is a gain for the Ministry and a loss for ICAR. Such is his quality of leadership which makes you inspired and committed to do the best.

Personally, I admire him as he is our inspiration. He supports all the activities taken up by the ASM Foundation, as well as the Confederation of Horticulture Associations of India (CHAI). The Confederation has instituted, Dr R S Paroda Award of excellence in science and technology, in the recognition of his services to agriculture. He is also providing visionary guidance to CHAI as Chief Patron. We convey our best wishes for 75th Birth day and pray God for his continued guidance for many more decades.

H S Gupta

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Dr Raj Paroda as I know him

At the outset, let me take this opportunity to wish Dr Raj Paroda a very happy 75th birthday and a very long life with great health. Dr Raj Paroda, an eminent plant breeder and an able science manager, has been the role model for many of us for the past four decades. I came to know him when he took over the reins of the National Bureau of Plant Genetic Resources (NBPGR) and faced a daunting challenge of reorganising this institution, some of the regional stations of which were merged with the ICAR institutes located in different parts of the country. Dr Paroda realised the handicap and visited all the regional stations to impress upon the need of demerger of the regional stations (of NBPGR) in view of the emerging importance of collection, maintenance and utilization of the plant genetic resources in the country. One such centre that was merged with the ICAR Research Complex for NEH region was NBPGR's Shillong centre. I was heading the division of Plant Breeding in which this centre was merged. Dr Paroda travelled to Shillong and discussed the importance of demerger and precious service it would render to the plant breeders not only in NEH region but in other parts of the country because of enormous amount of crop genetic resources spread over 8 states of NEH region which were still to be collected, characterised and utilised in the breeding programs. Everyone was convinced and the centre was not only separated out of the division of plant breeding of ICAR Complex along with its assets but was given a piece of land on which centre's new building was constructed in the campus of ICAR Complex at Barapani. This station, since then, continues to play a key role in collection, maintenance and evaluation of germplasm of different crops from the states of the NEH region.

Having restored NBPGR's status, Dr Paroda went on to establish the world's 2nd largest genebank at New Delhi and got a brand-new building constructed for NBPGR which serves today as its headquarter. Thereafter, he took over the reins of the crop sciences division of ICAR as its Deputy Director General followed by Secretary, DARE and Director General, ICAR.

Dr Paroda was instrumental in modernising ICAR - linking the institutes through information and communication technology and renovation of the old institutes' building and laboratory facilities to mention a few. He was instrumental in bringing the concept of 'One Time Grant' for undertaking renovation in the old institutes.

He was not only responsible for modernising infrastructure of the ICAR institutes but also of the State Agricultural University. Dr Paroda's initiative in getting National Agricultural Technology (NATP) infused new zeal among the scientists of National Agriculture Research, Education and Extension System (NAREES) to aggressively pursue frontier areas of research.

One incidence that I always remember and wish all the administrators should instil within them is encouraging good researchers based on merit and merit alone. I would like to narrate my own experience when I was posted in ICAR Research Complex for NEH Region at Barapani and had completed 12 years of service; I approached Dr Paroda, the then DG, ICAR for a transfer to Indian Institute of Pulses Research, Kanpur. I was pleasantly surprised that he agreed to my request although number of scientists in my division at Barapani was dwindling fast and by the time my transfer request materialised, only 4 scientists remained in position. Realising my responsibility and the enormous amount of breeding materials generated, I apprehended their loss. After a great deal of discussion with my family and colleagues, I decided to continue at Barapani till some more scientists joined. Since my transfer order was already issued, I went to Delhi and met Dr Paroda with a request to allow me to stay there for some more time. Dr Paroda listened carefully, called his Director (Personnel) and ordered cancellation of my transfer and said 'you are working at a difficult place and I am glad that you want to continue there. In future, whenever you want to move from there, I assure you of that.' This was something which I had never imagined - that a DG, would take care of his scientists in such a manner, more so when Dr Paroda knew me only through my work.

After I moved to IARI in 2009, Dr Paroda had returned from Central Asia and was working from his TAAS office in the IARI campus. When I visited him, I was appalled to see that a person who had created huge structure like National Agricultural Science Complex and had modernised ICAR with great efforts, was sitting in a small chamber. It was his greatness that he preferred to keep his TAAS office in IARI rather than anywhere else. I, then and there decided to do my bit and got TAAS office expanded and created a chamber for him commensurate to his status. This gave me a great satisfaction of paying back to

someone who had contributed enormously to the system and was not being taken care of the way he deserved. I take pride in this step of mine and still cherish the memory of our association.

Another way of recognizing his services to NAREES (in a small way though), was to confer upon him the inaugural Dr AB Joshi memorial award for outstanding contribution to agricultural education in the country. This award was conferred upon Dr Paroda by the then Prime Minister of India Dr Manmohan Singh Ji in the Golden Jubilee convocation of the IARI.

I continue to cherish the memory of our association and wish him a healthy and happy times ahead.



Dr RS Paroda receiving inaugural Dr AB Joshi Award from the then Prime Minister of India, Dr Manmohan Singh Ji during Golden Jubilee Convocation of IARI, New Delhi

Hari D Upadhyaya

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Dr Rajendra Singh Paroda – A Visionary Leader, True Friend and an Excellent Human Being

I have known Dr Rajendra S Paroda for about 37 years, when I attended an interview for the position of Junior Oilseed Breeder in Department of Plant Breeding at the Haryana Agricultural University, Hisar, Haryana in early 1980. Dr Paroda, was Head of the Department of Plant Breeding in the university at that time. During the interview, Dr Paroda and external expert Dr KBL Jain (a top-class Biometrician) from IARI New Delhi, asked me several questions on my thesis on Soybean and on Biometrics. My interview extended close to 50 minutes, while 12 other candidates were interviewed for about 10 minutes each. Finally, Dr Paroda, asked me “Dr Upadhyaya tell us a question which you cannot answer”. I replied, “Sir I do not know much, but yes, I have understood what I have studied in my courses on Genetics, Plant Breeding, Biometrics and Quantitative Genetics at the GB Pant University of Agriculture and Technology, Pantnagar.” Since I was the last candidate, and by the time my interview was over it, was close to 2 pm, and Dr Paroda came out of the interview room. He saw me standing in the corridor as I was enquiring from the peon about the way to the Farmers’ Hostel where I was staying. Dr Paroda asked me whether I had lunch or not and I told him that I was going back to Farmers’ Hostel and would eat there. He said that the mess in all the hostels would be closed and insisted on accompanying him to his residence for lunch. We ate food in his home where I met Mrs Paroda and his new born son. During lunch, Parodas made me so comfortable, as if I had been eating with them regularly. But none of us talked about the interview. Later, I attended another interview for the position of Soybean Breeder. I did not hear anything from the university for a few months. Meanwhile, I attended an interview for the position of Postdoctoral Research Fellow in Chickpea Breeding at ICRISAT in August 1980, I was selected and joined in October 1980. Immediately after my joining ICRISAT, I received appointment letters from university for both the positions. As I had committed to ICRISAT, I thanked university and continued at ICRISAT. Fortunately, I was posted at the ICRISAT substation, Hisar and came in close contact with Dr Paroda. We had frequent interactions particularly, through one of our ICRISAT colleagues Mr Onkar Singh, who was doing his PhD

with Dr Paroda on chickpea. I was in Hisar for about six months and came back to ICRISAT, Hyderabad, where I was assigned to work on inheritance of wilt resistance in chickpea. I had a very firm relationship with Dr Paroda which I cherish the most.

My next interaction with Dr Paroda was when I was working in the University of Agricultural Sciences, Dharwad, Karnataka and Dr Paroda was working as Deputy Director General Crop Science in the Indian Council of Agricultural Research (ICAR). As DDG (CS), Dr Paroda had secured funding for improving infrastructure for Hybrids in Oilseeds. To accomplish this task, a meeting of the Heads of Oilseeds Schemes in the universities in India was called at the Directorate of Oilseeds Research, Hyderabad and Dr Paroda participated in the meeting. I also attended the meeting from Raichur, Karnataka where I was posted as Head Oilseeds Scheme and Groundnut Breeder. We had group meetings and presented our requirements to upgrade facilities. However, I was disappointed with the discussion in the group meetings, as our requirement which was minimal and genuine, was not given due importance and some of the institutions were cornering most of the funds. In the plenary presentations, which Dr Paroda, chaired, we were asked if there is any issue, I voiced that the process of allocating funds had not been in the spirit of requirements and transparency. He advised the then Director of Oilseeds to look into the matter. The group discussions were held once again and needs of all the stakeholders were considered genuinely. After this incident, my belief in Dr Paroda as a fair person got fortified. For him, Indian Agriculture Research was one, irrespective of the fact whether it was being carried out in an agricultural university in remote part of India or in an ICAR institute. We did not have very good communication facilities at that time and we used to meet either in All India Co-ordinated Research Project Meetings which Dr Paroda used to attend as DDG (CS) or whenever I visited New Delhi. It



Dr Hari D Upadhyaya, Head ICRISAT Genebank, addressing the gathering at the unveiling ceremony of plaque of naming ICRISAT Genebank as Rajendra S Paroda Genebank on 12 Dec 2002. Mrs and Dr William D Dar and Ms Martha Stone on left and Mrs and Dr Paroda, Dyno Keating and Dr Leslie D Swindale on right



*Dr William D Dar, Director General, ICRISAT
congratulating Dr Paroda, after naming of ICRISAT
Genebank as Rajendra S Paroda Genebank on 12 Dec
2002. Ms Martha Stone applauds*



*Dr Paroda and Mrs Paroda with Dr Hari D Upadhyaya,
Mr DS Bisht and Mrs Bisht on 12 Dec 2002 after
naming ceremony of ICRISAT Genebank as Rajendra
S Paroda Genebank on 12 Dec 2002*



Dr Paroda with Dr Hari D Upadhyaya, Head of ICRISAT's Rajendra S Paroda Genebank visiting in 2006

was always a pleasure meeting him, and he used to take up any issues that we had and tried to find solutions.

In 1991, I came back to ICRISAT as Groundnut Breeder and Dr Paroda became Director General of the ICAR and Secretary, Department of Agricultural Research and Education (DARE). As the DG of ICAR, Dr Paroda was Vice-Chairman of ICRISAT's Governing Board also, and I had opportunities to interact with him regularly during Governing Board meetings. He keenly listened to the deliberations during board meetings and made outstanding contributions. During difficult times at ICRISAT, Dr Paroda was elected as Chair of ICRISAT Governing Board and this was not only a unique recognition to his administrative capabilities, but a great responsibility as we had several issues including selecting a new Director General.

I do not want to embarrass Dr Paroda, but would still like to say that his leadership of ICAR at that time and that of ICRISAT Governing Board was a golden period for both institutions. Unfortunately, there were some clouds that tried to surround this 'Sun' and tarnish his image and reputation through false and mischievous accusation. I, as Convener of National Scientist's Forum at ICRISAT, petitioned the President of India extending our full support to Dr Paroda. Eventually Dr Paroda, came out of it clean and as true as gold out of fire, shining much more.

During December 2002, in recognition of his immense contributions, ICRISAT's Genebank was named as Rajendra S Paroda Genebank. This was a moment to cherish, I, as Head of the Genebank welcomed Dr Paroda and Mrs Paroda during plaque unveiling ceremony. This was a first instance that an important facility such as Genebank of a CGIAR center was being named in honor of Dr Paroda. He truly deserved it. In my speech at that time I described him as a 'Karmayogi par excellence'. Since then our relationship became much stronger and Dr Paroda made it a point to come to genebank and get a firsthand information on not only the regular genebank activities but on research that ICRISAT's Rajendra S Paroda genebank was conducting. He was particularly fascinated with our research on concept of mini core collection, where in 1% of germplasm accessions represents diversity of entire collection that can be used to identify germplasm to meet needs of the breeders for traits of economic importance. He always encouraged me to do first class science. In one such interaction, he asked me in my office "Hari why don't you apply for DDG's post in ICAR, as people like you can contribute significantly to agricultural research in India". I thanked and told him that due to my straightforward nature, I will not be a fit person. This gave another glimpse of his personality and constant thinking about good of organization and people.

In 2014, Dr Paroda, nominated me for a global award, and when the email from award secretariat landed in his junk mail, he contacted me by telephone to send the needed documents as he was travelling outside India. He was in constant touch with his office till my nomination was submitted successfully. How considerate and meticulous, Dr Paroda is, was demonstrated by this example.

In 2016, Dr Paroda decided to organize First International Agrobiodiversity Congress in India. This was a huge task but the way he worked for days preparing for this event, is testimony to his absolute commitment and great vision. I was member of the organizing committee and attended a few of the preparatory meetings at New Delhi. The Congress was successfully held from 6 to 9 November 2016 at New Delhi with Prime Minister of India as the Chief Guest. The participants from across the globe applauded the vision of Dr Paroda and grand success of the Congress.

On August 28, 2017, Dr Paroda would be completing 75 years. I wish him all the very best in his life (though in Vanprasth), that I believe will be continued to be dedicated to the science and poor farmers of the world. May God bless him with long and healthy life with family.

Hiroyuki Konuma

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During my tenure as FAO Assistant Director General (ADG) and the Regional Representative for Asia and the Pacific (2010-2015) as well as my tenure as the FAO Deputy Regional Representative for Asia and the Pacific (2003-2010), I had great privilege to work closely with Dr R.S. Paroda who had been serving as the Executive Secretary of the Asia Pacific Association of Agricultural Research Institutions (APAARI) based at FAO Regional Office, Bangkok at that time since 1992. During this assignment, he was an elected Chairman of the Global Forum on Agricultural Research (GFAR) based in FAO HQs, Rome, 1998-2001.

When I think of Dr Paroda, I am always reminded of his smile, energy and passion. His strong leadership and commitments made many difficult endeavors possible with successful outcome. He had a special ability to bring people together and create team work. Moreover, he never forgot to thank everyone for their contributions and support. We jointly organized many regional expert consultations, seminars and conferences on the theme which were of high importance.

To commemorate Dr Paroda's unforgettable contributions and significant achievements, especially for the advancement of science and technology, I am very glad to see this book being published, which would allow us to keep his memory in our heart and beyond.

Houda Nourallah

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I have known Dr Raj Paroda almost thoroughly since he joined ICARDA as the Regional Coordinator of Central Asia Program and Head of the CGIAR Facilitation Unit (PFU) for CAC; and later as Assistant Director General for International Cooperation (IC). Dr Paroda's entire journey has been one of learning, contributing and sharing experiences with the rural poor farmers. He is a man of great wisdom and vision, a fascinating scientist, an administrator and an advocate of dry land farmers, who has selflessly contributed to agricultural research in dry areas. Building on his vision and rich expertise, Dr Paroda has been able to bring Central Asia Program closer to the World. He succeeded in forging partnership with the Republics of Central Asia in the Caucasus, and most importantly, in strengthening NARS support of institutional and human resource capacity development. Dr Paroda's diverse invaluable efforts and remarkable achievements have certainly and generously paid off.



The unveiled humane side of Dr Paroda embodied incredible warmth and care for people mixed with unique modesty and rich intimate soul. He is a man of high personal integrity, an understanding humble and inspiring friend; and above all, a great philosopher who is holding a universal message for life, science and regeneration.

I wish Dr Paroda and his lovely family many happy and prosperous years to come.

I P Abrol

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I first met Dr Paroda in the year 1984 when both of us were invited to an International conference on the subject, 'Forage and Fuel Production from Salt Affected Wastelands' in Australia. The conference had been organized in a small agricultural town / village (with a population of less than 1500), Cunderdin, on the campus of an agricultural college and an experimental station. I still recall having exchanged thoughts on how we could learn from this small focused and highly productive no-frills conference. We were also impressed by how a small local scientific Centre was serving the cause of educating the farmers- the Centre had nearly 500 printed advisory material on different subjects of importance to local farming communities. Our contact grew when Dr Paroda joined as Deputy Director General (crop science) in the year 1987 when I was also in the Council as in-charge of the NRM Division. Very soon Dr Paroda distinguished himself as a science manager with tremendous zeal and fervor in promoting the cause of crop sciences as a response to the national needs. He demonstrated immense resolve in end to end conceiving, planning, executing and monitoring research programs with total dedication. He took several initiatives which, over the years have contributed significantly to India's capacity to provide science led solutions to India's farming problems. It was also his dedication and perseverance that earned him full confidence of the scientific community within the system.

Dr Paroda took over as the Director General of the ICAR after a stint with the Food and Agriculture Organization at Bangkok. I still recall the first meeting he took with the senior colleagues. It was clear even in this first interaction that Dr Paroda had given considerable thought on how he viewed the challenges which the system faced and what were the kind of institutional changes required to be able to measure up to the challenges. He talked about the need of adopting a 'programmatic' approach to research in place of the prevalent 'Institute' based projects / schemes, adopting a matrix or a two – way approach to setting priorities, need for building and working in partnerships mode etc. I could see Dr Paroda bring in new enthusiasm which was so essential for the team to embark upon the urgently needed changes which had become a prerequisite for the system to address complex productivity and environment related challenges. Dr Paroda's dynamism brought the organization

to new heights at a time when the system was facing increasing criticism with the overall growth rate in agriculture slowing down. To Dr Paroda goes the credit for several bold and significant initiatives, both infrastructural (e.g. NASC Complex) and programmatic (e.g. NAIP). Dr Paroda had also the unique ability to communicate effectively with and address concerns of political bosses while being fully sensitive and watchful to the institutional needs and concerns.

I had particularly an opportunity to work closely with Dr Paroda in my position as facilitator of the 'Rice-Wheat Consortium for the Indo-Gangetic Plains' , a multi country and a multi institutional program aimed at coordinated research to address post-green revolution sustainability issues of an important production system. Dr Paroda was throughout involved in conceptualizing and giving a concrete shape to this CGIAR-led initiative which involved four countries of the region. This multi partner, multi disciplinary research project was greatly applauded as a unique institutional learning in addressing systemic research issues. To Dr Paroda goes the credit of this and several other initiatives which have been sensitizing the system for a much needed transformative change to which the system can no longer keep mum.

Recalling association with Dr Paroda would be incomplete without mentioning Mrs Paroda. We (my wife and I) have had the pleasure of enjoying hospitality of Parodas on a number of occasions. Their presence evokes understanding, mutual respect and affection. Having known them and worked with Dr Paroda has been a valued possession and we look forward to the benefit of our association in the years to come. May God bless him with a long, active and very productive life.

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Most revered Dr R.S. Paroda, former Secretary, Department of Agricultural Research and Education (DARE), Government of India and Director General, Indian Council of Agricultural Research (ICAR) was my teacher during my Master's programme (1978-80) and officer as the Prof. & Head, Department of Plant Breeding, Haryana Agricultural University, Hisar. Everybody had great regards for him as a very good teacher, administrator, orator and as a human being. He introduced several reforms in the department for teaching, research and extension activities. Prior to his joining as Prof. & Head, very few students and scientists used to attend the seminar, but he made it compulsory for all to attend them. The seminar hall used to be full with teachers and students and the late comers even used to stand on both sides of the hall for full duration of the seminar. He took initiative to start a series of seminars to begin with the senior faculty members. I remember the day of my credit seminar. After I completed the seminar, Dr Paroda Saheb came to the stage and patted me on the back and told the audience that the seminars delivered should be of such quality/standard. Dr Paroda Saheb was undoubtedly the most dynamic Prof. & Head the HAU, Hisar has ever seen. It was due to several qualities he possessed like, deep knowledge of the subject, command over the languages (Hindi and English), very much disciplined, never used to go for loose talk, always extremely well dressed, soft spoken, listened to everyone with patience, very helping attitude, man of few words, at times very humorous also, etc. Since 1979 till date, I have never seen him shouting at anyone.

He was most particular about the discipline and cleanliness, whether it is in the class room, laboratory or the experimental fields. On the occasion of VIP/team visit(s) to the experimental area, he himself would supervise the experiments and fields first and give suggestions/tips for improvement. Once satisfied then only he would allow/go ahead with the visit. He got constructed/renovated the Field Laboratories in different sections of the department. His day used to start with the field visit, interaction with different categories of field staff and relevant instruction to them.

Till he was at HAU, Hisar, every year he used to invite the PG (M.Sc. and Ph.D.) students to his residence in the evening for dinner. Before dinner, there used to be a

lively cultural evening where every degree holder was supposed to present some item of his/her liking. Dr Paroda Saheb is indeed a very versatile personality.

After completion of my M.Sc. programme, I, along with my batch mates, went to Dr Paroda Saheb with a request to appoint us suitably. He suggested that all of us should go to the Vice-Chancellor and request him to appoint us all on ad-hoc basis, and report back to him. The Vice-Chancellor told us that he would look into the matter. We reported the same to Dr Paroda Saheb. Three days later, to our surprise, all of us (nine fellows) were appointed as Assistant Scientists on ad-hoc basis till the regular appointments were made. Only Dr Paroda Saheb could have done it and he did it. This shows his helping and superfine nature.

The whole agriculture world is acquainted with his contributions, achievements and awards won by him. I will not enumerate them, fearing I would miss several of them and thereby, becoming a culprit. If there is someone in the Indian agriculture whose contribution is next only to that of Dr M.S. Swaminathan Ji, it is undoubtedly Dr Raj Paroda Saheb. He has already contributed a lot, still contributing and we wish and pray to the almighty God that he keeps on contributing for the upliftment of Indian agriculture. Long live Dr Rajender Singh Paroda Saheb – a great teacher, administrator, manager, visionary and a superfine ambassador of goodwill!

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I am sure there will be a lot of appreciations of professional qualities of Dr Paroda, of his leadership and organizational skills, but I would like to say a few words about his very special vision of human relations. This vision has been the secret of Dr Paroda's amazing team building talent. He considered all of us who worked with him as members of his family, always trying to help in difficult situations, to offer his advice and to find a solution. He once told us that there was a reason why people meet each other in this life. According to him, "If you feel to be able to help a person, do it without hesitation as this is the reason why you happen to come across him/her in your life." He feels people, and can see their talents, of which they may not themselves be aware. It was a real blessing for many young graduates to get integrated into Dr Paroda's team, where they had excellent opportunities to learn and to further develop their professional and interpersonal skills. And there has been one very essential thing to learn from Dr Paroda – striving for perfection in everything you do. What could be more important for a young scientist to learn to fully realize his/her potential?

I also remember how concerned Dr Paroda would be when one of his team members would have a health trouble. He would try to do his best to help and would never stop half way, going into details of every particular situation. Despite his busy schedule, he always tried to ensure the person in need would get best possible care and medication. Often Dr Paroda would offer financial support as it was in the case of Sergey, his driver in the Regional Office of ICARDA in Tashkent, Uzbekistan. Even after having left Tashkent, Dr Paroda was trying to help Sergey and his family to get through hardships caused by Sergey's health problems.

Thanks to his sincere interest towards people, Dr Paroda is still maintaining very good relations with most of his former collaborators and junior colleagues, who continue sharing with him their achievements and happy events.

It is with such human values that Dr Paroda, together with Madam Shashi, have brought up their children and are continuing bringing up their grandchildren. I have no doubt, they will be very proud of the younger generation of the Paroda family.

On the occasion of his 75th anniversary, I would like to wish Dr Paroda to remain strong and full of energy and to continue sharing his values with people surrounding him.

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I have known, Padma Bhushan Dr Rajendra Singh Paroda, an internationally renowned eminent agricultural research scientist and an undisputed leader of the agricultural scientific community of the country as a visionary and a crusader who worked for the benefit of Indian agriculture. He was Secretary, Department of Agricultural Research and Education (DARE), Government of India and Director General of the Indian Council of Agricultural Research (ICAR). My first meeting with Dr Paroda was when he visited Punjab Agricultural University, Ludhiana as DG, ICAR. His kind words of appreciation and encouragement during his visit to wheat breeding trials in the wheat section had ever since motivated us to strive for better. Later on, he visited PAU on several occasions in connection with various meetings. I heard Dr Paroda on several occasions and realized how close he was to the farmers and minutely understood their (farmers') basic problems related to their economic status and education. I was always spell bound to hear him talk not only about the high advanced areas of science but all the basic issues of agriculture in a very simple language which anyone could understand easily.

I personally met Dr Paroda, in Karnal during 2013 when he chaired one farmer-scientist interaction meet and seed day. At a time when I was leading country's wheat program as Project Director at IIWBR erstwhile DWR, Karnal, his guidance and suggestions on various issues of wheat improvement paved the way forward. His keen interest in the research developments as far as wheat was concerned motivated the scientific community at IIWBR to excel in their endeavours. Later on we interacted in various meetings wherein he was the chairperson of several committees for the development of farming community of Haryana. He apprised the farmers of various policies of Govt. which were beneficial to them as he was heading the Farmers' Commission of Haryana. Our goal to make India a leading nation in the world in the new century, hinges critically on how



successfully we take science to the people and create a stronger scientific temper in our society. Dr Paroda is one such visionary who has a lot to contribute in this particular aspect.

In 2015, he agreed to be the guest of honour in the 54th All India Wheat and Barley workers meet held at SDAU, SK Nagar, Gujarat. Describing our wheat



program as one of the best in the world, Dr Paroda praised the efforts of IIWBR and scientists for commendable work. He opined to shift from the concept of crop commodity to farming system management. He stressed that the only way out of weather uncertainties is to evolve weather resilient breeds. It is necessary to decrease the yield gap to increase the productivity.

He appreciated the role of women in agriculture at the farm level and always wished more women to come forward in leadership role in agriculture and decision making. I have gone through several of his publications which all pertained to enhancing farmers' income, suggesting ways for diversification, minimizing cost of cultivation, linking industry with agriculture and soil health improvement. He has emphasized quality related issues while discussing export potential.

Dr Paroda is known internationally for his contribution towards promotion and conservation of biodiversity. One of our interactions was during a promotional programme for growing maize in Haryana under crop diversification where he was the chief guest. His thought of making India free of poverty, hunger and malnutrition, and an environmentally safe country, through efficient and sustainable use of our human, natural and other resources was highly appreciated. As chairperson of Trust for Advancement of Agricultural Sciences (TAAS), Dr Paroda is striving to work for the benefit of the scientific and farming community of the country.

I have always admired him for his positive response, encouraging tone and visionary approach whenever we interacted.

He is a living legend in promoting farmers to grow more food.

I wish him great success in all his endeavours.



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For R.S. Paroda: A Leader of Distinction and Ability

It is a great pleasure to be writing these words in honor of my friend and colleague Dr R.S. Paroda. A man of substance and integrity, a scientist, a leader, a manager and an accomplished diplomat. I have been very impressed by Dr Paroda's abilities and achievements as well as his modesty.

Dr Paroda was the Executive Director of the Asia Pacific Association of Agricultural Research Institutions (APAARI), a task which he handled with remarkable vigor but still with great delicacy to maintain the commitment of all these various national agricultural systems to a regional organization. It was the fore-runner of many other efforts elsewhere to create south-south cooperation, an oft-invoked slogan that seldom lived up to its promise except under the deft handling of Raj Paroda.

I had the good fortune of meeting Dr Paroda during my early years as Chairman of the Consultative Group for International Agricultural Research (CGIAR). At that time, the CGIAR was going through a profound financial crisis and I launched a bold campaign to rescue it financially and institutionally. Dr Paroda was one of the pillars of the renewed CGIAR.

I started the rejuvenation of the CGIAR from the mid-term meeting in New Delhi, and from the beginning I could not have had better companion in arms than Raj Paroda, who shared the vision I was advancing for the global system, and my belief that the CGIAR should be transformed from a club of rich countries donating money to agricultural research into a south-north partnership where the developing countries would have their say in setting the agenda and fixing the priorities, as well as defining the obstacles and designing the strategies to overcome them.

Later Dr Paroda became the head of the National Agricultural Research System (NARS) of India, his exceptional performance showed a combination of pragmatism and vision that is the manner in which dreams get turned into realities. His many institutional legacies are a witness to his remarkable abilities, from the genebank in New Delhi to the Indian Society of Plant Genetic Resources (ISPGR) and well beyond, he was a leader in protecting our plant genetic resources.

Dr Paroda was central to many initiatives that the CGIAR – and the World Bank – would support: the Rice-wheat initiative of the Indo-Gangetic plain, a favorite program of my close colleague at the World Bank, Dr Michel Petit. But for me, as Vice-President of the World Bank it was the National Agricultural Technology Project of India that we financed and that was jointly developed with our Indian partners, led by Dr Paroda, that would be an enormously valuable template on how the World Bank should work with the national authorities of giant nations like India and Brazil. Dr Paroda again showed his enormous talents in recognizing the institutional problems in India and the means to ensure a merit-based allocation of resources to research institutes as well as designing imaginative ways to develop centers of excellence around exceptional researchers so that they could nurture a new generation of scientists as well as push the envelope of research in their field.

During the many fights that I undertook during the many years that I was Chair of the CGIAR, I was always delighted to have Dr Paroda on my side. We shared the same beliefs and pursued many of the same objectives. We became friends, and after Dr Swaminathan, he has been my closest colleague in India. One of those momentous efforts was the creation of the Global Forum for Agricultural Research (GFAR), an important institution that Dr Paroda chaired.

I was also very privileged to have been invited to speak at a number of events in India under his organizing hand. One very special incident that I recall with enormous clarity, is the time he invited me to be the opening speaker at a retreat that he organized with the top researchers in India, because he wanted me to promote “out of the box” thinking on that marvelous occasion. Simply put, the question was what should be the priorities for an agricultural research program for India, if we accept that no matter what is done, there will be some 500 million more Indians in India in some 25 years, and they would have to be fed from largely the same land and water currently available. This was a broad and visionary exercise, which I still recall vividly and I consider it a privilege to have been invited to contribute to that distinguished meeting. That meeting also underlines an important aspect of Raj Paroda’s abilities, which sometimes others might not sufficiently recognize, and that is his ability to ask the hard questions, to promote a broad vision, and then to marshal the resources to pursue the implementation of that vision.

I was also inducted into the Indian National Academy of Agricultural Sciences (on the same day that PM Manmohan Singh was inducted into the same academy). I know that Dr Paroda’s strong support contributed much to making that great distinction possible.

Finally, although our paths diverged in the last few years, I am very happy that I was able to welcome him to an event at the Library of Alexandria, before I retired from heading that distinguished institution. I look forward to the pleasure of meeting him again and I seize this opportunity to join all his loving colleagues and friends in wishing him many years of health and happiness.

J B Chowdhury

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My association with Dr Paroda goes back to the early seventies when he had just joined Haryana Agricultural University. Those were the days when H.A.U. was humming with activity in various fields of agriculture and was a forerunner among agricultural universities. Leading scientists from different parts of the country were contributing significantly towards the speedy growth of the university.

He joined the department of Plant Breeding and his dynamism and talent led to notable advances in crop research.

With time, our friendship flourished and our families also got along famously. We have lots of happy memories of that period including incidents like travelling to Delhi from Hisar on our two-wheelers! It was great fun! I am sure he has not forgotten that journey!

Talking of journeys, his has been exemplary!!

From being professor/ H.O.D./ ADR at H.A.U., he travelled to the top echelons of agriculture becoming a Director at NBPGR, Deputy Director General (Crop Science) and finally Director General, ICAR and Secretary, Department of Agricultural Research and Education, GOI. Wherever he served, he left an imprint of his personality and way of working.

Dr Paroda has always been a dear friend of mine and I wish him all the best for his seventy fifth birthday with many more to come.

J C Katyal

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I know Dr Rajendra Singh Paroda since the mid-1960s. This was the time, when I took admission as an M.Sc. student and Dr Paroda had joined IARI as a Ph.D. student. Although our subjects were different, but we used to share a common dining outfit called Jewel Box/Jukebox or Punjabi Mess. Then Dr Paroda was a well-known figure among the student community because of his being a key member of the Rajasthani Cultural Group led by Drs Chundawat/Shekhawat.

My close association with Dr Paroda and knowledge on his real leadership persona grew when he was elevated to the position of the Director General, ICAR and I was assigned to lead the Central Research Institute for Dryland Agriculture, Hyderabad. This was the time when he steered the idea that ICAR and each of its constituent Institutes should write 2020 Vision Document. To my knowledge, this initiative by the Council was by far the most outstanding and unique in many ways. Firstly, it inspired scientists to assess the agriculture of 1990s and thence map and plan what its requirements would be 25 years later. Secondly, it bred the concept of multi-disciplinarity and system approach to agricultural research. Thirdly, Vision 2020 documents laid the foundation describing the need for engaging with the private sector, what later came to be known as public-private partnership for technology generation and dissemination. Fourthly, it brought farmers' participation to occupy the central place while conceptualizing research programs and fixing their goals and aims. Fifthly and lastly, the ICAR Vision 2020 document specifically recognized the need for initiating systemic reforms like decentralization and grant of autonomy to the Institute Directors and down to the Principal Investigators of projects. In order to translate these perceived outcomes into action, Dr Paroda led from the front. For institutionalization of organizational and management (O&M) reforms, it was under his leadership, guidelines and instructions on undertaking consultancy projects from private sector, autonomy and decentralization of powers and several more issues were published. Dr Paroda contributed prominently in incepting the technology transfer strengthening schemes like the Institute Village Linkage Program (IVLP), Agriculture Technology Information Centre (ATIC) and Agriculture Technology Management Agency (ATMA). Success of these programs changed the landscape of agriculture research, technology and development.

In fact, the Vision 2020 documents led Dr Paroda to believe that piecemeal translation of research findings into technologies and induction of only a handful O&M reforms were not adequate to influence growth of agriculture across the length and breadth of a country of India's areal size, ecological diversity and socio-economic inequalities. He exhibited unparalleled stewardship in conceptualization and development of a National Agricultural Technology Project (NATP). Launch of this World Bank assisted program in 1998 was a holistic initiative that proved a game changer for ways the research would need to be conducted, how it would be translated into usable technology and what was necessary to make technology transfer effective. NATP, besides empowering research managers and researchers, also brought to fore the need for modernizing research facilities and supporting infrastructure. I distinctly recall that this exemplary contribution of Dr Paroda had irrefutable positive and visible impact on research output that Indian NARS would continue to cherish in times to come.

Working closely with Dr Paroda, I can comment on a not so known aspect of Dr Paroda's personality. Even in the worst of times, he placed interests of ICAR in front of his own. He is so committed and dedicated that even during the times of turmoil, instead of talking about the extant crisis, he would discuss ways and means by which the flag of ICAR could continue to flutter higher and higher. The dilemma, that NARS in general and he in particular faced, related to the construction of the NASC complex. The unfounded allegations were resolved, the entire issue got settled and Dr Paroda came out of the crisis unscathed. Today, if any contribution of Dr Paroda is remembered the most, it is the wondrous facility and infrastructure of NASC complex. Undoubtedly, Dr Paroda is both an institution builder and an institution in himself. These achievements have left an indelible mark not only on the Indian NARS but have inspired everyone to scale great professional heights like him.

I send my best wishes to Dr Paroda on his 75th birthday and pray that we continue to have a friend and mentor like him always near us.

J Coosje Hoogendoorn

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My first meeting with Dr Paroda occurred in 2002 during my involvement with plant genetic resources and genebanks as the Deputy Director General Programmes of Bioversity International, when we met in India. We found that we share a passion for not only conservation, but also use of plant genetic resources in breeding, for the benefit of in particular smallholder farmers.

Dr Paroda has been of great service to the CGIAR, the Consultative Group for International Agricultural Research. I, in particular am impressed by the role he has played by working across CGIAR centres. Examples are his work in Central Asia and the Caucasus, and his contribution to the IARI Pusa Campus in New Delhi, encouraging CGIAR centres to work together and to work more closely with NARS, National Agricultural Research Systems.

Furthermore, he has played a leading role in setting up and developing GFAR, the Global Forum for Agricultural Research, which brings together all stakeholders in international agricultural research for development, and has the power to greatly influence the international agricultural research agenda.

Most recently, our paths crossed when I attended the 1st International Agrobiodiversity Congress in New Delhi in November 2016, which was co-chaired by Dr Paroda and Dr Swaminathan. This excellently organized and very high-profile meeting was a very important step forward in bringing agricultural biodiversity into the limelight of the SDGs, the global Sustainable Development Goals agenda.



*Dr R.S. Paroda with Dr J. Coosje Hoogendoorn
at the 1st International Agrobiodiversity
Congress in New Delhi, November 2016*

It is a great honour and a great pleasure to congratulate Dr Paroda on his 75th birthday. I wish him all the best, and many more productive years. I am sure that he will continue to push forward the importance of agricultural biodiversity, and of collaboration and partnership between countries, intergovernmental organizations, research institutes, farmers, the private sector and NGO's, towards a world without hunger and poverty.



Dr R.S. Paroda Ji – An outstanding agricultural scientist on able administrator and effective research manager, and visionary leader for modern agricultural development

Padma Bhushan Dr R.S. Paroda Ji, Former Secretary, DARE and the Director General, Indian Council of Agricultural Research (ICAR), one among 'Who is Who' in Modern Indian Agriculture, has scripted the image of a visionary and an acclaimed leader before the agricultural scientific fraternity in the country. I consider myself privileged and fortunate to come in association with the towering personality like Dr Paroda Ji during these years. The long list of awards and honours, including those of Padma Bhushan Award (1998), Norman Borlaug Award (2006), President of the National Academy of Agricultural Sciences (1998-2000) and Rafi Ahmad Kidwai Memorial Prize (1982-83), conferred on him, amply justify his outstanding academic and research record, and brilliance. As the Secretary, DARE and Director General of ICAR, he has been instrumental in bringing several transformations in the research framework of the Council, management reforms and developing distinct infrastructure facilities in the ICAR research institutes. Age has not deterred him from contributing towards the cause of development of agricultural science and agricultural development at large. As the Chairman of the Trust for Advancement of Agricultural Sciences (TAAS), he has been actively associated in organization of several events concerning the agriculture and the farmers. The successful organization of the 1st International Agrobiodiversity Congress at New Delhi during 6-9 November, 2016 under his leadership is testimony to his leadership capability even at this age of 75.

I had great honour to receive two ICAR awards during his tenure as the Director General, ICAR, one 'Special One-time Award of ICAR' on 16 July 1998 and another ICAR Award for the Team Research in Fisheries for the Biennium 1997-98 on July 17, 2000, as a Team Member. As the Director of the ICAR-National Bureau of Fish Genetic Resources (NBFGR), Lucknow it was a privilege for me to organize the 2nd Meeting of the 'National Advisory Board on Management of Genetic Resources (NABMGR)' constituted by ICAR under the Chairmanship of Dr Paroda Ji, at Lucknow during August 2012, where I got an opportunity to have greater interaction with him.

The advice and directions received from him in different meetings of NABMGR especially on genetic resource management was a great learning for me. Further, it was also a good fortune for me to have opportunity for several interactions with him in diverse subjects at different fora during my tenure as the Deputy Director General (Fisheries Science), ICAR since January 2016. I sincerely believe that he would continue to share his knowledge and wisdom for the cause of agriculture development in the country. Further, I look forward to his continued guidance and blessings in years to come.



The 2nd Meeting of the 'National Advisory Board on MGR)' Chaired by Dr R.S. Paroda at ICAR-NBFGR, Lucknow on 13 August 2012.

I sincerely wish for his completion of 75th year of age on 28 August 2017 and looking forward to wishing him for the day and for many more years.

Visit of Dr R.S. Paroda to the Ganga aquarium at ICAR-NBFGR, Lucknow.

J K Ladha

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It has been my great honor and privilege to have the opportunity to know and interact with Dr R.S. Paroda, an outstanding scientist, administrator, policy maker, and above all visionary and wonderful human being. My association with him began in 1985 when I had just started my research journey in agriculture.

I have never met anyone with the level of energy and capacity that Dr Paroda has, to absorb new ideas and knowledge. He has always been ahead of the curve. While he has devoted his life to serving the Indian agriculture system, which undoubtedly has helped strengthen the country's agriculture to achieve national food security, he has remained fully engaged internationally.

Dr Paroda has made numerous contributions nationally, regionally and internationally. Some that will always be remembered include: (a) establishing the National Genebank at NBPGR, New Delhi, which is 2nd the largest in the world; (b) conceptualizing and establishing the National Agricultural Research Information System (ARIS); and (c) negotiating with the World Bank for the creation of the National Agricultural Technology Project (NATP). He has also devoted time to intellectual property rights and preserving and conserving national biodiversity, which are all in the interests of the entire developing world.

One of my fond memories of Dr Paroda is his visit to our home at IRRI during 1990-93 when he was on the IRRI Board of Trustees. During one such visit, I believe in March or April 1992, he was then DDG (CS), ICAR but planning to make a move to FAO. During dinner, he asked my wife, Usha, and me, what we thought about him joining the FAO. I remember that I was momentarily puzzled by this question. But then I realized that he wanted to know if a move to FAO would be viewed by some as deserting his country. Usha and I both told him that it would, in fact, be nothing less than serving the causes of India through his representation at this UN organization. He did go to FAO in Bangkok for two years but then returned to India to be Secretary, DARE and DG of ICAR.

Dr Paroda's passion and dedication to his work are difficult to match. He has always been fair and treats others with respect. He leads by example and works harder than anyone I know. I have enjoyed meeting and intermeeting with him whenever I am in Delhi. He has always been a great source of inspiration and encouragement for me.

For Dr Paroda: Long may you prosper!

J L Karihaloo

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It gives me immense pleasure to recall my association with respected Dr R.S. Paroda and pay tribute to him on the occasion of his 75th birthday.

My familiarity with Dr Paroda goes back to late 1970s when I joined ICAR as a scientist and came to hear about his dynamism and leadership qualities. I became more closely aware of his personality and contribution after joining National Bureau of Plant Genetic Resources, New Delhi (NBPGR) in 1988 where Dr Paroda had served as Director and had just left for ICAR headquarters to join the coveted post of Deputy Director General (Crop Science). In spite of a brief tenure at the Bureau, he left a lasting mark with the initiation of massive infrastructure development and administrative restructurings. The enthusiasm and excitement that these developments had generated was evident during my interaction with colleagues at the Bureau.

One of the outstanding contributions of Dr Paroda has been the development and implementation of INDO-USAID project aimed to strengthen NBPGR capabilities and internal linkages for management of national plant genetic resources as well as for increasing its role in regional and international activities. The project operated during 1988-2002, led to massive infrastructural development including construction of new NBPGR building with one of the world's largest genebank facilities. Dr Paroda also successfully negotiated with the Department of Biotechnology, Govt. of India for establishment of tissue culture and cryopreservation facility (erstwhile NFPTCR) which along with seed gene bank took care of all the required infrastructure needs for ex situ conservation of the vast diversity of crop related genetic resources of the country. The Indo-USAID project having a large component of human resource development led to training of more than a hundred scientists of the Bureau and other ICAR centres in advanced areas of plant genetic resources management at designated centres in the USA. I was fortunate to get trained under this programme and get introduced to molecular marker and DNA fingerprinting technology. The Indo-USAID project led to the elevation of Indian plant genetic resources conservation system to match the highest international levels and the Indian gene bank to become the 2nd largest genebank in the world. As Director General of ICAR,

Dr Paroda replicated these efforts for conservation of Indian animal and fish genetic resources by establishing National Bureau Animal Genetic Resources, Karnal and National Bureau of Fish Genetic Resources, Lucknow.

Dr Paroda was instrumental in initiating the World Bank funded National Agricultural Technology Project which had a major component of plant genetic resources management operated from NBPGR. The project resulted in massive nation-wide collection, characterization and conservation of crops and related wild species germplasm involving more than 130 partners from all over the country including public institutions and NGOs.

My association with Dr Paroda became closer when I joined Asia-Pacific Association of Agricultural Research Institutions (APAARI) and personally experienced his multifarious qualities of dedication, hard work and compassion. As Executive Secretary, APAARI from 1993 to 2015, Dr Paroda single handedly nurtured and expanded the organization which now has a membership of more than 50 institutions spread all across Asia and the Pacific. He initiated wide ranging discussions to identify and address agriculture related policy, R&D and outreach issues relevant to this region. As a result, APAARI Mid-Term Perspective Plan (1995–2000), sub-regional Research Needs Assessment documents and policy documents including Bangkok Declaration on AR4D (2008) and Suwon Agrobiodiversity Framework (2010) were developed under his guidance. Specific thrust areas like policy advocacy, human resource development, partnership and regional research networks were identified and appropriate activities carried out. During his tenure, two major programmes, Asia-Pacific Consortium on Agricultural Biotechnology (APCoAB) and Agricultural Research Information System were launched which have created their own niche. Dr Paroda's global recognition helped APAARI to collaborate with several international and regional organisations like CGIAR, FAO, CABI, FARA, CACARRI and ARINNENA.

Dr Paroda is now deeply involved in national agricultural research and development scenario and the welfare of farmers. Through the Trust for Advancement of Agricultural sciences, he has been bringing together world's brightest minds on Indian agriculture to chart the course of policy, research and extension advances required to enhance productivity and nutritional quality of Indian crops, and benefits to resource poor farmers. He has been passionately championing for adoption, upgradation and farm-level implementation of modern technologies of crop improvement and resource conservation. While assisting him in his submission as a technical expert to the Hon. Supreme Court in a case related to GM crops, my impressions about Dr Paroda's commitment, hard work and meticulous application were further strengthened.

I had several opportunities to experience the excellent hospitality of Mrs and Dr Paroda at their home and outside. Their personal qualities of respect and kindness have endeared them to their friends and staff. I wish Dr Paroda a very happy birthday and the family many more years of togetherness.

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An Inspiring Personality – Padam Bhushan Dr Rajendra Singh Paroda

As a farmer's son I have family association with Dr R.S. Paroda. His father-in-law was my teacher at Jat College Rohtak, Haryana. After completing Ph.D. in Chemical Engineering from Bombay University, I worked in industry for 5-6 years before joining I.I.T. Kanpur during 1975. The focus of my research has been on agro-based industries. I have written books on 'Strategies of Rural Development' and 'Modernisation of Indian Sugar Industry'. In this context, my interactions with IARI and Dr R.S. Paroda have been very frequent.

After retirement I am devoting my time for Social Engineering. As past Chairman of Institution of Engineers, Delhi State Centre, I have invited Dr Paroda to be the Chief Guest and Guest of Honour during National Seminars organised by the Agriculture Engineering Division Board. I have had frequent interactions with Dr Paroda during seminars organised by 'All India Farmer's Forum'. I have written an article on the brilliant career of Dr R.S. Paroda which was published in February 2001 issue of Jat Jyoti Magazine. This article inspired the youth of Farming Community to do well in their chosen fields.

On the occasion of his 75th birthday, I wish Dr Rajendra Singh Paroda a long and healthy life.

Jayant Joshi

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One evening in late 1964, my father Dr A.B. Joshi came home and showed me a manuscript handwritten beautifully and neatly and said to me “This is what handwriting should be. This boy will go a long way”. Those words turned out to be prophetic.

When I asked, who this person was, father told me that it is a fine young man from Rajasthan named Raj Paroda.

The incident was forgotten and a few days later, the doorbell rang on a Sunday morning. I opened the door and found a tall, strapping, handsome young man, immaculately attired, standing at the door. He bent over (I was not even 10 years old then) and softly said to me “I am Raj Paroda”.

Father had already briefed me so I beckoned him in. Shortly father joined and that was the first of so many lively Sunday morning sessions, discussions on research that was being conducted for Raj Bhaiyya’s Ph.D. thesis, culminating in lunch. I could see my father enjoying the discussion because he had one of the brightest of his students with him. Soon, with his immaculate manners and fine etiquette, combined with genuine affection, Raj Bhaiyya became a favourite of the house. My mother soon paired the two of us as “Raj and Raju (which is my nickname)”. This was the beginning of a family association which continues till date, even after the passing of my parents. Never was a festive occasion complete without his presence. We have many family photographs together with him, which, unfortunately, I cannot access now, being away from India. If I remember correctly, one of my favourite childhood photographs with my little red bicycle, was one of the many shot by him.

Soon after completing his Ph.D. in 1968, he moved to Aberystwyth, Wales for his Post-Doctoral programme which, with his impeccable credentials, he completed with flying colours. In my father’s eyes, he became a benchmark of what his students should be.

My parents moved out of Delhi in 1976, but they continued following Raj Bhaiyya’s phenomenal progress with utmost pride. Often, I would get telephone calls from

them to Dubai, when he reached landmarks such as becoming Director NBPGR, DG ICAR, receiving the Norman Borlaug Award and many more. True to his character, he never failed to visit them whenever possible or ring them at frequent intervals.

Such individuals, few and far between, leave an indelible mark on your lives. These associations are built on genuine love and affection. Today, my wife and children relate to and participate heartily in this relationship because this is a continuum, not to be broken.

My family and I wish him the very best and may the future be filled with success for him.

James G Ryan

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Dr Paroda has distinguished himself in agricultural research governance, management and administration at many different levels: state, national, regional and international. Indeed he has been instrumental in forging links and partnerships among agricultural R & D institutions at all four levels. He continues to do so as he enters his 76th year, which is no small achievement.

Dr Paroda has an ability to orchestrate institutional innovations that enhance the conduct of agricultural research in India and importantly its translation into technology that finds its way onto farmers' fields. Not satisfied with this, he is a tireless and effective advocate for increased investments in agricultural R & D at all levels. He oversaw large World Bank agricultural R & D loans to India as Secretary of the Department of Agricultural Research and Education and Director General of the Indian Council of Agricultural Research, which improved the performance of the sector. His ability to enlist strong political support for agricultural science institutions in India is evident in the many high profile events he has organised that feature Presidents, Prime Ministers, Chief Ministers and Ministers. This elicits much media coverage that provides popular support for agricultural R & D that is essential in these tight budgetary times.

Dr Paroda has played key roles in the governance and management of the Consultative Group on International Agricultural Research system and in regional organisations like the Asia-Pacific Association of Agricultural Research Institutions. This has helped in harnessing substantial increases in India's contributions to the CGIAR system over the years and strengthened the partnerships between the international agricultural research centres and Indian research institutions.

Dr Paroda shows no signs of slowing down in his effective and innovative agricultural R & D advocacy and leadership. This should be an inspiration to us all.

Jitendra P Srivastava

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I am happy that this publication commemorates the outstanding contributions to humanity of a living legend, Dr R.S. Paroda, on his 75th birthday. As an accomplished scientist, able research administrator, development practitioner and agricultural visionary, Dr Paroda has become a highly regarded, respected and pivotal figure in the development of Indian and global agriculture. His personal history is an enduring lifelong commitment to ensuring food security and wellbeing of rural communities in India and all over the world.

I first met Raj Paroda in 1965 at Indian Agricultural Research Institute, New Delhi while he was a Ph.D. student and was impressed by his personality, candor, leadership and desire to contribute to improve India's food production. I had the opportunity to continue to interact with him throughout his career within India as well as abroad and whatever assignments and responsibilities he accepted, he is remembered for raising the bars high, taking required decisions, hard work, building outstanding teams, ability to work with different stakeholders and achieving the set objectives.

As a member of the World Bank team, I remember working with Dr Paroda, when he was Director General of Indian Council of Agricultural Research in development of several World Bank-supported projects in India, where his advice and support were key to the successful implementation of the projects. I also remember the moments



when he would not mince his words if he considered some of our suggestions were not necessary. Dr Paroda is still fondly remembered in Central Asia and Caucasus countries for forging a very effective and efficient Regional Agricultural Research Program bringing many International Agricultural Research Centers and the national programs

together. Dr Paroda's contributions to the society have been recognized by the Government of India and many national and International organizations. However, his untiring and inspirational work continues.

I am also impressed by Raj Paroda for his belief and practice that the greatest satisfaction is keeping others happy. He is a loving husband, caring father and considerate and supportive to all. I wonder how he manages work / family balance so well. Wishing him every happiness and success in all his endeavors on the occasion of his 75th Birthday.



John Dixon

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The contributions to science and the humanity of Dr Rajendra Singh Paroda have been an inspiration to me, my wife and many others. He served agricultural research in India, Asia and the world with distinction through a long and productive career.

I had the honour to serve alongside Dr Paroda in the FAO Regional Office for Asia and the Pacific in Bangkok during the 1990s. He had already made lasting contributions to science, science management and science leadership in the fields of genetic resources and crop improvement in India, for example as Director, National Bureau of Plant Genetic Resources and Deputy Director General (Crops) in the Indian Council of Agricultural Research. In the FAO Regional Office, I was impressed by his strategic view of agricultural development and his pragmatic advice to Asian countries, underpinned by a sound understanding of national research and development capacities, led to strengthened plant production and protection services which contributed to the major improvements of food security in the region. He also strongly supported testing and piloting new innovative approaches to agricultural and rural development, such as the multidisciplinary and participatory methods developed and applied through the FAO/UNDP Farmer-centred Agricultural Resource Management Programme which I coordinated. His strategic view, pragmatic advice and support for innovation led to widespread respect through the Asian region.

During his visionary leadership of the Indian Council of Agricultural Research modern information and communications systems were established and scientist farmer dialogue strengthened through the village linkage program. Another lasting contribution to South Asia was the leadership of the Rice Wheat Consortium which provided a platform for the coordination of research and sharing of results across the region, and was recognized by the award of the King Baudoin Prize. His commitment to regional sharing of scientific knowledge continued with the CGIAR in Central Asia, with ICARDA; and was demonstrated over decades of leadership of APAARI. More recently, he has continued to strengthen farmer-science-policy dialogue with the Haryana Farmers Commission and the Trust for the Advancement of Agricultural Science.

During a long and distinguished career, Dr Paroda has contributed massively to a better world for farmers, consumers and the general public.

K D Kokate

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I know this powerful soul with pleasant personality: Dr R.S. Paroda Ji, for the last more than three decades when I joined ARS in 1984-85. In 1985, I was undergoing Foundation Course at NAARM, Hyderabad, when I heard him for the first time focusing on germplasm conservation as Director, NBPGR, New Delhi. I remember after listening to him, there was a discussion among the colleagues that he would be the future Director General of ICAR which came true in the year 1996. Subsequently, I got many opportunities to listen to him on different occasions when he was the DDG (Crop Science) and later Secretary, DARE and DG, ICAR.

I came in close contact with him during 2009 to 2014 when I was DDG (Agril. Extension), ICAR. It was my great privilege to participate along with him in the Global Conference on Agricultural Research for Development (GCARD) – I & II at Montepellier, France and Punta del Este, Uruguay during 2010 and 2012, respectively. In these international conferences, I could experience the honour given to him by the global scientific community which was a proud moment for me and all the Indian scientists. I remember that he moderated impressively and professionally, the panel discussion at GCARD – II on Innovation for Impact on Smallholder Farmers: Challenges and Opportunities.

Interestingly, GCARD II applauded India for organization of First Global Conference on Women in Agriculture (GCWA). Then, it was the initiative of Dr Paroda Ji, that the GCWA was held in 2012 in New Delhi under his leadership. The GCWA was a landmark event



*Pleasant moment - GCARD II, Punta del Este,
Uruguay 2012*

on many accounts. The conference, for the first time, brought together the R&D stakeholders, institutions and partners from across the world and deliberated upon several issues influencing women in agriculture. Dr Paroda Ji took the major responsibility of planning and coordinating the conference activities as well as getting the much needed support from the national and international organizations for the conference.

Similarly, I got an opportunity to organize two international and national events successfully under his leadership and guidance viz., exclusive session on 'Openness in Agriculture Knowledge Information System' of International Conference on 'Innovative Approaches for Agricultural Knowledge Management: Global Extension Experiences' and National Workshop on 'Farmer-led Innovations' in 2011 at New Delhi.



Release of publication at First Global Conference on Women in Agriculture (GCWA) 2012

Further, personally I express my sincere gratitude to him for very kindly accepting the responsibility of Chairman of High Power Committee on Management of Krishi Vigyan Kendras (KVKs) for suggesting measures to improve the relevance, efficiency and guidelines for implementation and this herculean task was completed in stipulated time due to his untiring effort. The recommendations of the committee have relevance in the present context to make the KVK system more effective and efficient. This report of High Power Committee is a milestone in the history of KVK system.

With the blessings of the god, I feel that I got an opportunity to work under the guidance of the great visionary, Dr Paroda Ji and it was a unique learning experience. He is the person not only of vision but execution of that vision in reality. He is an excellent example of Self Managing Leadership in the present world of challenges and competition. Further, it was surprising to see his beautiful hand writing while making the corrections in the draft

submitted to him inspite of his busy and hectic schedule. I realized that at his age, he is younger than many youngsters due to his passion and compassion. He is a hard task master, meticulous and perfectionist as a leader but at the same time he is very loving and caring with his colleagues and always gives personal attention to their well being. Whenever he is around, the situation is charged with positive energy.

I wish him and his family a healthy, peaceful and long life.



Great moment - Receiving Memento from Dr R.S. Paroda Ji (GCWA 2012)

K Gopakumar

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My first meeting with Dr Paroda was in the late 1980s when he was the Deputy Director General (Crop Science), ICAR. I can't recollect the exact date. It was when I was attending one of the ICAR regional Committee meetings at South India as a substitute for the then Director, CIFT, Kochi. It was a very well organized meeting. Dr Paroda was speaking and presenting the achievements of ICAR institutes in that area. I was very impressed by his presentation and started admiring his in-depth knowledge. During lunch, I tried to go near him and introduce myself. But it was a failure. Dr Paroda had so many admirers surrounding him and I failed to talk to him.

However, my next meeting with him was very special to me. It was in early 1992 at Bangkok, when Dr Paroda was working at the FAO Regional office as Regional Plant Production and Processing Officer. I went there to attend the FAO working party meeting of the Indo-Pacific Fisheries Commission on Fish Technology and Marketing. During lunch, I was informed by one of the Senior Officers of FAO that a very senior scientist of ICAR is sitting at the fourth floor and I should go and meet him. I did not know who the person was. I decided to go and meet him. I knocked at the door and got an invitation to enter. To my surprise, I saw Dr Paroda sitting there. He smiled at me and said "I heard that someone from India is elected to chair the IPFC meeting and he is a highly respected scientist in the Fisheries Department of FAO. I felt very



proud but never knew you are the person. I am glad that you came to meet me." I met him two more times before departure from Bangkok and told him that "One day you will become DG, ICAR and I will be pleased to work under you." He thanked me and said that if Govt of India and ICAR would want him then he would come.



Within months, Dr Paroda became Director General, ICAR. I sent him a congratulatory message. Within three days, I vividly remember, he sent me a reply. To my surprise, he wrote to me that he remembered what I had told him at Bangkok and thanked me. That is the greatness of Dr Paroda.

In 1997, the post of Deputy Director General (Fisheries), ICAR was notified. I applied for the post. I was selected by

him. But soon I realized that my appointment was not accepted by the President, ICAR for reasons I do not want to write. Dr Paroda recommended me again, yet, it was not cleared. At that point of time, he asked me to come over to New Delhi. I went and met him in his room. He asked me to sit there and went to the Minister's room and returned after 23 minutes. I vividly remember the time when he said, "I have told the Hon'ble Minister that I want you and your file will be cleared." That night, the Minister of Agriculture cleared my file and the next day I joined duty. I went to Kochi after a week and resigned from the post of Director, CIFT.

I professionally record that but for Dr Paroda and his greatness, I would have never become Deputy Director General, ICAR.

His monumental contribution is NASC Complex housing the NAAS Building and International Guest House. He told me once that he wanted his scientists to stay in healthy conditions and a guest house was a must. He did the task wonderfully. Every time I visit Delhi and stay at the NAAS guest house, I think of Dr Paroda.



I worked for five years under him. If Dr Swaminathan created ICAR, it was Dr Paroda who modernized it. He computerized all ICAR institutes and SAUs by bringing huge funds from World Bank (NATP). I enjoyed working under him. He is a great human being and revolutionized the concept of Project Planning.

As a person intimately known to him, I record professionally that he was one of the pioneers who modernized a system when it was at its low end.

There is only one man equal to him in Indian Agricultural Research System in the country and that man is Dr Rajendra Singh Paroda.

K Mohan Naidu

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A Sweet Deal with Dr R.S. Paroda

I deem it as a great honour and rare distinction to share my association with Padma Bhushan Dr R.S. Paroda ji, the architect of the national genebank and India's voice in biodiversity and IPR related issues. His stellar contributions as an outstanding research manager have strengthened and modernized the Indian agriculture. He has successfully spearheaded the National Agricultural Research System and introduced several policies for improved efficiency and its reorganization. His thoughtful initiatives have prepared the Indian agriculture to face the challenges in the changing global scenario.

Memories are sweeter when I recollect his more than three decades old association with ICAR-Sugarcane Breeding Institute. In the capacity of DDG, Crop Science he was always a pillar of support for the institute and his expert consultations and guidance motivated us to reorient our research programmes to the benefit of sugarcane farmers and the industry. He always ensured better working atmosphere and facilities for the scientists as he believed it is the institutions and human resource that constitute the cradles of future development. As the Director General of Indian Council of Agricultural Research, his visions and plans have helped us to scale our research to newer heights and continue to make outstanding contributions to Indian sugarcane agriculture. During his tenure as DG, ICAR, he visited Sugarcane Breeding

Institute during November 24-25, 1999. He visited the crop geometry and cropping system plots and suggested to intensify research activities for the sustainable crop production with reference to various factors. He was very particular that the work had to be taken in relation to water requirement and stress conditions like salinity. This has



much relevance even today as we are facing the problems of frequent droughts and salinity and it shows how practical a visionary he is.

He is better known as the PGR person whose scientific journey is parallel to the paradigm shift in conservation of genetic resources as he could realize that the loss of every gene and species limits our options for future. His efforts were to ensure equitable and



sustainable use of the plant genetic resources for the present and future generations. His expert visions and policy decisions on conservation of plant genetic resources encourage us to be the proud custodian of the world collection of *Saccharum* and other related grasses and to safeguard our nation's sovereignty over it. It is our proud privilege to have his guidance all these years as a policy-maker and as Chairman, Farmers Commission of Haryana; he visited several times our Regional Centre at Karnal and helped in strengthening the infrastructural facilities. He inspired us to dedicate to the well being of the sugarcane farmers and to make the sugarcane agriculture more sustainable. He is a close companion of SBI and contributed immensely to our growth and has been a motivator to me both professionally and personally.

A great human being and a true visionary, he has always boosted the morale of the fellow colleagues of the organization. As the Director of the institute, I was largely benefitted by his thoughtful and timely actions and always inspired me to deliver the best for the growth of the organization. He never said no to any of the proposals, instead assured all his support for the improvization of the institute.

True to my knowledge, Sugarcane Breeding Institute will be privileged to have his expertise and able guidance in the coming days as Chairman, Research Advisory Committee at a time when the importance of genetic resource conservation and utilization in sustaining the sugarcane productivity and to meet the challenges of alternate uses in a changed climate scenario is most felt. His decade long research experiences and policy decisions will be the guiding force in further prioritizing the research programmes to serve the sugarcane farming community better and to catalyze the growth of sugar industry.

In a lifetime of more than seventy years dedicated to alleviating human suffering; Sir, you have completed the work of many lifetimes. Your dynamism inspires us to rededicate ourselves to the cause of Indian agriculture. We sincerely wish and pray to Almighty to bless you with good health and success in all your future endeavours to lead the Indian agriculture.

K S Varaprasad

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I met Dr R.S. Paroda personally in January 1986 in NBPGR Director's chamber. My life took a new turn since then. I became a Research Manager and I found my role model in Dr Paroda. The most important attribute I admire and try to emulate is his philosophy - 'Give and facilitate everything possible and then seek output from your team'. It is not exaggerating to state that the era of Dr Paroda in ICAR brought self esteem and self respect to the scientific community. I was pleasantly surprised when a visiting scientist from USDA at our NBPGR Regional Station told me that I was part of the pre-project visit to USA under the prestigious USAID PGR Project, which was in silent appreciation of my contribution to NBPGR RS, Hyderabad. Infrastructure planned by him at the national level for NARS is par excellence and that is how the world-class facilities were built, even at NBPGR Hyderabad Regional Station. I can't forget his magnanimity and empathy towards needy sections of the society. He is responsible for 16 labourers getting their due as the 'Temporary Status' at NBPGR RS, Hyderabad paving way for 16 families to lead decent lives. He does not mince words to call spade a spade and is an instant decision maker, which is the most important attribute in a leader. He used to diligently make notes on his visits and used to follow up on the suggestions/ improvements expected even after his next visit to the same Centre after a year. He used to recognise and appreciate each team member and not just the Team Leader. I found a new Director



and a true leader in him when he said, "Build your own house when you are young and do not commit the mistakes that we did". That is how he sanctioned home loan and now I own a home in Hyderabad. Every important decision that I make, I always try to think that if it was Dr Paroda, how he would have thought and then accordingly I take a decision.

He was always concerned about the staff facilities and then used to extract the output. Accordingly, he prioritised first quarters for supporting staff and then office building came up later. One of the most important attributes the national scientific leaders shall possess is 'Connecting the national political leaders to the science and scientific achievements in agriculture'.



No less than Union Ministers of Agriculture inaugurated our small initial Regional Station facility in 1987 and also full-fledged Laboratory Complex in 1997 for NBPGR Regional Station, Hyderabad. Dr Paroda's respect to his seniors was evident when he readily agreed to deliver the "First MV Rao Lecture" organised by me as President of Indian Society of Oilseeds Research at Hyderabad. His lecture note was

reprinted more than once and is on demand even today.

Dr Paroda's mega vision on agriculture, team nurturing capability, accessibility to the performers, quick decision making capacity, scientific spirit and human touch with social consciousness and above all a friendly family man - the combination of all these traits make him special and my role model. Every team member of NBPGR Regional Station, Hyderabad remembers, respects and adores him.



K V Peter and K Nirmal Babu

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Padma Bhushan Dr Rajendra Singh Paroda – A Man of Mission, Vision, Compassion and Accomplishment

History is made and events triggered by a few men and women and they become pillars of human existence, survival and happiness. Dr Rajendra Singh Paroda is one of them.

As Director General, ICAR he insisted on production of breeders/foundation seeds by the ICAR Institutes and State Agricultural Universities. He played a major role in the enactment of Protection of Plant Varieties and Farmers Right Act, 2001. He presided over the prestigious Indian Science Congress Association in 2001 and his address 'Intensive Efforts Needed for Food and Nutrition Security' was widely covered by media in India and abroad.

Dr Paroda was fully involved in drafting the 'Vision Statement' adopted by all the science academies in India. He is a Fellow of almost all the science academies in India, a rare distinction to any scientist. He was President of the National Academy of Agricultural Sciences, New Delhi. The National Agricultural Science Complex, New Delhi housing and a auditoria, offices of professional societies, science museum, guest house was conceived and constructed during his period as Director General, ICAR and the NASC stands as a living memorial to him.



The theme of the Indian Science congress held at ICAR-IARI, New Delhi was 'food, nutrition and environmental security'. The Hon'ble Prime Minister, Late Shri. Atal Bihari Vajpayee, who inaugurated the congress said his dream was - 'A zero hunger India with food, nutritional and social security'. The

work plan for this was envisioned by the National Agricultural Research System supported by the policy makers and other CGIAR institutions like CIMMYT, ICRISAT, IRRI and Bioversity International etc. Dr Paroda quoted former Prime Minister Late Smt. Indira Gandhi to emphasise the need for self sufficiency “no nation can live with pride unless it has the capacity



to feed its people”. He and his colleagues established the Trust for Advancement of Agricultural Sciences (TAAS) with the goal of an accelerated movement for harnessing agricultural science for the welfare of people as a continuum of the Science Congress. TAAS, with the moto ‘Progress Through Science’, acts as a think tank on key policy issues relating to agricultural research for development (AR4D).

The leadership of Dr Paroda brought together scientists of Indian origin but working abroad under one umbrella to make use of the ‘Indian brains for India’s development, progress and happiness’. Many strategic papers were compiled through collective discussion and exchange of scientific information. In the paper ‘Reorienting the Agricultural Research for Development (AR4D) Agenda for Sustainable Livelihood security of Small Farmers’, Dr Paroda calls for caution in the context of growing population touching 1.3 billion, declining factor productivity, deteriorating natural resources, impact of climate change and above all a fatigue in the existing research and extension system that largely operates in the public sector.

Human Resource Development was a cherished goal of Dr Paroda. The main theme was ‘Knowledge is



wealth'. Freedom needs to be attained from fear, jealousy and egoism, the characteristics of Indian mentality. Libraries in Research Institutes, State Agricultural Universities and Science Divisions were funded by the Education Division of ICAR under his directions. Awards were instituted for the best Institutes/Universities for all round performances. Jawaharlal Nehru Awards were given to Best Ph.D. thesis. International scientists exchange programmes were encouraged. I visited World Vegetable Centre (AVRDC), Taiwan; BARC, Bangladesh; Bacterial Wilt Conference, Guadeloupe (FWI) etc. under his encouragement and support.

Dr Paroda is a boss with a human face to us. He visited the Indian Institute of Spices Research, Calicut and its research station at Peruvannamuzhi (Calicut) and sanctioned adequate funds for construction of research laboratories and scientists' quarters. Many centres of scientific excellence – National Biotechnology Facility, a *Phytophthora* Network, Agricultural Technology Information Centre (ATIC) were established during 1991-1999 at the upgraded ICAR-IISR Calicut, erstwhile NRC on Spices, Calicut. He inaugurated the First International Plantation Crops Symposium on 30 November 1994.

He also sanctioned a Krishi Vigyan Kendra (KVK) at IISR research farm Peruvannamuzhi, and inaugurated it during December 1998. This KVK is now being adjudged as one of the best in the region.

Dr Paroda is equally humane and 'justice was done and made known that justice was done'. I was on deputation to ICAR-IISR Calicut for 8 years and as I had to join Kerala Agricultural University as Director of Research within 24 hours, he was kind enough to get me relieved within time. As Fellow of National Academy of Agricultural Sciences, I get opportunity to meet him and my dream of drafting a biography "TOWARDS XERO HUNGER INDIA" is yet to be accomplished. Padma Bhushan Dr R S Paroda is relentlessly pursuing the voice of farmers so that they lead a life of pride and self-esteem. As Lord Krishna pleaded with the great warrior Arjuna to conquer and save the Mahabharata from the evil Kauravas, the farmers of India plead you to show the light so that they can walk to light and prosperity.

Thank you, sir, for your vision, commitment and dynamism. We are blessed to have known you.



Dr Rajendra Singh Paroda, the Big Thinking Institution Builder

If I am asked to pick up five living legends in India who have been responsible for making India stand upright while rubbing shoulders on equal footing with global agri-science leaders without losing sight of the national farmers' interest or their wellbeing, invariably one of them is Dr Raj Paroda, as he is fondly known among the leaders.

Behind the bright and warm smile, resides a mind that thinks positively which is proactive, firmly in line with topical needs of the country and that literally expresses the phrase “*Think globally, act locally*”. There are very few among the policy makers who are in touch with what is happening globally in agricultural research and technology development with firm rooting on native ground in the awareness of local farming situation like Dr Raj Paroda, who has deep knowledge base on all connected sectors of farming systems, within and outside India. He has in him a personality, that combines the big picture with big achievement, the key for institution building. Fund raising seemed so easy for him as can be made out by a mere glance at the gigantic infrastructure he created in ICAR *pan India*. These abilities in him have enabled him to put together, possibly in quickest of time, the establishment of many mega features in agricultural sciences which catapulted Indian agricultural research to a much higher level than before, which is difficult to emulate.

My first direct ‘brush’ with the leader personality in Dr Paroda came in 1990 when as Deputy Director General (Crop Science) he walked down the stage into the row of seats where I was sitting as a young wheat breeder representing Northern Hills Zone in the Annual Wheat & Barley workshop at Kanpur, and congratulated me for the development of four varieties of wheat for different production conditions, three of which were identified for release in one go. He told me while shaking my hand warmly with his characteristic smile looking into my eyes, “*Congratulations Prabhu, keep it up. You represent my hope for the future of Indian farmers*”. I had not known him nor had come in direct contact with him other than during the interview for the selection for ARS in 1985 at ASRB where he was the Chairman of the Board for Plant Breeding discipline. Yet, he was able to recognize me in the crowd somewhere

in the middle rows of the auditorium and remember my name, possibly based on the proposal presentations I had made the previous day! The keen observation and intent to acknowledge good work, irrespective of the status was so visible in that small act that made a huge impact on me. I became an instant hero that day among the wheat fraternity, thanks to this beautiful professional gesture that Dr Paroda showed that evening. I promised myself to do that much extra for our farmers, a promise that I have kept till date. Subsequently there were more professional interactions where the bond of merit or performance recognition always showed up in his response to me, which I have cherished.

I have, then onwards, followed Dr Paroda as one of our national agri-research leaders with a sense of professional belongingness. One cannot miss the fact that Dr Paroda has been living up to his often quoted phrase “Paradigm Shift” that he adopted as his *modus operandi* in the leadership roles he played as Director, National Bureau of Plant Genetic Resources; Deputy Director General (Crop Science), ICAR; Secretary, DARE and Director General, ICAR; Chairman, Trust for Advancement of Agricultural Sciences (TAAS); Executive Secretary, Asia-Pacific Association of Agricultural Research Institutions (APAARI), etc., where he effected several changes in policies and guidelines of personnel management, project development, networking with other research systems, international collaborations, public-private partnership etc.

His period as the Secretary, DARE and Director General, ICAR was a Big Happening Period in Indian agriculture. Lack of resources or hurdles in getting the permissions required in many such infrastructural features did not deter, slow-down or frustrate him. His ahead-of-time mindset and drive to achieve resulted in India becoming one of the leaders in documenting, maintaining and utilizing plant germplasm resources establishing its massive National Gene Bank, the success of which led to the establishment similar facilities for animal and fish genetic resources later ; launching of mega network project with World Bank assistance, the National Agricultural Technology Project (NATP) that led to such mega projects such as National Agricultural Innovation Project, National Agricultural Education Project, etc.; establishment of the National Agricultural Science Centre (NASC) with its huge infrastructural expanse and relevance ranging from school children to Nobel laureates; the National Phytotron Facility and Indo-Israel centre for Protected Agriculture on IARI campus; facilitating the import of GM crop (transgenic crop) technology through *Bt*-gene in 2000 that brought in *Bt*-cotton Revolution in India over the next decade; accelerated seed spread of new varieties to reaching the farmers through National Seed Policy (1988) which I would conclude, was the turning point that led to the development of a competitive Indian seed industry and market; to name a few. I also saw the meaning of “*when things get tough, the tough get going*” through Dr Paroda, when he calmly and firmly displayed his dedication despite the most difficult time he faced as Secretary to the Govt. of India. I saw, being involved in the organization of the Indian Science Congress 2000 which he was the General President, how he set a new standard for organizing a mega science event, coming out at the same time unscathed, bright and shining to lead higher achievements.

I was lucky, as a representative of the Union Ministry of Agriculture, to have witnessed the unfolding of Dr Paroda's bold and forward thinking personality undeterred by political or unscientific idealism when he worked like a brave heart to submit his own separate report to the Supreme Court of India in 2013, firmly veering himself from the rest five of the Technical Experts' Committee (TEC) appointed by the Court on issues related to GM crops while hearing a Public Interest Litigation petition filed by Ms Aruna Rodrigues and others *vs* Union of India and others. He did not get clouded by the idealistic and speculative depths of academic science disregarding the required biosafety and environmental safety perspective that could have prevented him also, like it did the others, from taking stock of the purpose of the risk assessment for biosafety regulation while establishing the safety of the GM crop technologies. His report, known as the "Paroda Report", put up the practical, realistic and logical regulatory approaches that would enable biosafety assessment of the GM crop technology without causing any harm to the society, ecology and environment. The amount of reading, understanding and planning required to file a comprehensible voluminous document to facilitate the Supreme Court to conclude the litigation was a big responsibility that Dr Paroda took upon himself patiently. Such large impact involved paths can be created only by those who can assimilate biosafety regulatory processes within the large canvas of agriculture, as was done unflinchingly by Dr Paroda with grit and poise being fully aware of the impact the document shall have on the future of agri-biotechnology in India.

My salutes to this visionary, with best wishes for his health, happiness and continued professional contributions and leadership the Indian agriculture needs.

K V Raman

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I am very happy that the former students, professional colleagues and well-wishers of Dr R.S. Paroda, are planning to bring out a book on him on the occasion of his 75th Birth Anniversary. It is a well thought out and commendable move to honour a person whose contributions to Indian agriculture, in general, and to the ICAR in particular, are legendary and phenomenal.

I have known Dr Paroda since 1984 when I joined ICAR as Director of NAARM and he was the Director of NBPGR and later became Deputy Director General (Crop Sciences). As fellow Directors in the system, we had many opportunities of close interactions both at the professional and administrative levels. This association continued when I became a Member of the ASRB and he was Director General, ICAR. I have always been impressed by his critical and exploratory ability as a scientist which helped him to achieve high professional attainments. He was always positive in his approaches, was a good judge of people and was open to new ideas and approach. He had grandiose ideas of developing good institutions and this was evident in the way he developed NBPGR as an excellent institution with world class facilities, and the way he provided guidance and support to many institutions that were established in the ICAR and NARS in India. He was also a good organizer and got along very well with his colleagues and coworkers, encouraging them to perform with commitment and excellence.

These rare qualities as both an accomplished professional and organizer *par excellence* helped him to develop the ICAR as an outstanding organization devoted to agricultural research and development. Even though there are several accomplishments to which Dr Paroda can be credited for, I would like to specially mention the following contributions as very significant.

1. The ICAR is a very large organization with so many institutions and projects on various aspects in the broad area of 'agriculture'. Streamlining the research activities of such a large organization as the lead institution of the country is a formidable task. He was instrumental in developing vision documents both at the Institute and ICAR level so that ICAR can be a leader for developing new ideas and approaches, while also enabling other organizations like the State Agricultural Universities and select NGOs to perform effectively. The

approach not only recognized their expertise and experience, but the liberal financial and infrastructure support to them promoted new initiatives excellence.

2. He also took important initiatives in establishing the 'National Agricultural Science Centre at New Delhi with excellent infrastructure and facilities of a world class standard. These facilities were thrown open for all Professional Societies and International Organizations, thus facilitating an interface for interactions. Persons who have worked with government organizations know that this is formidable task fraught with many hurdles on the way. However, with a remarkable vision and a high level of personal dedication, he implemented the project most comprehensively and effectively. This is no mean achievement.
3. Organizing the Indian Science Congress session at IARI, New Delhi, very effectively despite many odds. His organizational skills as well as HR capabilities were fully evident in this massive task. This session of the Science Congress is still considered to be one of the best organized sessions of the Science Congress, and no small part of this credit goes to him and the devoted band of workers he was able to motivate.

True to the tradition, even post formal retirement, Dr Paroda has been quite active taking an active part in the agricultural development scenario in the country. He headed the Farmers' Commission in the State of Haryana, addressing several issues of concern to the farmers, especially those concerning production, processing, storage and marketing of produce. The recommendations of the Commission have far-reaching consequences. Currently, as Chairman of TAAS, he is doing yeomen service bringing out excellent publications addressing issues of current relevance to agriculture and technology development.

While recalling with pleasure my pleasant association with Dr Paroda, which I have always cherished, I wish him many many more years of active and productive life with good health and happiness.

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I have known Dr Raj Paroda since 1994. We have participated and worked together in many international conferences, working groups and as panel members on agriculture and related areas. More recently I had the opportunity to work with him on matters of the Indian National Academy of Agriculture Science.

Dr Paroda is a world class researcher and leader and manager in the area of genetics, plant breeding, genetic resources, agriculture policy and translating scientific knowledge to practical outcomes. His leadership in genetic improvement and crop management practices has significantly contributed to the sustainable intensification for improving food and nutritional security in India and numerous developing and under-developed countries. Dr Paroda has published extensively in high quality scientific journals, presented his research at numerous national and international conferences. Dr Paroda's highly effective scientific leadership and negotiation skills are demonstrated in the establishment of agriculture research and teaching institutions in India and elsewhere. His passion and commitment to bring together researchers from different fields within India and overseas on common objective of global food and nutritional security is commendable.

Dr Paroda is a highly motivated, self-driven and very creative scientific leader and a great colleague. He is strong advocate of the application of science and innovation in agriculture and he has always sought opportunities to be involved in highly innovative research projects that bring him into close contact with farmers and the agricultural industry both within India and other countries.

Dr Paroda has made significant contributions to Indian and global agriculture during the past several decades. He is an efficient project manager and has considerable experience in the preparation of applications, negotiation with funding bodies, and making sure project outcomes are delivered on time. Dr Paroda always demonstrates the personal values of responsiveness, achievement, determination, continuous learning and improvement, integrity, accountability, cooperation, and respect for colleagues. He maintains high standards for his performance and is suitably self-motivated to produce quality results in an energetic manner.

Dr Paroda has a wide range of national and international research and leadership experience in crop science and farming system research, development and teaching. He has a broad knowledge of the agricultural industry in India and overseas and has excellent communication and interpersonal skills. Dr Paroda has demonstrated his achievements in agriculture research, teaching and extension leadership by his



outstanding role as a research scientist and manager and by the impact his work has had both within the scholarly community and with its end-users.

More recently Dr Paroda has been leading and conducting interdisciplinary research, knowledge sharing, and capacity building activities on sustainable intensification for improving food and nutritional security of smallholder farmers in Asia and elsewhere. He is also providing leadership and managerial activities of the various farmer groups in India.

Dr Paroda's personal qualities, expertise and international leadership in agriculture science is worth celebrating on his 75th birthday. I wish him and family all the best on this auspicious occasion. I have thoroughly enjoyed and benefited immensely from my association with Dr Paroda over the years and I look forward to continue interacting with him in the future.

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I first knew Dr Paroda in 2002 at a consultation meeting, hosted by ICARDA in Aleppo, Syria, on research priorities for Central, West Asia and North Africa (CWANA) Region and spotted in him the qualities of commitment, vision and strong believer in partnerships. We then became colleagues when I joined ICARDA as Natural Resources Economist in January 2002. Since then, Raj and I worked closely and collaboratively in several regional and international initiatives and activities. Dr Raj Paroda served as the regional coordinator of ICARDA and Head of the CGIAR Eco-Regional Collaborative Research Program for Sustainable Agricultural Development in Central Asia and the Caucasus (CAC) from August 2001 till April 2007 in Tashkent, Uzbekistan. Following that he served as the acting Assistant Director General for International Cooperation of ICARDA from April to December 2007.

Dr Paroda played a key role in strengthening the existing partnership and further expanding collaborations of ICARDA with multiple stakeholders in agricultural research for development in the CAC region. His contributions in supporting activities in genetic resources, crop improvement and seed systems were particularly noteworthy. The CAC region benefited greatly through ICARDA's technology transfer to the end users involving extensive partnership.

Dr Paroda's contribution in establishing new plant gene banks and strengthening the existing ones in the CAC countries remains a milestone and has been widely acclaimed in the region by the national institutions.

Dr Paroda understood the value of scientific capacity building in the CAC countries and supported training of more than 6000 researchers, primarily young men and women through different research and capacity building projects. The national partners in the CAC region and the colleagues in Tashkent office who had opportunity to work with him are still appreciating his management approach and effective communications.

The value of the excellent work done during Dr Paroda's tenure in Tashkent office between 2001 and 2007 was an important basis for the CGIAR Eco-regional Program in Central Asia and the Caucasus in receiving the "King Baudouin Award" of the CGIAR in 2008.



Under the leadership of Dr Paroda, the Regional Program made a considerable impact through re-establishing communication links among CAC countries by establishment of Central Asia and the Caucasus Association of Agricultural Research Institutions (CACAARI), which is still being hosted by the Regional office of ICARDA in Tashkent, Uzbekistan.

The CGIAR Regional Program team remembers Dr Paroda as a person committed to achieve the stated goals and results. He will be long-remembered by ICARDA family and national agricultural research communities in the CAC region for his visionary leadership and amicable human attributes.

Raj and I, along with other colleagues, formed an excellent team with full commitment to ICARDA's mission and improved livelihoods of rural communities in dry areas in full partnership with NARS in developing countries, and beyond. Through his service in several international and regional bodies, Raj demonstrated success in motivating his colleagues and partners toward same targets and achievements.

Raj, I would like to thank you for your contribution to enhancing food security and reducing poverty in some of the most difficult areas of the world. I always appreciate our warm friendship and the opportunity for working together at ICARDA. I will treasure these for many years to come.

Kanchan Khurana

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A man who doesn't need an introduction in Agriculture fraternity, who guided us throughout his tenure in NBPGR and is still our mentor. Dr R.S. Paroda, Padma Bhushan - an extraordinary visionary, globally renowned agriculture research scientist, a dynamic leader, so on and so forth.

It seems that it was yesterday (on March 3, 1986)) when I joined the NBPGR under Dr R.S. Paroda, Director to provide secretarial assistance. It is a fortunate moment for me to share my bit of experience with such a visionary and learned boss. He has capabilities to distinguish himself very wisely in the crowd with his diligent- humour drive at the workplace. He has been honoured with many awards and achievements for his hard work, dedication and increased turn-over of NBPGR. Dr Paroda – a perfectionist, always desired 100 percent results from his team with precision. NBPGR achieved greater heights and attained global recognition during his tenure and his dynamic leadership.

We all are indebted to Dr Paroda for not only giving us the New Building Campus with all the amenities at an international level but also raising funds from USAID to build this state-of-the-art infrastructure including 200 seating capacity Auditorium, well equipped research labs, library, largest Gene Bank (in the world) and land for residences for NBPGR staff. NBPGR is known at an International level – that is the reflection of hard work of Late Dr Harbhajan Singh Ji, Founder of the great Institute - NBPGR, nurtured by Dr R.S. Paroda, the then Director, NBPGR, Deputy Director General (Crop Science); and Secretary DARE and Director General, ICAR. The legacy continued in a beautiful manner with great zeal and enthusiasm with the coming Directors like Dr R.S. Rana, Dr P.L. Gautam, Dr B.S. Dhillon, Dr S.K. Sharma. They further nourished the growth of NBPGR in India and overseas.

I wish that Dr R.S. Paroda continues achieving great results and success in his future endeavours. His great achievements have inspired us a lot and would continue to do so in the future. Of course, he is the boss for us, not only by post but also by his work, his way of dealing with us and success. He has amazing management skills, good sense of humour and trustworthiness, and is a kind-hearted gentleman. I gained a lot of experience working along with him. He provided a happy working environment and a supportive team with easily available facilities.

Thank you, Sir, for all the support, blessings and guidance. I wish you great success and well-being.

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It is indeed a pleasure and an honor for me to have the opportunity to write a few words about Dr Rajendra Singh Paroda on his 75th birthday. Dr Paroda's contribution in national and international agricultural research and development is stellar to say the least. I am sure there are better people than me who can attempt to chronicle his legacy to Indian agriculture, and how it has shaped the future of agricultural R&D in the country, and in several other regions in the world. I would confine myself to sharing my personal experience of knowing Dr Paroda as a person, and a mentor.

I first met Dr Paroda in 2014. IPNI organizes a researchers' meet biennially to critique current research, and to discuss future research directions. While planning for it in early 2014, I was looking for someone who could act as a mentor to the participating researchers during the event, and provide us with fresh perspectives on nutrient management research and extension relevant to the region. One of my close colleagues suggested Dr Paroda's name, and I thought he was joking. Surely our partner researchers would be delighted and would benefit immensely from his presence,

but how could I even request someone of his stature to fly for more than two hours, sit in a car for another three hours to reach a small University town, and then spend two days with us to share his wisdom with a small group of nutrient management researchers. On insistence of my colleague, I went to visit him with trepidation, and ready for outright rejection. My first impression of him: how could someone over 70 look so young and full of life; his kind but incisive eyes; and his very sharp questions about our organization and the objectives



of the event. He agreed once he was convinced that the research we facilitate with the SAUs, ICAR and CGIAR Institutes are for better understanding the role of plant nutrients in intensive production systems; the issue of the long and arduous travel never came up, as if it was an insignificant issue compared to interacting with young researchers and positively influencing research directions. I have never received so many congratulations for inviting someone to an IPNI event! The researchers were delighted and the University overjoyed! And this is what Dr Rajendra Singh Paroda is, held at the highest esteem, and people feel honored to get a chance to interact with him and share his wisdom. During the event, I saw him surrounded by people, the University added a couple of extra events to use his presence on-campus, and still he sat through all the research presentations and shared his concerns and advices. I think such un-wavering focus and commitment differentiate over-achievers like Dr Paroda.

Since our first meeting, I had the privilege of knowing him a bit more closely in the following years. He still works with clock-like precision with sharp eyes on details, which I am sure was his hallmark while he led national and international R&D programs. It is still hard to keep pace with how fast he makes decisions and drives decisively to ensure implementation. I have known Dr Paroda for a very short period but still consider him a mentor. His lifetime achievements followed a trajectory that is impossible to touch, but his work ethics, his leadership and visions are inspiring to me. I know he has touched numerous people all along his professional career, and continuing to do so through his supportive relationship to help them develop into thriving and productive professionals. I find it a privilege to be part of that group and learn from his example.

Dr Paroda is a Padma Bhushan, the recipient of one of the highest civilian awards given by the Republic of India to recognize distinguished service of high order. He is the only Padma Bhushan awardee that I know, and I always thought that recipient of such awards are not normal people. Indeed, Dr Paroda is an extraordinary person, an accomplished scientist, an outstanding administrator, and an internationally recognized agricultural development professional and visionary.

Dr Paroda will be a very young seventy-five soon, and I wish him from the core of my heart to stay healthy, happy and productive for many more years and continue to share his wisdom for agricultural development in India.

Kirti Singh

Chairperson, WNRF

President, ISNS

Former Chairman, Agricultural Scientists Recruitment Board, New Delhi

Former Vice-Chancellor, NDUAT, Faizabad (UP)

HPKV - Palampur (HP) & IGKV, Raipur

Former Secretary, National Academy of Agricultural Sciences, New Delhi

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I have known Dr Rajendra Singh Paroda since 1968 when I was transferred from Punjab Agricultural University, Ludhiana Campus to Hisar Campus which later became Haryana Agricultural University after bifurcation of Punjab State. When I met young Rajendra, who was working as Forage Breeder, I was very much impressed with his ever-smiling nature, brilliant academic record and friendly attitude. He is an outstanding scientist and has contributed immensely to the growth of Agricultural Science and development of agriculture in India and abroad. He held various important positions such as Director, NBPGR, Deputy Director General (Crop Science) ICAR; Regional Plant Production and Protection Officer, FAO Bangkok; Secretary Govt of India and Director General, ICAR; Chair, Global Forum on Agricultural Research; Head CGIAR Program for Central Asia; and Assistant Director General, ICARDA.

He is recipient of almost all prestigious awards like Rafi Ahmed Kidwai Prize, FAO World Food Day Award, Padma Bhushan Award by Govt. of India. He has been awarded honorary DSc (HC) by 15 universities of India and abroad, and is a Fellow of several scientific academies and societies of India and abroad. He also served as President of Indian Science Congress Association. I had a very close and pleasant association of working with him as Secretary of National Academy of Agricultural Sciences when he was the Vice President and President. It was a memorable period of my working as Member and Chairman of ASRB (ICAR) when he was the Secretary DARE and DG of ICAR. His honest, sincere, devoted, hard and transparent working can never be forgotten. I continue to enjoy my happy association with him till today.

I have great pleasure in felicitating Raj Paroda on his 75th birthday and also shower my best wishes and blessings on this happy occasion. May Almighty God bless him with the strength and good health to continue serving the cause of humanity in general and Indian Agriculture in particular.

Krishan Lal Chadha

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Both myself and Dr Rajendra Singh Paroda joined ICAR headquarters as DDG (Hort.) and DDG (Crop Science) respectively during the year 1987. While he came from NBPGR, where he was Director between 1985 and 87, I was earlier Director at IIHR Bangalore (1980-85) and Horticulture Commissioner and Executive Director, National Horticulture Board, GOI (1985-87). I had the privilege of working with him as a colleague between 1987-92 as DDG after which he went on a foreign assignment (1992-94) and rejoined ICAR as DG, ICAR & Secretary, DARE, Govt of India. I, however, continued as DDG (Hort.) for 9 years till Nov 1996. This was an important period in the history of the ICAR when a team of senior DDGs including Dr Paroda under the leadership of Dr N.S. Randhawa, former DG, brought lot of reckoning to the ICAR and the leadership of Dr Paroda further brought it to the forefront among the scientific organisation of the country. We were closely associated for 8 years at ICAR headquarters and later through various committees and activities after our retirement. As a person, Dr Paroda has been quite warm, unassuming, interactive, helpful and respectful.

Dr Paroda had been a distinguished student at IARI and a brilliant scientist while at HAU in several capacities. He made a mark in developing infrastructure facilities and human resources while at NBPGR as its Director. The infrastructure and research programmes, particularly the first Genebank developed at NBPGR, brought him abundant recognition for making this facility globally the 2nd largest and most modern.

As an administrator, Dr Paroda showed rare acumen in managing manpower and making the support services at ICAR headquarters efficient and responsive which led to a speedy implementation of policies and programmes and redressal of staff problems. He took lot of pains in revising several rules, regulations and proformas aimed at removing anomalies e.g. rules for Technical Services, A.P. Cess Fund schemes and Revolving Fund schemes of the council. He was also instrumental in appointing the 6th Pay Committee for National Agriculture Research System, with me as Chairman though ICAR Scientists opted to accept UGC pay structure in preference to the committee recommendation.

One of his monumental contributions was the planning and construction of the National Agriculture Science Centre at Pusa Campus which stands as a testimony of ICAR's pride. I was fortunate in having been associated with this as Chairman of the committee which overviewed, monitored and guided its construction and furnishing from start to completion. I continued to hold this responsibility as National Professor at IARI even after my retirement as DDG (Hort.) due to our mutual trust.

As a Research Manager, Dr Paroda had a complete appreciation of national research priorities and guided various institutes to focus on these and helped them in creating modern research facilities, preparation of vision documents etc. Many important international and national projects/ programmes were started because of his initiative. He made it possible to attend maximum workshops, regional committee meetings and was instrumental in making more purposeful.

His personal charm and his leadership qualities made him quite sought after, so much so, that he had the distinction of presiding over the Indian Science Congress at Delhi during January 2000. He was associated in forming, supporting and running new scientific societies particularly National Academy of Agriculture Sciences (NAAS) in Delhi of which he later became a president. He continued to work in this direction by establishing TAAS after his retirement of which I have the privilege to be a member of the Governing Board.

Dr Paroda has been held in very high esteem even in international circles be it CGIAR System, FAO and other organisations. He has been associated with several international boards as Chairman of the Global Forum of Agricultural Research (GFAR), Executive Secretary, Asia Pacific Association of Agricultural Research Institutions (APAARI) and Regional Secretary, SABRAO.

He has made lasting contribution to national and international agriculture through his above positions and has also chaired the Farmer's Commission, Govt of Haryana, where his initiative and experience resulted in indentifying important policy issues and bringing out approach papers for tackling these. His contributions to agricultural system have been suitably recognised by important Societies, Universities, Institute and the GOI.

Dr Paroda is a person of rare acumen and competence. I had pleasure of working with him in different capacities and admire his wealth of qualities. I wish he continues to play a leadership role in ensuring focus of various national and international organizations in solving problems of Indian agriculture and farmers. I wish him a long, happy, healthy & prosperous time in years to come, in service of nation.

It is a great pleasure to share some experiences with Dr R.S. Paroda - Former Secretary, DARE and DG, ICAR. He is Honourable Patron of Pusa Association of Retired Agricultural Scientists (PARAS), established in 2012. As Secretary of PARAS, I feel that under his patronship and guidance, PARAS is doing very well for the welfare of retired Scientists. Since beginning of PARAS, Dr Paroda has been participating and guiding us in all activities of PARAS including get-togethers, cultural functions, lectures on health by reputed Doctors, 6th Pay Commission issue in beginning of 2014 and now the 7th Pay Commission issue. The 1st Foundation Day Lecture of PARAS was delivered by him on “Addressing Second Generation Challenges of Green Revolution While Managing Natural Resources and Climate Change” under the chairmanship of Dr Gurbachan Singh, Chairman ASRB on June 10, 2016 at IARI. He has attended most of the get-togethers and Annual General Body Meetings of PARAS.

Dr Paroda is a great Scientist in the field of Genetics, particularly Plant Genetic Resources. In 1982-83 he was honoured with Rafi Ahmed Kidwai Award. He was the Director of newly established NBPGR from 1985-87. Because of his valuable contribution in genetics, he was appointed as Deputy Director General (Crop Sciences) in 1987 and was elevated as DG, ICAR and Secretary, DARE in 1994.

I have some things, common with Dr Paroda. We were both born in 1942 and are celebrating our 75th birthday this year. Myself and Dr Paroda passed our M.Sc. in 1964, while Dr Paroda did it from University of Udaipur in Agriculture and I did M.Sc. in Physics from B. R. College of Agra University. Dr Paroda completed his Ph.D. in Genetics in 1968, while in the same year I joined as Asst. Physicist at Division of Agricultural Physics under Dr C. Dakhisnamurty as Head and Dr M.S. Swaminathan as Director IARI. Changing from Physics to Agriculture was a critical decision, but my interest in Instrumentation attracted me to IARI. Before joining IARI from 1964 to 1968, I have served Sri Ram Institute of Industrial Research Delhi for 2 years, Aviation Research Centre (Govt. of India) as JSO for 3 months, Lecturer in Physics at St. John's College Agra for 2 years. In 1971, I was selected as Maintenance Engineer Instruments at Division of SSAC, IARI and worked as Instrument Specialist and P.I. Biogas Technology. During 1983, I had gone to

USSR under Exchange program for one month. In 1985, I attended a training on Mass Spectrometer in UK. In 1987, I was assigned with UNESCO assignment in Vietnam for training on laboratory Instruments.

During the tenure of Dr Paroda as DDG (Crop Science) and DG, ICAR, he has won many honours and awards. Regional Plant Production and Protection Officer, FAO-RAP, Bangkok, Thailand, 1993-94; Chair, Global Forum on Agricultural Research (1998-2002); Head, CGIAR



Program for Central Asia & Caucasus, Tashkent, Uzbekistan, 2001-2007; Assistant Director General (Int. Coop.), ICARDA, 2007. He got honourable D.Sc. conferred by C.S. Azad Univ. of Agriculture & Technology, Kanpur (1993); G.B. Pant University of Agriculture & Technology, Pantnagar, (1996); Assam Agril. University, Jorhat, (1997); Tamil Nadu Agricultural University, Coimbatore, (1998); Acharya N.G. Ranga Agril. University,

Hyderabad, (1998); Banaras Hindu University, Varanasi (2000); Ohio State University, Columbus (2000)

He got prestigious awards: Rafi Ahmed Kidwai Award in 1982-83; ICAR Team Research Award, 1983-84; Federation. of Indian Chamber of Commerce and Industry Award, 1988; Om Prakash Bhasin Award, 1992; Asia Pacific Seed Assn. Award, 1995; FAO World Food Day Award, 1995; Padma Bhushan, Govt. of India, 1998; Gold Medal 2006, Armenia; Borlaug Award, 2006; He was General President, Indian Science Congress Association, 2000-2001; Agriculture Today Lifetime Achievement Award 2008.

During the tenure of Dr Paroda as DG ICAR, I was professor (1994-2001) and Head (1996-2001) of Environmental Sciences. I appreciate



the positive support of Dr Paroda on getting a good number of National and International projects sanctioned to our Division. UNDP Project on methane emission from Rice fields was very important and we proved that Methane from Indian Rice fields is only 2-4 Tg per annum against projected figure of 40 Tg. I would like to thank him for allowing me to take many foreign visits to Philippines, Indonesia, Thailand, China under the methane projects. I would also like to thank him and Dr S.L. Mehta for sanctioning Ministry of Education sponsored exchange visit to USA on Climate Change for one month in 1998.



In 1998 Dr Paroda was the Chief Guest at a function organized by Bio-Energy Society of India of which I was the Treasurer at IARI Auditorium.

In 2001, Indian Science Congress inaugurated by Bharat Ratna Atal Bihari Bajpayee Ji, was hosted by ICAR at IARI under the overall supervision of General President Dr R.S. Paroda, I oversaw Hall Arrangements and Cultural Programmes.

During IARI Convocation held in 2001 I was awarded Best Teacher Award by Mr Nitish Kumar, Minister of Agriculture in the presence of Dr Paroda and Dr Panjab Singh.

It is a matter of coincidence that we both took voluntary retirement in 2001, Dr Paroda joined as Head, CGIAR Program for Central Asia & Caucasus, Tashkent, Uzbekistan, and I joined as Country Consultant for University of Leeds UK.

Dr Paroda formed a trust TAAS and got its office established at IARI Campus, previously called Gas House of which I was in charge from 1972- 94. I have also conducted some field experiments on Use of Biogas Slurry in combination of Urea in this premises.

In 1993 a new Division of Environmental Sciences was established at IARI. Dr Paroda being DG, ICAR has given positive support and a new Discipline of Environmental Sciences was formed under ASRB from 1994. Being a team member of IPCC, I feel a proud winner of Noble Peace Prize in 2007.

Dr Paroda is a great scientist, administrator and a noble gentleman. He has got a large number of prestigious awards including PADAM BHUSHAN. Presently under the Chairmanship of Dr Paroda, TAAS is organizing national and international conferences with great success and scientific interaction. I am also a life member of TAAS and wish him a healthy, happy and long life.

M E Tusneem

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Chairman, Pakistan Agriculture Research Council
Currently, Chairman, Agriculture Education Accreditation Council
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It is indeed my pleasure and privilege to recall the wonderful memories of my personal and professional association with Dr R.S. Paroda in promoting the agriculture research and development systems and institutions at the national and international level. Dr Paroda is a world-renowned agriculture scientist and research administrator. He is also one of the most decorated and eminent agriculture scientists and development practitioners bestowed with national and international awards for his scientific achievements and institution building initiatives.

I have had the pleasure of meeting Dr Raj Paroda in the mid-1980s during one of his visits to the Asian Development Bank in Manila to introduce APAARI—a regional organization with the mandate to foster agricultural research and development in the Asia and Pacific region. Dr Paroda made an excellent presentation on the mandate and activities of APAARI at ADB. It focused on strengthening the national agriculture research systems in the Asia and Pacific region through enhanced interaction and collaboration amongst the research institutions, scientists, and research administrators of the region. The then ADB management dealing with agriculture development in the region was impressed by Dr Paroda's mission to promote agriculture development through collaborative research in the region. I was then handling agriculture sector operations of the Bank, among other activities and assigned to work with Dr Paroda to develop a Regional Technical Assistance (RETA) proposal for ADB funding.

In the process of our interactions, I was very impressed by Dr Paroda's persona and his knowledge and vision of Asian agriculture and its role in poverty alleviation, employment generation and overall economic development of the developing countries of the Asia and Pacific Region. His visionary outlook and commitment for agriculture research and development was very inspiring and convincing. Since then we have worked together on various agriculture research and development projects both under the umbrella of APAARI and other ADB/Foreign funded agriculture projects in the South and Central Asia regions.

The second round of our professional association commenced after my retirement from ADB in 2005, and appointment as Chairman, Pakistan Agricultural Research

Council, Islamabad, Pakistan. Dr Paroda was still continuing as the Executive Secretary of APAARI while holding the executive positions of Director General, ICAR, and Secretary, DARE, India. During this period, we were able to strengthen and enhance agriculture search and development collaboration between India and Pakistan both under the umbrella of APAARI and bilateral relations.

All in all, it has been and continues to be a wonderful personal and professional association in promoting the noble cause of agriculture research for development. I was fortunate to immensely benefit from Dr Raj Proda's knowledge, rich experience, and vision of agriculture research for development. It is wonderful to stay in touch even now and to share our scholarship and friendship whenever and wherever we meet. It greatly owes to Dr Paroda's ever pleasant persona, affection and sincerity.

Concludingly, it will be amiss if I fail to mention the hospitality and cheerfulness of Mrs. Paroda who is the proverbial woman behind Dr Paroda's success. I fondly remember her kind hospitality and cheerfulness whenever I visited them. I wish Dr Paroda and his family good health, happiness and prosperity for all time to come!

M L Chadha

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My Memorable Interaction and Association with Dr R.S. Paroda – A Great Agricultural Scientist

It is a privilege to be invited to write about my association with Dr Paroda. I had also the privilege to attend his surprise 70th birthday party organized by his daughter Anju Tomar in Delhi on August 28, 2012. Dr Paroda, as you celebrate the joys of 75, may you be surrounded by love, may you find many peaceful moments, and may you be blessed with happiness.

I had a good opportunity to work closely with Dr Paroda, when I joined Haryana Farmer's Commission in May 2011 where our objective was to lay greater emphasis on agricultural diversification in Haryana, with major focus on horticulture. Before that I had the opportunity to spend some time and interact with Dr Paroda during his trip to AVRDC HQs in Taiwan, AVRDC-Regional Centre for South Asia at ICRISAT campus and also in Uganda during All-Africa Conference in 2004. I also had the opportunity to interact with him while attending couple of Asia-Pacific Association of Agricultural Research Institutions (APAARI) meetings under his leadership especially in Bangkok and Hyderabad as AVRDC- The World Vegetable Centre, Regional Director. For APAARI, I also wrote a booklet on 'Short Duration Mungbean-A New Success in South Asia' on his request. Recently as life member of Trust for Advancement of Agricultural Sciences (TAAS), had a good interaction with Dr Paroda and participated in National Conference on "Sustainable Development Goals: Preparedness and Role of Indian Agriculture" held at Delhi on 11-12 May, 2017. Beside this, I know him personally for the last over 40 years. I would like to thank him for being an open-minded person. I count myself lucky working with him when I joined Haryana Kisan Ayog (HKA) and together we contributed towards making road map for Horticulture development in Haryana, as well as Protected Cultivation in Haryana. Also help developing Policy issues and options based on interface with farmers as well as Agriculture Policy for Haryana. Working with Dr Paroda and being close to him made me realize the sincerity and loyalty in him.

His approach to getting things done the way they should be is unbeatable. I really appreciate all his time and everything that he has done openly and behind the scenes

to keep the HKA in business. Thank you for developing the “can-do” spirit in the staff at Haryana Kisan Ayog. I am proud to work with a team of achievers who continue to deliver excellent results. His decision-making skills are widely acknowledged. His level of reasoning is highly respected. I hope to see him continue with all the good deeds he is known for.



I cannot express how blessed I am to have him as my colleagues at the workplace. Words are not enough to show appreciation to someone who has given so much of his time and cooperation to shape the plans of Indian agriculture. Let me use this note to appreciate the honest effort that he has demonstrated. His dedication to work is an attribute that always inspires me. I have sincerely enjoyed the time that I have spent working with him. But I must sincerely thank him for all the guidance, support and encouragement that he has shown to me during our association.

Many congratulations on his birthday and best wishes for many more years to come in his way! I wish him a colorful birthday celebration. I'm sure he must have exciting plans to celebrate this day with his near and dear ones. Everyone grows old, but not all of us grow up! And this is what holds true for him because each time I meet him, I find a young person within him, who's as lively as ever! Here's wishing that he has a long and healthy life! Happy birthday once again!

Now that you've reached that vintage age of 75, you're considered a real classic! Take some time to enjoy your special day. My deepest thanks and love!

M L Jat

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I feel blessed being closely associated with Padma Bhushan Dr R.S. Paroda, a beacon mega mind in global agricultural research for development. My association with him dates back since 1996 when I was a Ph.D. student at Agronomy Division of IARI and Dr Paroda was Secretary DARE and Director General, ICAR. It's not an easy task not only for me but I believe for everyone to describe in words the great personality and contributions of Dr Paroda to global agriculture as well as personal and professional attainments of generations through his generous guidance, encouragement and support.

I would like to quote just one instance of his vision for carrier pathway of the young researchers like me. When I got selected as ARS in Agronomy (1996 batch), I was a second year Ph.D. student at IARI and certainly wanted to be posted at IARI. I had more than a year to finish my Ph.D. and join the ARS for which I had already received the posting letter for Project Directorate for Cropping Systems Research (currently IIFSR). Honestly speaking I didn't want to be placed at PDCSR. As Dr Paroda knew me personally, I approached him more than a dozen times at his office in Krishi Bhawan to request him for relocating at IARI. However, the visionary leadership (Dr Paroda) knew what is good for me as well as for the organization. His simple message was "For an agronomist, systems research is the key and in that respect PDCSR is the best place to start career for a young agronomist and contribute to modern agronomic research". That's why in my batch not only me but altogether seven agronomists were posted at PDCSR. Still, I wanted to be placed at IARI and in that respect, I kept approaching Dr Paroda and finally he asked the then Deputy Director Personal, ICAR to issue a letter to me saying henceforth if you approach for this matter, an action may be taken against you. To be very honest, I was deeply disappointed thinking that despite the fact that highest authority of the system knows me very well and am getting such letters. Anyway, finally I had no option than joining PDCSR but still made few attempt exploring the possibility to get relocated at IARI. Meanwhile, I realized that PDCSR, a small institute has 17 NATP projects and most of them were really on new agronomic research. I also got involved in 2 projects and started working from where I never looked back. In the process, I realized why my request was not entertained by Dr Paroda and why he insisted that work at PDCSR. This instance alone has contributed most significantly to my



professional attainments. For me, that was the beginning of learning which is continuing and am lucky to have continued guidance, support, encouragement of Dr Paroda to do better.

To me, Dr Paroda is 'Vision of the Visionaries'; 'Leader of Leaders'; 'Legendry of the Legends'; 'Icon and Inspiration of Youth'; 'Architecture of the Modern Agricultural Research for Development'; 'Translator of Global Vision to Meet Local Needs'; 'Brand Ambassador of AR4D Partnerships'; 'Heart of Farmers'; A Great Son of India'.

On this great day of 75th birthday of Dr R.S. Paroda Ji, my wife Bindu Choudhary joins me in wishing him a Very Happy Birthday and pray almighty for his good health and long-life.

M L Madan

Former:

Chairman, Livestock Sub-group, Haryana Farmer's Commission

President, Society of Animal Physiologists of India

Vice Chancellor, Pt Deendayal Upadhyaya University of Veterinary Science, Mathura, Uttar Pradesh

Vice Chancellor, Punjabrao Deshmukh Agricultural University, Akola, MS

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Dr Paroda – A leader in Agriculture Sciences in pursuit of excellence

‘Faculty Club’ at Haryana Agricultural University at Hisar was a unique institution created through the then visionary Leadership of a dynamic Vice Chancellor. Every faculty member of any of the colleges, be it freshly recruited or senior of any rank or grade, were members enjoying comradeship in the social, cultural or sports environment of discipline and belonging. In this environment, for which I had the custodian responsibilities, a member of the club who had a sway in his attire, a brand in his mannerism and charm in his persona was Rajinder Paroda, a forage breeder professionally. Thus began our acquaintance, worked through the badminton hall, entered in an interaction of families, children and friends, matured to share responsibilities at ICAR headquarters and culminated in his assumption of the visionary leadership role in Agriculture, nationally and internationally.

It is not easy to put words to a personality of grace, authority, academic competence, mature mind, compassionate heart, a leader who leads from the front and has a coveted record of delivering what was required or what was envisaged. Dr Paroda symbolizes all these traits. Once a person comes into his contact, he is truly infectious in sharing his personality assets thereby empowering those who work with him, an assertion from a person who has been a rich possessor of this affiliation.

Working in the ICAR HQ in his team was challenging and we had to keep up with program and project formulations, implementation and monitoring. This needs to be admitted that this major function, incidentally constituted only a fraction of the work load, the better part was that every day there will be an avalanche of events and expectation that at the end of the day, sometimes, we used to question our own output inspite of over 16 to 18 hours input. In this atmosphere, Dr Paroda was committed to achieve targets in a remarkable way and a style of his own.

Travelling with him to different parts of the country was a rich experience for me as it oriented me to totality of agriculture when by academic disposition I was an Animal Sciences man. I could value his contributions in making me to understand the basic of crop agriculture, when I had to take the leadership role as a VC of a prestigious Agriculture University. The trust he had shown in me to represent Indian Agriculture in totality at International Forums, conferences and International Agriculture science collaborations enabled me to be in grips of understanding and delivering Agriculture.

A trait richly possessed by Rajendra ji was his faith in taking people and diverse opinion along which came through assimilation of ideas over several decades of professional carrier. The respect in multiplicity of culture, faith, language, region or statehood and commitment to merit made him special. We used to argue, and may agree or not agree and may have divergent stands, but it has been the collective consciousness which mostly prevailed. Personally, several of us derived strength from the same. During his tenure as DG, ICAR, the Council and its institutes underwent a major infrastructural and systemic transformation. His grand vision held him instead to brush away the resistance to change and could muster support to the total renovation of the NARS.

Driven by a deep desire to bring transformational change in Indian Agriculture, Rajendra ji was quick in accepting the primary role of Livestock and Horticulture in bringing farmer profitability concepts in ICAR programs. This, not only resulted in doubling the financial resource allocation to Animal Science from 7 percent to 14 percent, but also lead to initiation of several new national programs in health, disease control, feed and nutrition, biotechnology and assisted reproduction, animal genetic resource and livestock products technologies. Sequel to these initiatives of the Animal Science Division, Dr Paroda gave full support in creating new Institutions like Institute for Physiology and Nutrition, Bureau of Animal Genetic Resources, Institute for Meat and livestock products, National Facility for Animal Disease Monitoring and Surveillance, and several network programs connecting ICAR, Agriculture Universities, International and National funding institutions and agencies.

Dr Paroda has a very friendly social dimension to his personality. As colleagues, he set the tune for families at ICAR HQ meeting every month at private get together and picnics. These used to be lively events devoted to fun and frolic. His humor and sense of belonging found us all DDG's once holding a meeting on the Tarmac of Airport at Bagdora when our flight got grounded for non-visibility as we were all travelling to Guwhati for a regional conference. We could not make it to Guwhati even next day and travelled amass in a bus, which was more of a metabolic shaker, whole night from Siliguri to Calcutta, a hilarious event. Even in these times, Dr Paroda was trying to take care of our food at shanty road side stalls. The food got exhausted before he could sit his turn on a rickety bench. This event is indelibly etched as a demonstration of his sagacity, calm disposition and positive light-hearted approach to things even in difficulty.

He has a humble disposition, but is astute in his character and strong in his belief in a no compromise manner with unflinching loyalty to the values he holds dear. This has been his source of strength and seen him conquer adverse situations. He once confided that his passion has been the service of farmers of India and looked ICAR as a temple for deliverance of better agriculture.

His capacity to deliver has seen him in a leadership role in many areas and institutions. National/ International agriculture trusts him and bestows him with stellar responsibilities epitomizes his stature. We wish him the best of health so that he can continue to contribute his excellence to the world's agricultural community.

M Mahadevappa

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Former VC, UAS, Dharwad
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Dr R.S. Paroda – A Scientist and Research Administrator Par Excellence

I met Dr R.S. Paroda, the first time, when he was the Director of NBPGR, New Delhi and I was working as Plant Scientist (Paddy) at the Visvesvaraiiah Canal Farm – a regional centre of the University of Agricultural Sciences, Bangalore, in early seventies. I had already heard a lot about his stature as an agricultural scientist; his visit to VC Farm opened floodgates for me to start interacting with him on topics of mutual interest. He kept himself easily accessible and loved interaction with young scientists, which encouraged me, like many others. In no time I had got into a close association with Dr Paroda.

We had many opportunities of working together in events overseas, as we specialized in the same subject and we both moved from research to administration - he at the centre and me at the state. I developed a particular liking for his human skills, first up in 1992, watching him engage the Indian delegates effectively in organizing a meeting at the University of Iowa, Ames, USA, during the International Conference on Crop Science under the chairmanship of Dr M.S. Swaminathan. My daughter Dr Mamatha Shekar was a research scholar in the same university and the event paved way for us to become family friends. Subsequent events like the Governing Council meetings of the International Rice Research Institute, Manila, Philippines, interaction with the world-renowned rice breeder - Father of Hybrid Rice - Dr Yuan Long Ping in the Hunan Province of China strengthened our professional association. I recall his remarkable performance as the Deputy Director General (Crop Science) of the Indian Council of Agricultural Research (ICAR) followed by his very successful tenure as the Director General, ICAR and Secretary DARE.

My interactions with him during my tenure as the Vice Chancellor of Agricultural University, Dharwad, Chairman of ASRB, President of ISGPG, President of IAUA etc., have always been positive, thoroughly professional and I have benefited from his compassionate advice and ideas. I cannot forget the occasion when he accompanied me personally to the concerned minister for resolving a problem with one of the bureaucrats, a very common issue these days in research administration.

ICAR has seen two significant and very distinct peaks in the course of its growth while accomplishing the Green Revolution. Both these feats, more so the latter, is

attributed to the vision and the policies developed under the leadership of Dr Paroda - a very well documented and acknowledged fact across the globe. The team he had built during his regime as the DG was one of the best. I have had the good fortune of being one among his team members not only as the chairman of ASRB, but even before when he delegated me the responsibilities such as the chairman or member of important expert committees and task forces. All along, it was his open minded and impartial stance that made him successful in finding the right people for the right job. In short, as the Director General, ICAR & Secretary, DARE, and having served in many different capacities, Dr Paroda has been most successful in modernizing and strengthening the National Agricultural Research and Education System (NARES) in India, in Central Asia and beyond.

As an accomplished plant breeder, geneticist and an outstanding research administrator, Dr Paroda has made memorable contributions to the field of crop science. A special mention must be made of the unique distinction of Dr Paroda being the architect of one of the world's largest and most modern National Gene Bank in New Delhi. His efforts in obtaining the UNDP support for initiating Hybrid Rice Development program in India is another of his pioneering contributions. Also, whatever facility the NARES scientists of agricultural universities and officers are enjoying today while visiting New Delhi and the sub campuses of ICAR across the country, it is the forethought and creation of Dr Paroda. It was his immaculate planning and ability to garner government's support that were instrumental in not only encouraging the pursuit of agricultural research in the country but also helped create the necessary infrastructure to sustain the efforts. It is no surprise that the ICAR grew by leaps and bounds during his regime. The National Academy of Agricultural Sciences (NAAS) is yet another institution he strengthened; he is actively involved in holding exercises of high academic standard and keeps bringing laurels to the Academy even to this date.

Dr Paroda's genial, gentle leadership was an inspiration to every NARES scientist. His intimate approach and friendly mingling with scientists and farmers alike characterize him as a professional who has compassion for both. His charisma and endearing qualities have motivated many young scientists grow up as competent science administrators. He keeps accumulating many friends and admirers with his charming personality and an eternal smile. It is not very often that we find people who accomplish great heights in their professional career yet lead a simple and ascetic life. He is truly one of the greatest agricultural scientists and administrators India has seen.

He has been bestowed with numerous awards and recognitions, right from the beginning of his service, at various institutes around the world. I will never be able to do justice in listing even half of them but can't resist mentioning a few of them: Rafi Ahmed Kidwai Prize, 1982-83; ICAR Team Research Award, 1983-84; FICC&I award, 1988; Om Prakash Bhasin Award, 1992; Asia Pacific Seed Association Award, 1995; FAO World Food Day Award, 1995; Padma Bhushan, Govt. of India, 1998; Ohio State University, Columbus (2000); Republic of Azerbaijan (2004); Gold Medal 2006, Armenia; Borlaug Award, 2006; Gen. President, Indian Science Congress Association, 2000-2001, Lifetime Achievement Awards

by most Scientific Academies in India and abroad like Russian Third World Academy of Sciences (TWAS), Armenia, Georgia, Tajikistan, Hon. Member of Crop Science Society of America and Agronomy Society of America, Global Forum for Agricultural Research (GFAR) and Executive Secretary of the Asia-Pacific Association of Agricultural Research Institutions (APAARI) and so on. He has been conferred the honorary D.Sc. Degree by more than 15 academic institutions in India and State Agricultural Universities (Pantnagar, Kanpur, Jorhat, Coimbatore, Hyderabad, Udaipur, Varanasi, Srinagar, Meerut, Bhubaneswar, Ludhiana and Dharwad). He has also received honorary degrees from the Agricultural Universities of Azerbaijan, Kyrgyzstan and Tajikistan, Ohio State University, Republic of Azerbaijan. International Crop Research Institute for Semi-Arid Tropics (ICRISAT), Hyderabad, has named its Gene Bank after him as 'Rajendra S. Paroda Gene Bank'.

He continues to strive for the cause of agriculture R&D through his two current portfolios as the Chairman of the Trust for Advancement of Agricultural Sciences (TAAS) and President of the Indian Society for Plant Genetic Resources (ISPGR), New Delhi. He is now given the responsibility of suggesting ways and means of restructuring the ASRB for energising agricultural research in India, a very daunting task in itself.

It is a providence that my recent rendezvous with him was on the banks of auspicious river Kabini, near Mysore. The place is home to Suttur Mutt, which runs a free residential school for children from poor families. Nearly 5,000 children from all parts of India – Karnataka, Tamil Nadu, Sikkim and Meghalaya avail free food, clothing, books and high quality education starting from kindergarten to matriculation. He relished his stay at the place with his family for two days and I couldn't miss seeing the spiritual side of his personality. Dr Paroda and his wife watched in awe the highly disciplined prayer performed by 5000 students at dawn; they spoke to them with deep affection and exclaimed, India needs more such institutions.

I have great admiration for Mrs. Paroda for standing by him; she has accompanied him quite often on his journey through the agricultural development this country has witnessed and I consider myself privileged for having enjoyed the hospitality at the couple's residence – truly, a wonderful family. Dr Paroda is always unmindful of hardship, risks, yet is firm and noble in words and deeds, is humane and dedicated to the service of mankind and, more importantly, to the farming community. The warmth and affection he has shown to me for over five decades are unforgettable. I am fortunate to be a close friend of him. I pray to God for his long, happy and healthy life to enable him to keep guiding the younger generations to serve agriculture and thus the deprived and less privileged rural communities. It is highly appropriate that we are publishing a book on Dr R.S. Paroda in commemoration of his vast achievements and passion for science and rural development.

M P Yadav

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Consider it a great privilege to be associated with the Commemorative book on Dr R.S. Paroda, former Director General, Indian Council of Agricultural Research (ICAR) & Secretary, Department of Agricultural Research and Education (DARE), Government of India, on the eve of his completing 75 years of age on August 28, 2017. Dr Paroda is bestowed with so many qualities that he can be described as “All in one”; from ideal parent to wonderful host, patron, mentor and advisor; symbol of natural leadership, discipline, punctuality, transparency, effective communication and benign humour. He is a ‘Reformer’ par excellence and introduced the needed O & M reforms in the ICAR. Some of these include, preparation of ‘Perspective Plans’ and ‘Vision’ documents of the ICAR and its institutes, decentralization of administrative and financial powers from top (DDGs) to bottom (HODs & PIs of research projects) for faster decision making and accountability; strengthening the accreditation system for the SAUs and DUs under the NARS; launching the National Agricultural Technology Project (NATP) with World Bank assistance; regularization of group D staff and promotion scheme for technical staff along with the placement of drivers in ‘technical category’ with five yearly assessment.

Dr Paroda is known for modernization and strengthening of the national agricultural research system (NARS) in India, Central Asia and the Caucasus. He gave emphasis for expanding NARS to NARES so as to bring education to equal footing with research. The QRT guidelines were framed in 2000 under his leadership as a part of overall reforms process in the ICAR.

Besides the creation of numerous national institutes, national research centres, bureaux and project directorates with state of the art facilities, Dr Paroda has the unique distinction of being the main architect of one of the world’s largest and most modern National Gene Bank in New Delhi. Some of the innovative infrastructure facilities created during his tenure include National Agricultural Museum and National Agricultural Science Centre (NASC) Complex at Pusa campus, New Delhi. The NASC with the unique facilities of Symposia Hall, Lecture halls, Conference/Committee rooms, International guest house, Board room, Cafeteria and spacious lawns, remains the epicentre for organizing Conferences, Seminars, Workshops,

Brain-storming sessions, Counselling, Award functions and other academic activities for ICAR and other departments of the government/organizations in public and private sector at Delhi.

A renowned plant breeder, geneticist and an outstanding research administrator, Dr Paroda has made significant contributions in the field of crop science research. For his notable contributions to Agricultural research, education and development, he has been bestowed with numerous prestigious national/international awards, honors/recognitions, like BP Pal Gold Medal, Borlaug Award, Rafi Ahmad Kidwai Prize, ICAR Team Research Award, FICCI Award, Om Prakash Bhasin Award, Mahendra Shiromani Award and the prestigious Padma Bhushan awarded by the Government of India. He has been awarded *Honoris Causa* by many SAUs. He has been President of several professional societies. Currently he is Chairman of the Trust for Advancement of Agricultural Sciences (TAAS) and President of the Indian Society of Plant Genetic Resources (ISPGR), New Delhi, India. Dr Paroda was General President of Indian Science Congress, held at IARI, New Delhi in 2001. Dr Paroda has immensely contributed for the cause of international agriculture. He is the Founder President of the Global Forum for Agricultural Research (GFAR).

While an administrator of par excellence, Dr Paroda equally cares for his family, friends and colleagues. He is an epitome of quick decision, action, accuracy and faith in his subordinates. Realising the need for change, he gave the dictum “Change we must, but difficult to make”. Realizing the need for documentation, data base and recognition of the performers, he created data base on ICAR institutes and all the scientists working under ICAR, and enlarged the scope of awards and recognitions to cover entire spectrum of activities in the Council.

Dr Paroda has great affection and bonding with rural India and its people. As Chairman, Haryana Farmers Commission, he received tremendous love and affection from the farmers and people he met/interacted, and received highest regards and felicitations. He remains connected with his roots, coming from a village in Rajasthan. He still visits his village on important festivals and other occasions. Besides interacting with the local people, he also looks after his horticultural orchard, which he established after retirement and coming back to India after memorable contributions to dry land agriculture through ICARDA and CGIAR centre at Tashkent. The yeoman services rendered by Dr Paroda to and through APAARI for establishing meaningful interaction, cooperation /collaboration between the agricultural institutions, NARS, Networks, and other organizations of various member countries will be remembered with reverence.

In his capacity as Chairman, TAAS, Dr Paroda is working earnestly for the advancement of agricultural sciences through its multifarious activities, such as organization of national, regional and international Conferences, Seminars, Workshops, Brain Storming Sessions/ Workshops, National Dialogues, Congress, Expert Consultation, Regional Meetings and Special lectures. TAAS has also instituted a prestigious international award in the name of Dr M.S. Swaminathan, architect and father of Green Revolution in India to

agricultural scientist for his/her contributions for agricultural research. Both TAAS and APAARI have brought out valuable publications on wide ranging topics in the form of Strategy and Thematic publications and Declarations among others for the advancement of agriculture.

One great quality I observed in Dr Paroda is his frankness. If he is unhappy or not satisfied with the behaviour or performance of his subordinate colleague, he will express the same before the concerned person often with a benign worded caution e.g. 'You are trying to be smart'. I had the opportunity to organize his three visits, one at NRCE, Hisar as Chief Guest during the National Symposium, and two at IVRI, one at Izatnagar to preside over the Convocation (2001) and another at IVRI Regional Centre at Bhopal for dedication of the High Security Animal Disease Laboratory in 2000, in the presence of the then Honourable Minister of Agriculture, GOI, Shri Nitish Kumar Ji. During all these occasions, he minutely observed our strengths, weakness and short comings in organizing the program and visits to the institute, and subsequently expressed the short comings to me so as to educate us and make improvement in future.

We wish Dr Paroda a very healthy and productive life ahead so that he continues to guide and aspire the younger generation of scientists for overall development of agriculture in India and abroad.

M V R Prasad

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Delhi weather gets better by October. It was one such day of October in the year 1964. I was a student of M.Sc. in the Division of Agricultural Botany at the Indian Agricultural Research Institute in Delhi. I just completed my first year in M.Sc. Genetics and entered the second year facing a hectic and busy schedule of work. Thinking about my research work under the guidance of Dr H.K. Jain on Cytogenetics of Advance Generation Polyploids of some Ornamental Plants, I was walking in the veranda of the Post-Graduate Hostel's Old wing to go to my lab. Then I saw a tall handsome gentleman in his twenties walking towards me. I paused my step to respond to him. He said in a very cordial voice, "I am Rajendra Singh Paroda from Rajasthan and I have just joined my first year of the Ph.D. programme in Genetics and Pant breeding. Could you show me the Students' Mess and CCA Hostel where I am going to stay?" That was how I met with him in 1964. I showed him the Students' Mess and CCA Hostel. I used to be a very shy and somewhat less communicative in my dealing with others. I tried to improve on this nature of mine; but till today I retain a bit of the same.

At the very first meeting, he created a very positive and nice favourable impression on me. Later, whenever we saw each other even casually, he used to pay special attention to me enquiring about my course work and thesis work, notwithstanding my hesitation and reserved nature. This enabled me to open up a little by little, slowly getting rid of my hesitation to talk with new persons etc.

After completing my M.Sc. program, I was planning to move to the University of Minnesota, although I was selected for admission into Ph.D. at IARI. However, when Dr Swaminathan asked me to work under his guidance on the Genetic differentiation of the tetraploid speices of wheat with special reference to the impact of dwarfing genes on the productivity of *Triticum durum*, I preferred to continue my Ph.D. program at IARI. When I met Rajendra Singh Paroda on one occasion in 1965, he asked me as to why I did not avail of the opportunity to do Ph.D. in USA. That was the time when I had a very detailed conversation with him. Later he appreciated my stand.

He was senior to me in Ph.D., but we used to meet at classes on several common courses. We used to meet very frequently at the threshing shed, where we threshed putting the selected single plants' ears of wheat in mini threshers. Our frequent

meetings at the threshing shed increased my familiarity and so to say affinity with him. He was working under the guidance of Dr A.B. Joshi, Dean and the Doyen of plant breeding. He used to participate in several cultural programs and student activities without any hesitation, unlike me. He contested for the position of the General Secretary of the IARI PG Students Union, when I extended my support to him silently and prevailed upon 21 of my friends vote for him. He was elected with a good majority and then he proved to be a very lovable General Secretary and friend of all students.

Later I did not see him for two years or so when I completed my Ph.D. Then I longed to see him as I missed him. Later I came to know that he moved to UK on a Post-doc assignment in Abyrestwith. I completed my Ph.D. but stayed on at IARI initially as a post-doc fellow and later as Pool Officer, although I was offered post-doc assignments in University of Sydney and University of Paris. I decided to stay on at IARI to pursue my dwarf *durum* breeding project, which later led to the development and release of the first dwarf durum variety i.e., Malavika (HD 4502).

On one day in 1969 or early 1970, I was moving towards the Department of Mycology and Plant Pathology at IARI, when I suddenly met Dr Paroda on the road. I would have missed him as he was riding a scooter and I was on a bike. I didn't see him; but he noticed me and stopped and called me aloud. It was a matter of great pleasure for me to have seen him after a gap of about 2 to 3 years. We exchanged pleasantries and he told me about his work in UK.

Later we met at the ICAR headquarters on some interviews to certain positions in ICAR. However, he didn't join ICAR and moved to Haryana Agricultural University as Forage Breeder and Head of the Forage Department. In this position, he made a mark and contributed extraordinarily to put the forages and fodder crops into the full lime light as agents to transform the economy of farmers. His Journal on Forage Research published from Hisar attracted every one's attention and used to be a great success. Then I was working as Plant Breeder on pulses and oilseeds in the All India Coordinated Project for Dryland Agriculture at the CAZRI Jodhpur. He used to invite me to all events at HAU and it was always my pleasure to interact with him. He conducted several seminars and workshops on forages and fodder crops, which won him national and international recognition at a very young age.

He is a very good host and never used to allow me to go out of Hisar without offering a tasty and sumptuous lunch or dinner at his place.

During this period, I came rather very close to him and used to admire his capabilities as an excellent communicator and scientist. We both worked at the CAZRI Jodhpur in 1976-77, when he moved from Hisar as the Head of the Division at the CAZRI. Later in 1977, I moved to Hyderabad to work on oilseeds.

His contributions to Indian Agriculture in his various capacities are too well known. His roles as the Director NBPGR, Deputy Director-General (Crop Sciences) and Director General ICAR & Secretary of DARE were indeed epoch making.

When I moved to the Directorate of Oilseeds Research in Hyderabad, I had worked in very close association with him. He was readily available to all of us to listen to us and solve

our problems. He took initiative to enhance the infrastructure and funding at the ICAR institutes. His every visit to us was eventful throwing new light on mode of working and research projects. His method was to encourage every scientist to contribute his/her best. He acquired the stature and dignity to command respect in all international organizations including World Bank etc. One significant help that I received from as the Project Director of the Directorate of Oilseeds Research was in the form of Seed Project through which we could tide over the severe financial shortfall that we faced at that time. His tenure in FAO opened up APAARI and he worked as the Executive Secretary of the Asia Pacific Association of Agricultural Research Institutions (APAARI) based at FAO Regional Office, Bangkok. Later his work as Coordinator of CGAIR helped several nations to set-up gene banks. He also served as the Chairman, Board of Trustees, ICRISAT, Hyderabad, Member of IRRI Board, Los Banos, Philippines and Member of Advisory Council of Australian Centre for International Agricultural Research (ACIAR), Canberra, and the Commonwealth Agriculture Bureau International (CABI), London. In 1996, he organised the second International Crop Science Congress in New Delhi. In 2001, he presided over the Indian Science Congress held at the IARI, which was inaugurated by the Prime Minister Shri Atal Behari Vajpai. In 2012, he organised the first Global Conference on Women in Agriculture (GCWA) in New Delhi which was attended by the President of India Mrs. Pratibha Patil. He served as Chairman of the Organising Committee of a very successful Global Conference on Agricultural Research for Development (GCARD 2) organised jointly by GFAR and CGIAR in October 2013 at Punta del Este, Uruguay.

I can go on writing several of his epoch-making contributions that strengthened Indian Agriculture and Agricultural Research, but most of them are too well known to be narrated here. The list of awards and special recognitions that he won is enormously long including the coveted Padma Bhushan. Apart from all the above, he remains a very lovable friend, who is always accessible.

He always used to enquire about my family very affectionately. Once I received him at the Hyderabad Airport in 1992, when the flight from Delhi arrived before time. After alighting from the aircraft, he said, "Prasad, I have more than half an hour now. Let us go to your house, which is not far from this place. I wish to meet Mrs. Prasad and your two children". That is the kind of affection he used to shower on me.

It was indeed to my regret that I had to leave DOR and ICAR in 1995 on voluntary retirement, about which Dr Paroda was not all happy. He tried to dissuade me from leaving ICAR; but I had taken that decision due to some unavoidable reasons that I can't state here, despite the fact that I enjoyed working as Project Director DOR in which I won the acclaim and cooperation of not only my colleagues in oilseeds sector but also at various levels of the administration. This took me away abroad from my friends and colleagues of over a decade and a half.

Dr Rajendra Singh Paroda is a rare and the most precious gem, which added enormous shine, lustre and value to the necklace of Indian Agriculture and it is my privilege to be his friend and associate.

May Lord Almighty shower him and his family with His choicest Blessings.

M Velayutham

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Dr R.S. Paroda – A Visionary and Architect of Modern ICAR

The Indian Council of Agricultural Research (ICAR) was undergoing a period of metamorphosis during the late 1980s. Dr R.S. Paroda took over the positions of Director, National Bureau of Plant Genetic Resources, New Delhi and subsequently as Deputy Director General (Crop Science) and as Director General, ICAR & Secretary, Department of Agricultural Research and Education, at the Headquarters, Krishi Bhawan, New Delhi. As Director of NBPGR, he established a world-class Gene Bank at New Delhi for development of new and improved varieties and hybrids of cultivated and forage crops.

I had the fortune of working closely with him as Assistant Director General (Soils) and officiating Deputy Director General (NRM) Division at ICAR. With his visionary outlook and Passion for modernisation and excellence in performance, he took the ICAR and the National Agricultural Research System, inclusive of the State Agricultural Universities, to greater heights of name and fame. By bringing in large scale computerisation of file and data processing at the ICAR institutes and the universities, he brought in a sea-change in the work culture in both research and administrative processes and delivery.

The priorities and portfolios of research programmes and themes were made relevant to the changing times and needs. The thoroughness with which he used to conduct the Annual Directors' Meeting was always an intellectual feat and feast. He strengthened the research infrastructure across the board through various new initiatives such as Mission Mode projects and National Agricultural Technology project with World Bank Funding. Numerous revolving fund self-support projects, competitive awards, linkages and coordination between bigger and smaller institutes across sectors and disciplines were instituted. In such meetings, one of his favourite phrases used to be, 'Big brothers should have a big heart!'

As officiating DDG, I placed a note to him, mentioning that it is high time that the name of the Division of Soils, Agronomy and Agroforestry should be changed to Division of Natural Resources Management in the national and global context. The next day he got it approved and appreciated that the change will bring in a holistic

outlook, output and outcome of technologies for the sustainable management of our natural resources. Needless to say, the Renaissance in agricultural research came during his period as Director General.

He initiated the task of the preparation of Vision 2020 document for all research institutes and coordinated projects with milestones and goals. He finalised all of them in a peer reviewed consultative mechanism. It is time now that the institutes may revisit the document to assess the progress made in the realisation of the envisaged goals and build on that.

Dr Paroda has been an institution builder. In a short span of time, the growth in infrastructural facilities, new institutions and Krishi Vigyan Kendras (FARM Science Centres) during his period were phenomenal. The National Agricultural Science Complex at Delhi built by him is a national pride for students, scientists and farmers of India and also houses the office of the various national societies of disciplinary subjects under agriculture, the National Academy of Agricultural Sciences and the outreach head-quarters of various international institutions.

During 14-18 February, 2000, the ICAR and the Indian Society of Soil Science (ISSS) conducted an International Conference at New Delhi on the theme 'Management of Natural Resources for Sustainable Agriculture towards 21st Century'. At the curtain raising function on 13 February, Dr Paroda introduced the significance of the Conference to journalists and invited audience. I, as the President of ISSS and Dr G.B. Singh as DDG (NRM) were glad to see how convincingly the message conveyed was received, carried home and spread through the media in that week.

His contributions to International Agricultural Research through the positions he occupied in FAO, Bangkok, the World Bank, APAARI, and the Consultative Group on International Agricultural Research were seminal. Post-retirement, he is as active, through the trust that he founded, named as the Trust for Advancement of Agricultural Sciences (TAAS) at New Delhi, as President of the Indian Society of Plant Genetic Resources and as Chairman of the Haryana Farmers' Commission.

Mrs. and Dr Paroda are known for their hospitality and generosity to colleagues and friends. May Dr Paroda's counsel and guidance benefit the nation for many more years.

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I am happy to learn about the 75th birth anniversary of world renowned agriculture science, technology and research for development leader Dr Rajendra Singh Paroda. No wonder that his contribution to society has been recognized with many accolades and awards; more may happen, even though that is not his concern. I am privileged to have been involved in supporting him in my humble capacity, as richly deserved by him.

I am impressed by the selfless commitment of Dr Paroda to our country and society. He gave up the senior professional Plant Protection and Production post at Bangkok-based Asia-Pacific office of FAO (UN Food and Agricultural Organization) in early nineties and returned to India to innovatively lead agriculture research and education programmes as Secretary of the Department of Agriculture and Director General of ICAR (Indian Council of Agriculture Research) through 2001. I met him at Bangkok when I was also working for FAO at its Rome-based headquarters. Subsequently, several times at his New Delhi Krishi Bhawan office to exchange thoughts for our common cause, despite he being heavily engaged with high level administrative and creative leadership of agriculture sector countrywide, while conceiving and launching new initiatives and modernizing the ICAR centre. Before, then and thereafter, I have learnt about his mission as a scientific steward in pursuit of productive farming, farmer's welfare, earth's biodiversity and society at large in harmony with ecology, environment and economy.

Apart from science and research requirements, Dr Paroda is very well knowledgeable about agriculture sector's ground realities, society's needs, *inter-alia*, about crop diversity and food security under different landscapes. He has been devoted to the cause of agro-biodiversity and plant genetics as part of our earth, especially in the Asia-Pacific region. In addition to his home-country's agricultural diversity, he has served for several years as head of CGIAR programme in Central Asia and Caucasus based in Uzbekistan, after he successfully completed his ICAR assignment in India, for orienting agriculture towards farmer's entrepreneurship and to serve society for freedom from poverty, hunger and malnutrition. In that context, he is well remembered in the entire Asia-Pacific region as the Executive Secretary of Asia-Pacific Association of Agricultural Research Institutions (APAARI) for over

two decades when he organised diverse expert consultations of priority importance in the region.

More recently, I met him when he generously hosted a meeting with me at New Delhi while he was enroute to Panchkula as Chairman of Farmers' Commission of Haryana. Also, when he was the first Chairperson of the Global Forum on Agricultural Research (GFAR) hosted by FAO at Rome; early this year GFAR was being re-invigorated through a steering committee and quite a few people remembered Dr Paroda fondly. Most recently, I met him very quickly when he was busy as the Co-Chair of 1st International Agrobiodiversity Congress organized along with Rome-based Bioversity International in November 2016 in New Delhi as a platform to rationalize the effective use of agrobiodiversity for food, nutrition and environmental security. Lot of people paid accolades for the Congress agenda, conclusions and wide-ranging presence of participants from India and worldwide.

Now Dr Paroda continues to serve as the Chair of the Trust for Advancement of Agricultural Sciences (TAAS), with the goal to link science to the society. Wish him continued success in his laudable endeavour and looking forward to meeting him in the near future.

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Honorable Dr Raj Paroda: Extraordinary Strategic Achievements for Sustainable Agriculture in Central Asia and the Caucasus and in Dry Areas Globally

I have had the honor of knowing and collaborating with Dr Raj Paroda for many years. He has achieved remarkable and outstanding achievements in every position he has filled at the national, regional, and international levels. I have always admired his work and his commitment to enhancing the capacity development of national programs in developing countries throughout his entire career. These achievements and steadfast work ethic reflect Dr Paroda's professional vision, wisdom, determination, and commitment.

While several other colleagues will cover Dr Raj Paroda's remarkable achievements, my comments will focus on Dr Paroda's invaluable contributions to the implementation of the mission and mandate of ICARDA globally and to the CGIAR Program in Central Asia and the Caucasus (CAC). Dr Paroda was Head of the Facilitation Unit for the CGIAR Program for CAC and ICARDA Regional Coordinator for the CAC Regional Program (CACRP) for six years, from 17-Aug-2001 to 13-Apr-2007 in ICARDA Tashkent Office in Uzbekistan. Due to his outstanding leadership in the CAC he became ICARDA's Assistant Director General for International Cooperation (ADG-IC) from 14-Apr-2007 to 03-Mar-2008 in ICARDA Headquarters near Aleppo in Syria.



Through his professional dedication and highest level commitment to these two positions, Dr Paroda contributed to enhancing food security, improving livelihoods and protecting the natural resources of CAC and the non-tropical dry areas globally. The CGIAR Eco-Regional Program for Sustainable Agricultural Development in Central Asia and the Caucasus (CAC) was established in September 1998 and involves seven CAC countries (Armenia,

Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkistan and Uzbekistan); nine CGIAR Centers (CIMMYT, CIP, ICARDA, ICRISAT, IFPRI, IPGRI/Bioversity International, IRRI, ILRI, IWMI) and three non-CGIAR Centers/Universities (ICBA, World Vegetable Center and Michigan State University). The CGIAR Program, coordinated by ICARDA, aims to achieve



overall food security, enhanced productivity, environmental sustainability, economic growth, and poverty alleviation in the countries of CAC Region. Through his invaluable contribution to achieve these major goals, Dr Paroda earned the full respect and full support of high level policy makers and the national agricultural research systems of all seven countries of CAC. Dr Paroda's wise leadership of the Facilitation Unit of CAC Region has strengthened and facilitated the contribution of members of the CAC Consortium of CGIAR Centers and non-CGIAR Centers and Michigan University.

CGIAR Centers' remarkable confidence and trust with the national agricultural research systems of all the seven CAC countries. He was instrumental in developing effective networks and collaboration among the countries of the region and the relevant CGIAR Centers in areas of common interest. These areas include policy and land reforms, natural resource management, conservation of plant genetic resources, crop improvement and diversification, seed systems, development of integrated livestock/rangelands/crops production systems including rangeland management and rehabilitation.



Dr Raj Paroda and national leaders inaugurating the Plant Genetic Resources Unit in Kazakhstan

Dr Paroda helped the CAC countries in establishing and strengthening Gene Banks to conserve the valuable heritage of plant genetic resources, something which is very dear to Dr Paroda's heart. He established eight PGR units and a Plant Genetic Resources Network that has more than 2500 valuable accessions of cereals and legumes collected and conserved. He also launched a PGR website for CAC countries. One of the attached photos shows Dr Paroda with national leaders inaugurating a Gene Bank in Kazakhstan.



Dr Paroda paid special attention to human resource development and strengthening research infrastructure. These areas were critical since most of these countries were just emerging as independent countries from USSR and badly needed to be exposed to the technological innovations and developments in international agricultural research. To facilitate and help these countries get up to date in science and technology, Dr Paroda organized special advanced training courses for national scientists as well as policy makers and leaders of national programs. He even organized English language courses for national scientists to expose them to the rich English literature and scientific papers focusing on science and technology in agriculture.

Dr Paroda has been innovative in initiating the development of projects to mobilize financial resource to support the CGIAR Program in CAC and ICARDA's Regional Program in CAC. He was successful in mobilizing resources from the CGIAR Secretariat, IFAD, the Asian Development Bank, GIZ of Germany and FAO. These resources provided national programs, ICARDA and other CGIAR Centers with the financial support they need to achieve the goals of the CGIAR Program and ICARDA Regional Program in CAC countries.



In his capacity as ICARDA's Assistant Director General for International Cooperation (ADG-IC), Dr Paroda did a remarkable job in many important roles. He was responsible for ICARDA's relations with national programs in 44 developing countries in the non-tropical dry areas as well as donor relations and coordinating the Center's resource mobilization.

He was also responsible for the Center Capacity Development Unit, the Center's Communication, Documentation and Information Service Unit (CODIS) and the Project Development and Grant Management Unit. He provided leadership and guidance to six outreach Programs for ICARDA in North Africa, the Nile Valley and Red Seas Region, West Asia, Arabian Peninsula, the Highlands Program, in Central Asia and the Caucasus. These Programs developed excellent relationships and confidence with national programs under Dr Paroda's leadership.

As ADG-IC, Dr Paroda developed excellent relations with donors who supported ICARDA over many years. He was also instrumental to initiate and develop bankable projects with ICARDA Deputy Director for Research and ICARDA's Regional Coordinators in different Regional Programs. These financial resources helped ICARDA to achieve its mission in dry areas.

Throughout his professional career; before, during and after his ICARDA days Dr Paroda has been a close friend before being a colleague. I always admired his professional vision, wisdom and high level commitment. On my personal behalf and on behalf of many former ICARDA colleagues and friends, I wish Dr Raj Paroda all the best for his 75th Birthday and for many years to come.

Mahmud Ayed Duwayri

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Greetings to Dr Raj Paroda on his 75th Birthday!

I have known Dr Raj Paroda for more than twenty-five years. We both participated in CGIAR meetings when I represented Jordan NARS system or when I was a member of the executive committee of our regional agricultural research association (ARANENA) or when I was the Director of Plant Production and Protection Division in the Food and Agriculture Organization of the United Nations (FAO) during 1997-2001. Dr Paroda was always a recognized and important figure in those meetings.

My relationship was strengthened with Raj when he started working for ICARDA as the Regional Coordinator in Central Asia Program. I had the privilege to visit him in Tashkent to participate in a meeting in 2004 as a representative of ARANENA. I was highly impressed with the arrangements and his keen and strong interest in leading the program and also in assisting the national research programs.

Later we had participated in several open field days and board or scientific meetings organized by ICARDA. His contributions and ideas were of great value for advancement of applied research in particular and for science in general.

In 2014, I was privileged to be a team member with Raj to review the bilateral collaboration between ARC, Egypt and ICARDA with the aim of assessing the relevance, efficiency and effectiveness of this cooperation. We both believe in strengthening NARS, the regional and international cooperation for alleviating poverty and reducing hunger. In our review we observed and documented outstanding results which need to be extended to farmers and neighboring countries and mainly African countries.

I feel the recommendation submitted in our report is important contribution toward improvement of the livelihood of people in CWANA and Sub-Saharan Africa and reflects deeply the commitments of scientists and administrators like Raj Paroda. Sids Research Station provides an ideal location for ICARDA to fulfill its mandate, almost same as Obregon Research Station in Mexico for CIMMYT. This should be considered as a 'Niche' for ICARDA in providing leadership in wheat research for developing irrigated, high yielding, medium duration, heat and drought tolerant

varieties of bread and durum wheats for dry areas in low altitudes of CWANA and SSA. Accordingly, 'Sids station for CWANA' should be the future strategy of ICARDA and required research and training facilities be created as such. It is hoped that Egypt, ICARDA, and other organizations put this into action.

I feel I am so privileged to have been acquainted with the friend, the brother, the scientist and the human Raj Paroda.

I wish him happy and healthy life and I take this opportunity to thank him for his contributions to minimize the suffering of the poor and needy farmers.



Mahtab S Bamji

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I am indeed happy to learn that a commemorative book on Dr RS Paroda is proposed to be brought out on his 75th birthday. Not being an agriculture scientist my association with Dr Paroda has only been through the National Academy of Agricultural Scientist (NAAS). I got to know him when I was one of the council members of NAAS and him the president.

With his genial personality, broad vision and vast knowledge and understanding of the complex subject of agriculture research and practice it was easy to bond with him. I was very happy to find his sensitivity and comprehension of the burning issue of malnutrition in India, and appreciation of the fact that food security does not stop at calories and protein adequacy (the general view of administrators), but has to address the problem of micronutrient deficiencies- the hidden hunger which is even a bigger challenge. Nutrition security goes beyond food security and has to ensure safe environment, drinking water and primary health care. Nutrition Society of India has recognised him with the prestigious Gopalan Oration.

Dr Paroda is a no-nonsense man, with courage of conviction and faith in science, as was demonstrated by his stand on GM foods. He has the God given gift of being an outstanding research worker, science administrator and an articulate speaker.

My best wishes to him for a very happy 75th birthday and many happy healthy productive returns. This country needs many more Parodas.

Manoj Sharma

भूतपूर्व निजी सहायक डॉ. आर.एस. परोदा
वर्तमान में सहायक महानिदेशक, डाक विभाग, संचार मंत्रालय
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मैंने 11 अगस्त, 1994 को कृषि मंत्रालय के कृषि एवं सहकारिता विभाग में सरकारी नौकरी की शुरुआत की थी जबकि पूजनीय डॉ. आर.एस. परोदा साहब ने 21 सितंबर, 1994 को सचिव, कृषि अनुसंधान एवं शिक्षा विभाग व महानिदेशक, भारतीय कृषि अनुसंधान परिषद का पदभार संभाला था। लेकिन क्योंकि मेरे भाग्य में परोदा साहब जैसे महान पुरुष का आशीर्वाद प्राप्त करना लिखा था, इसीलिए जुलाई, 1995 में मेरी नियुक्ति उनके कार्यालय में हो गयी। पूजनीय परोदा साहब के मनभावन व्यक्तित्व में एक अजीब सा चुंबकीय आकर्षक है। जो कोई भी उनके संपर्क में आता है उन्हीं का हो जाता है। उनकी सादगी, सहृदयता, सकारात्मकता, उदारता, उनका अन्तर्ज्ञान, निर्भीक व सक्षम नेतृत्व, उनकी निर्णयक्षमता और उनकी दूरदर्शिता से कोई भी अछूता नहीं है। मेरा निजी अनुभव भी कुछ अलग नहीं रहा। परोदा साहब सरी के इंसान के गुणों का बखान करना मानो सूरज को दीया दिखाना है। परोदा साहब के अतुलनीय व्यक्तिगत गुणों के लिए ही तत्कालीन महामहिम राष्ट्रपति जी ने परोदा साहब को पद्म भूषण की उपाधि प्रदान की।

मुझे परोदा साहब से पितृप्रेम प्राप्त हुआ है। वर्ष 1998 में, एक सड़क दुर्घटना में अपने पिता की अकाल मृत्यु के बाद जब मैं अन्यथा असहाय महसूस कर रहा था, तब उन्हीं के प्रेरक वचनों से जीवन मूल्यों का ज्ञान पाकर मैं संभल सका। वर्ष 2000 के आखिर में जब उन्हें कुछ बेबुनियाद आरोपों से दो-चार होना पड़ा था, तब मैंने उनके आत्मविश्वास, सत्यनिष्ठा और धैर्य को बहुत करीब से अनुभव किया। डॉ. परोदा ने सच्चाई और ईमानदारी का दामन नहीं छोड़ा। उन्होंने अपने ऊपर लगाए गए सभी आरोपों को बहुत सहजता से लिया और अपनी सच्चाई और ईमानदारी का परचम लहराकर न केवल अपने विरोधियों को परास्त किया बल्कि जनवरी, 2001 में, अपनी अध्यक्षता में 88वी. इंडियन साइंस कांग्रेस का अभूतपूर्व आयोजन भी किया।

मैं अपने आपको अत्यंत भाग्यशाली समझता हूँ कि मैं सदी के उस काल में जन्मा हूँ जबकि मुझे परोदा साहब जैसे महान इंसान के इर्द गिर्द होने का, उनके चरण छूने का, उनका आशीर्वाद पाने का सुअवसर प्राप्त है। मैं ईश्वर से प्रार्थना करता हूँ कि हे प्रभु परोदा साहब को लंबी उम्र और स्वस्थ शरीर के साथ-साथ अपनों के प्यार व जनता के दुलार का आशीर्वाद सदैव बनाए रखना। अपने इन्हीं जज़्बातों को मैंने नीचे लिखे अल्फाजों में भी कहना चाहा है:-

तिनका नहीं सहारा हो, कश्ती नहीं किनारा हो।
परवर हो, रहबर भी, रहमतों का पिटारा हो तुम।।

जमीन से जुड़े साइंस-दान हो, किसानों के सच्चे हम-आवाज़ हो।
हरी क्रांति को इंद्रधनुषी, बनाने को हर वक्त रहते बेताब हो तुम।।

वालिदा इर्दिरा, वालिद रामकरण का, पूरा हुआ अरमान हो।
सरपरस्त हो बहनों के, बीवी-बच्चों के बागबान हो तुम।।

दोस्तों, रिश्तेदारों और मुलाजिमों, के निगहबान हो।
बेदान तर्ज़-ए-जिंदगी मिसाल जिसकी, वही मुहिब-ए-वतन अंजान हो तुम।।

इयानत को जिसकी दुनिया ने सराहा, पदम भूषण खिताब से।
सदर-ए-हिन्द ने नवाजा, वही बेहतरीन इंसान हो तुम।।

ए इंसानियत के मसीहा, दुआ है मैरी ये रब से।
मुसलसल रहे आपकी नवाजिशें, आपकी इनायतें इस मुल्क पर ही नहीं, पूरी कायनात पर-हर दिन,
हरदम।।

Manju Sharma

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During 1974 upto 80s when I was in the Department of Science and Technology, I had known Dr R.S. Paroda as a very eminent agriculture Scientist. I never met him. When I joined Planning Commission as Chief Science and Environment, I interacted with him couple of times and realized that he was truly a very intelligent and dedicated scientist who knew about his field extremely well.

It is when I joined the Department of Biotechnology as Senior Advisor I came to know him more closely but our real interaction started when I became Secretary, DBT and he was DG, ICAR and Secretary, DARE. We worked together to get the approval for BT Cotton which was released in 2002 and today we know that the farmers have benefited a lot by using this cotton variety both in productivity and quality. They had significant economic benefit. Major states which used the BT Cotton variety include: - Maharashtra, Gujarat, Andhra Pradesh, Madhya Pradesh, Karnataka, Tamil Nadu etc. (Source: Clive James, 2011)

Norman Borlaug, while addressing the scientists on 'Role of biotechnologies in agriculture', in New Delhi, on 12th March 2009, said:

"We need the best of biotechnologies, the best of cytogenetics and breeding programme. A package is essential. The new technologies have opened up doors and we should use it to be able to produce food needed by 8.2 billion people in future."

He also said that "good public sector supported programme in biotechnology, linked with genetics and breeding are called for."

I remember my scientific discussions with him on starting a joint project on International Rice Genome Sequencing and Japan was the nodal center. We agreed to launch this project; which has been one of the most successful programmes in Agri-Biotech. Both the ICAR and other scientists from the University system jointly worked on this project and they successfully completed the sequencing on time for Chromosome 11 (Figure 1).

Sharing of Rice Genome Sequencing

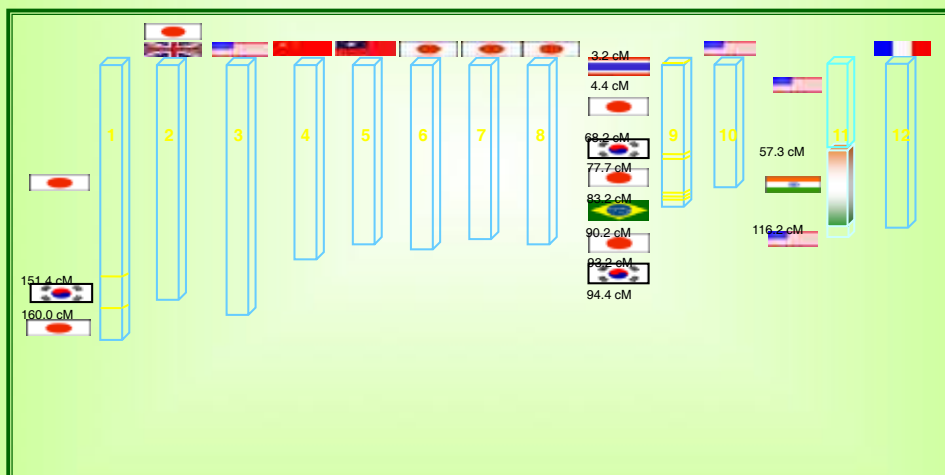


Figure 1

A world famous scientist Dr G.S. Khush from Manila, Rice Research Institute was requested by us to monitor the project regularly, which progressed on time and achieved all the milestones. In addition to the scientist from South Campus Delhi University, ICAR scientists were also trained. Prof. Akhilesh Tyagi from the University was the overall coordinator.

A joint committee - DBT-ICAR was constituted by me and Dr Paroda to ensure that the two organizations would avoid duplication and would work in the important areas of agriculture biotechnology. This effort proved very beneficial for both DBT and ICAR and many technologically viable projects were started. We formed a "Team" which was devoted to improve agriculture productivity; go for value addition and use new tools of science for over all agricultural growth in the country.

In 1995 when I was the President of the National Academy of Sciences, India (NASI), Dr Paroda received the prestigious B.P. Pal memorial lecture award and gave a very exciting and informative lecture. He really became emotional while receiving the B.P. Pal Medal and paid very rich tributes to Late Prof. B.P. Pal.

In 2014, I invited him on behalf of NASI in its Annual Session in Jodhpur to give a keynote address. Although he was very busy but he could not say no to me. We had wonderful friendship – a close bond to deal with nationally relevant agriculture related issues.

He had gone abroad to Bangkok as a FAO expert. I was invited by FAO and it was very nice spending some time with him to discuss the new and innovative agricultural practices.

I requested him on his return to India to be a member of the Governing Body of National Institute of Plant Genome Research (NIPGR). His contributions and advice were very valuable for the newly established institute. We were together in Bhasin Award Committee and many other committees of ICAR. In fact I worked very closely with the ICAR system during his regime.

I still remember his very charming daughter who piloted the party for his farewell from ICAR. It was very touching and we all felicitated Dr Paroda.

Dr Paroda is an outstanding Scientist and a Science Manager. The present building of the National Academy of Agricultural Sciences is the effort and real hard work of Dr Paroda. Today all of us are enjoying the fruits of his creative endeavors.

He was the President of the Indian Science Congress in 2001. We once again came together and did significant work for the successful organization of Indian Science Congress in 2001 in New Delhi.

As per my experience goes Dr Paroda in spite of being an outstanding agriculture scientist, is also a human being par excellence. He was a very successful DG of ICAR and was loved and respected by all his colleagues. He was also very much admired by the rest of the scientific community as his personality was very attractive. He would never use a harsh word for anybody; very soft spoken and gentle. The younger people have always been very fond of



Figure 2

him because of his mentoring attitude towards them. He would help them in their difficult times and would be very helpful in their professional endeavors.

Dr Paroda has a very charming wife - Shashi who is also very well known to me. She is a very good scientist and her performance in the Hisar Agricultural University has been very good. She represents a true traditional Indian wife who was handling her professional work as also the household chores. I became very fond of her when she worked for a short while in my department.

Even today both Dr Paroda and I are very deeply involved in our scientific work and whenever we meet we remember the good old times – we have really very fond memories of our teamwork. Knowing Dr Paroda well, he can never retire; he will always continue his work and under his guidance several young people would bloom.

I wish him great success in all his endeavors. He will always remain my very good friend, colleague and a team-mate. I respect him for all his great qualities and admire him for his skills and leadership role, which he played as DG, ICAR. He would continue to serve our country especially with his Vision for Indian Agriculture and his deep concern for the Farmers and poor people.

Marco Ferroni

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My friend, Dr R.S. Paroda, is a towering figure in national and global agricultural research, research planning and management, and the progression of research results to farmers' fields and the wider market. During decades of patient and inspired leadership, Dr Paroda played key roles and made pivotal contributions to the modernization and transformation of Indian and Asian agriculture. Farming became diversified and more commercial during this period. Agriculture sectors grew. Agri-food value chains expanded. Rural poverty declined. Technology and improved crop yields played essential roles. Dr Paroda can take credit for having energized this process. I wish him well.

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I have had the pleasure of sharing activities related to agricultural research for development with Dr Raj S. Paroda, an outstanding Indian agricultural scientist, being able to appreciate his leadership, strong commitment, high scientific capacity, vocation, dedication, and vision. We have developed a productive and friendly interaction for several years.

On the occasion of participating in international meetings in India, I was aware of the significant contributions of Dr Raj S. Paroda, through his high positions and responsibilities, as academic and research administrator. He contributed to development of crop science research and to strengthen the national agricultural research system, at national level, as former Director General of the Indian Council of Agricultural Research (ICAR) and Secretary, Department of Agricultural Research and Education (DARE), Government of India, as well as, General President of the Indian Science Congress Association and President of National Academy of Agricultural Sciences (NAAS).

I would like to remark and highlight that in addition to his exceptional career as a plant breeder and research manager at national level, he has had a recognized leadership at regional and global level. Based on the extensive relationship we developed through the years, I could appreciate his scientific capacity and generous attitude to collaborate with other countries and regions. He is deeply proud of his country, and I appreciate that I have learned about the Indian culture, and the kindness of its people.

He served as Executive Secretary of the Asia Pacific Association of Agricultural Research Institutions (APAARI) based at FAO Regional Office, as well as, integrating Boards in ICRISAT, IRRI, ACIAR and CABI.

At global level he served as Chair of the Global Forum on Agricultural Research (GFAR), at FAO, Rome (1998-2001), and later he was a member of the Steering Committee, Chair of the Programme Committee, and very actively involved in the Global Conference on Agricultural Research for Development (GCARD), particularly leading the team responsible for the GCARD Road Map, as well as the Organizing Committee of GCARD 1, at Montpellier, France, and GCARD 2, at



Sharing with Dr Raj S. Paroda the Panel related to Regional Fora in the GCARD 1, Montpellier, France, 2010, Dr Raj S. Paroda's presentation on behalf of APAARI with other Chairs of Regional Fora and myself.



Sharing the Organizing Committee of GCARD 2, Punta del Este, Uruguay, 2012, Dr Raj S. Paroda together with former Chairs of GFAR and myself.

Punta del Este, Uruguay, organized jointly by GFAR and CGIAR, in collaboration with the host countries.

Dr Raj S. Paroda has also been involved in the GFAR Conference "Reorienting Agricultural Research to meet the Millennium Development Goals (MDGs)", held in New Delhi, in 2006, as a component of the relevant cycle of international triennial conferences organized by GFAR.

He also was Co-Chair of the first Global Conference on Women in Agriculture (GCWA), held in New Delhi, in 2012, organized by ICAR, APAARI, and GFAR, through Gender in Agriculture Partnership (GAP), with participation of researchers, policy makers, women farmers and other stakeholders from different regions of the world. This Conference contributed to understanding the issues in national, regional and global context and share their knowledge and experiences, emphasizing the capability and role of women in agriculture, in the developing countries.

I have also been sharing other academic activities supporting horizontal scientific and technological cooperation among Regional Fora. Dr Raj S. Paroda contributed permanently to strengthen agricultural research for development systems, orienting towards meeting sustainable agriculture worldwide goals, with special sensitivity of reducing hunger and poverty, meeting the needs of resource-poor farmers and consumers, ensuring environmental sustainability.

The deserved relevant awards that Dr R.S. Paroda has received express the enormous recognition to his contribution to agricultural research at national, regional and global levels.

Mark Holderness

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I have had the pleasure of knowing Dr Raj Paroda for around 25 years. My first encounter with him was when I was working as a scientist at CABI in the UK and he visited our campus, as the then Director General of ICAR. What a pleasure it was, to encounter someone with such innate knowledge of agricultural science and who could ask such insightful questions around a science outside his own discipline! I truly felt then that this was a man whose heart and soul were in agricultural science, and who had the vision and scope to see the bigger picture – a vision I was to welcome and benefit from later in my career.

Our paths diverged after that time, but we came back together when I took on the role of Executive Secretary of GFAR. Dr Paroda had been a previous Chair of GFAR and was the Executive Secretary of APAARI. APAARI was itself developed by Dr Paroda from the beginning. It was his creation, and his far-sighted vision and drive, had created a vibrant and active network of agricultural research professionals in the Asia-Pacific region, held together and kept on track through the strength of his knowledge and personality.

Our interactions as Executive Secretaries of the two bodies weren't always smooth – anyone who knows Dr Paroda will know that he holds strong opinions on many issues – but underneath that I knew that his heart was always in the right place and that when he had strong opinions it was because he cared deeply about the state of agricultural research and innovation around the world and rightly saw agricultural science as the bedrock of sustainable international development. It was always useful to listen and learn from his knowledge, even when our opinions differed, our commitment to our common cause always stayed strong.

Dr Paroda has always been a man of constant surprises. For one so expert in crop science, he also maintains a very clear vision and awareness of important emerging issues in agriculture and we enjoyed a terrific partnership in addressing climate change implications together, long before the mainstream agricultural community had begun to mobilize itself around this vital issue. The result was a very far sighted meeting and the Tsukuba Declaration, which really spelled out the importance of climate change for agriculture and this planet's future.

Through his involvement in the GCARD1 regional process and then as Chair of the GCARD 2 Organizing Committee, he created a truly ground-breaking programme that really reflected the reality of networked agricultural research actions which set out an exciting and inspiring agenda for change. He has the ability to look well beyond institutional walls and sectoral rivalries to capture a bigger vision of collective action.

Another case was that of women in agriculture. While many might see this as an issue far removed from crop science, Dr Paroda had the vision and the drive to really take on the subject and, from our original discussion and first development of the germ of idea, he grew the first ever International Conference on Women in Agriculture. This is where I really saw Dr Paroda at his finest – taking on an issue that affects millions of lives and livelihoods, which runs deep into the cultural norms in India and around the world, and using his considerable powers of persuasion, and his abilities to mobilize his extensive network of friends and partners, to create an event of international impact and one that really engaged key policy makers and thinkers, including no less than the President of India. We gladly gave for such an important cause, but all along Raj Paroda's dynamism helped give us all the drive to succeed.

How to sum up Dr Paroda? A strong and dynamic leader, an international expert, totally committed to his work and someone who is very prepared to speak his mind and strongly defend his views. He is one of the few in this world who is prepared to really stand up for national agricultural research systems in international debate and truly champion their value and importance. Through the force of his personality and expertise, he has brought together and, as importantly, kept together, a diverse range of leaders and thinkers from different backgrounds and cultures and given them a vision and focus beyond their own roles. I know the forceful Raj, but also the kind gentleman Raj – I am proud to call Raj Paroda a friend and delighted at all he has achieved in his 75 years – I wish him many more.

Mekhlis Suleimenov

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For six years, I worked with Dr Raj Paroda in Tashkent as deputy head of regional office of ICARDA for Central Asia and the Caucasus. When he began to be acquainted with leading scientists in eight countries of the region, almost everybody started the talk with a few words about Raj Kapur. I explained to him that Raj, the popular Indian movie star was very well known in Soviet Union. Although it was fifty years ago when they saw movie “Awara”, but many people still had fond memories about Raj Kapoor.

In the countries of the region common language was Russian and some words were confusing for Raj. When he had first meetings with livestock people, he noticed that they quite often used his last name but interpreter never said that they talked about him. Only after some time he learned that word “paroda” in Russian means, “breed”.

From the beginning, Dr Paroda took care of problem of conservation of plant genetic resources. He supported building genebanks at plant breeding centers in all countries of the region. At the same time, he organized support to winter wheat plant breeders. The point was that in Soviet times in the countries of Central Asia, all irrigated land was used to grow cotton and alfalfa. And after these countries became independent, their governments decided to remove alfalfa and reduce cotton area, growing winter wheat on half of the irrigated cropland. That is why in the beginning Russian wheat varieties were widely used. Local scientists started developing new varieties, and to accelerate this work, Raj combined efforts of local scientists with scientists of international research centers of CGIAR. This joint work was most successful in Uzbekistan where in a short period, newly developed local varieties exhibited an increased average wheat yield up to 5-6 t/ha.

One of important challenges in irrigated agriculture was rational use of cropland to increase land productivity. In Uzbekistan, Tajikistan and Turkmenistan, all irrigated cropland was used in cotton-wheat crop rotations. However, this kind of crop rotation was depleting soil fertility and Raj suggested growing pulses common bean, mungbean and soybean for double cropping after harvest of winter wheat. The pulses played double role providing good cash crop and improving soil fertility. However, this practice was not adopted at once although farmers saw positive



effect. It took years before big government officials were convinced and allowed farmers to use new practice. Raj always took into consideration, that in some countries of the region one had to first convince high officials for new practice adoption. In Kyrgyzstan and Kazakhstan, it was another story. Firstly, farmers were independent in taking farm management decisions, secondly it was dryland agriculture. In these two

countries, we suggested to improve cropland use under rainfed conditions. One of major practices was use of summer fallow to accumulate moisture and to control weeds. We suggested growing pulses like dry pea, chickpea and lentil, rather than having no crop for one season. Certainly, wheat yield, sown after pulses, was lower than after summer fallow but pulses were giving high market value product and were improving soil fertility. Presently, this practice is widely adopted in Kazakhstan, where instead of summer fallow, farmers grow lentil, which was unknown before.

In the regional ICARDA office, working language was English. Not all staff members had good command over this language but Raj treated everybody equal irrespective of knowledge of English. In general, Raj treated every member of staff as member of one family. He was especially careful selecting interpreters as quality of office work depended on them a great deal. Raj was a good organizer of numerous meetings and seminars, paying attention on all small details. He had excellent relationships with leaders of Ministries of Agriculture and with all agricultural scientists. I am sure, if any Indian agricultural scientist will visit the region of Central Asia and the Caucasus first thing he will hear words: «O! Raj Kapur! Raj Paroda!»

Michel Petit

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Having enthusiastically accepted to write a contribution for this commemorative book in the honor of Dr R.S. Paroda, I began reminiscing about the opportunities I had the privilege to interact with him, soon realizing that we had worked together on many occasions and in very diverse circumstances. In most cases, we were fighting the same causes and we shared the same convictions.

My first encounter with Dr Paroda was in the early 90s when, at the FAO Regional Office in Bangkok, he had been instrumental in creating APAARI (the Asia Pacific Association of Agricultural Research Institutions). We, in the World Bank, viewed APAARI as the forerunner in the promotion of regional cooperation among National Agricultural Research Systems (NARS), a need which we saw as very pressing but which the Bank was not well equipped to foster, its main instruments being loans to individual developing countries. Dr Paroda's dedication and commitment to this cause is demonstrated by the fact that he was the Executive Secretary of APAARI for almost two decades. Note that in this position the word Executive reflects exactly the role he has played, that of the doer in a very fragile institutional context.

A few years later, Dr Paroda became DG, ICAR. We had then many opportunities to meet and to develop a true sense of respectful friendship and complicity fighting together for what we both considered worthwhile causes. We met at least twice a year in regular CGIAR meetings. And there our common cause was to promote a rebalancing of power between the international centers (the IARCs) and the NARS.

It is in that context that we were both instrumental in launching the Rice-Wheat Consortium for the Indo-Gangetic Plain, an undertaking I am still proud today to have been part of and for which the partnership with Dr Paroda was critical. The research challenges facing the various crop systems involving those two crops were great, generally well recognized and their significance broadly understood. Many research actors were involved and making good contributions: the NARS, several IARCs and many others which we would include today in what is called the innovation systems. But we were convinced that the efforts were too fragmented and that the collaboration among all these actors was not up to the challenge. This was true of collaboration among the NARS of the region, for obvious geopolitical reasons. This was also true of the IARCs, hampered by their own financial and institutional constraints which led

them to individually initiate collaboration activities with individual NARS in which the IARCs were playing the leading role. As a result, the cropping system dimension of the challenges faced by farmers was not sufficiently taken into account. The Rice Wheat Consortium was designed to overcome these institutional weaknesses.

My World Bank colleagues and I were able to use the “convening power” of the Bank to bring all the major actors together. Dr Paroda was immediately convinced of the value of setting up a truly “NARS driven” initiative. I still remember vividly the meeting in Delhi when we launched the Consortium. His role was somewhat delicate, however. As host of the meeting and chief Executive of the most important NARS, he had to avoid that his peers from other NARS resent his influence. And this is where he demonstrated outstanding leadership qualities. He very nicely brought his colleagues on board, creating a situation where the IARCs had no attractive alternative but to collaborate.

The preparation of the NATP (National Agricultural Technology Project) gave us another opportunity to collaborate. He was of course the key actor in that process. The World Bank provided financial support to the project. But my colleagues from the relevant geographic department of the Bank were in charge of that operation. Dr Paroda fully understood the situation. He knew that I viewed Bank support to the Indian NATP as valuable experience for similar operations in other countries, notably Brazil and China. So, he also knew that I was a supporter of NATP but that I could not be directly involved. Very astutely, he took me as his informal personal adviser, seeking often my advice. I greatly enjoyed that role and I hope I thus helped him make NATP a world flagship in the support to agricultural research, which I believe it was then.

Dr Paroda was one of our greatest supporters when in the World Bank we created ESDAR¹, a special multi-donor unit dedicated to the support of agricultural research in developing countries. He liked the concept of a global agricultural research system which we were promoting, in a sense extending at the world level the ideas which had guided us when we created the Rice-Wheat Consortium. The same ideas led to the creation of GFAR (the Global Forum on Agricultural Research). And it is thus only fitting that Dr Paroda became the chairman of GFAR in 1998.

Retrospectively, I am very proud to have been closely allied with him on important issues or initiatives, each one of us playing his own role, in line with our different institutional affiliations, but in full confidence that the other would do his utmost to achieve the common goal. I am also grateful to him for having been very considerate and kind to me and my wife on many occasions after I had retired from the World Bank, notably when we came back on visits to India. In addition to his friendship, which I value enormously even if life circumstances have been such that we had little opportunities to interact in recent years, I have been really impressed by his clear mind, his forceful character and his strong convictions. I wish him well for the future.

¹ESDAR is an acronym typical of the World Bank jargon. It stands for Agricultural Research (unit) in the Environmentally Sustainable Development (Vice Presidency), then headed by Ismail Serageldin, not a bad description after all!

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Dr Raj Paroda – A Man with Great Vision for the World and Humanity

I became acquainted with Dr R. Paroda in 1996 when I was working as Deputy Director General of Agricultural Research, Education and Extension Organization (AREEO) in Iran and as vice president of Association of Agricultural Research Institutions in the Near East and North Africa (AARINENA). He was deeply involved in transforming ICAR as DG and working with the NARS leaders in Asia and Pacific region to strengthen the newly established “Asia and Pacific Association of Agricultural Research Institutions (APAARI)”. We had the same vision for establishing a global platform to promote dialogue and strengthen partnership among all stakeholders in agricultural research for development.

In October 1997, the Global Forum on Agricultural Research (GFAR) was established during the CGIAR- ICW meeting held at the World Bank in Washington, DC and Dr Paroda was elected as its Chairman. In 1998, I was elected as President of AARINENA and became a member of the GFAR- Steering Committee. We were happy to closely work together for promoting the GFAR vision and programs and also strengthening the NARS (national agricultural research systems institutes, universities, private sector, NGOs, farmers organizations, donors etc.) for their effective participation in the regional and global agricultural research for development. Dr Paroda was the main pillar and force behind the establishment and achievements made by GFAR during this period and beyond.

He served GFAR with high devotion and commitment. He was also helping APAARI as Executive Secretary with exceptional commitment and dedication. He was behind all the big achievements made by this great association until his retirement in 2015. His leadership in APAARI was recognized and appreciated by all NARS leaders and stakeholders.



Aleppo, ICARDA HQ with ICARDA Management Team in 2007

In October 2002, I was elected as Chairman of GFAR after Dr Paroda decided to join ICARDA as Coordinator of the CGIAR Programs in the Central Asia and Caucasus. We closely collaborated again to enhance the GFAR vision and its activities. He not only continued to serve APAARI as before, but fully supported all activities of the new established Central Asia and Caucasus Association of Agricultural Research Institutions (CACAARI). The countries was badly needed technical and financial support from the international community after the collapse of the Soviet Union in 1991. All agricultural institutions and networks were facing great

challenges and the scientists and technicians were all in despair. Without Paroda's support and involvement, the NARS of the countries and CACAARI could not achieve and carry out the proposed activities. He was the main advocator for receiving the support from the CGIAR and ICARDA. His first priority was to improve the infrastructures and institutional capacities of the NARSs in all countries of the CAC region. He sought the support from all national, regional and international stakeholders and donors for the approved programs. The high officials of all the countries in the region awarded him with medals or plaques of appreciation or honor for his long and big service. His legacy to improve the livelihoods of the small farmers in the region will always be remembered and not be forgotten. Dr Paroda was also a strong supporter of all other regional fora, particularly AARINENA. Together, we encouraged and promoted partnership among AARINENA, APAARI and CACAARI research intuitions for establishment of Inter-regional Network on Cotton in Asia and North Africa called INCANA.

Dr Paroda is still very active in promoting investment in agriculture sector and the unique role of the agricultural research system for sustainable development of all developing countries. He is certainly an asset to India and the world agricultural research community.

It is my great pleasure to extend my best wishes to Dr Paroda and very pleased to share with

you his valuable contribution to the advancement of knowledge in agricultural sciences and his unique achievement in improving the livelihoods of the underprivileged and small farmers around the world. May God bless him with full health, happiness and prosperity for many years to come.



At AREEO, Tehran, Iran during INCANA meeting in 2003



CWANA Regional Research Priority Setting Meeting at ICARDA, Syria, Aleppo May 2002

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Dr Raj Paroda – A Much Revered Colleague and Friend

I have known Dr R.S. Paroda from early 1970s when I was still at the GB Pant University of Agriculture and Technology, Pantnagar. I knew him then as a budding star in the field of agricultural research and education as he served with distinction several institutions of repute in the country. It was, however, in 1980s, several years after my joining the International Center for Agricultural Research in the Dry Areas (ICARDA) in Aleppo, Syria, that I started knowing him personally. Since then, our contacts and friendship have grown steadily as he transited from one coveted position to another, at the national and international agricultural research scene and I moved from active research to administration at ICARDA. Thus, I remain beholden to ICARDA for providing me the gift of a wonderful colleague and friend in the person of Raj Paroda. I cherish this friendship now and will continue to do so in the future.

ICARDA, having the world mandate on barley, durum wheat, faba bean, lentil, Kabuli chickpea and cold season forage legumes (lathyrus and vetches), had great interest in the genetic resources activities at the National Bureau of Plant Genetic Resources of India. Therefore, soon after its establishment in 1977, ICARDA initiated contacts with NBPGR. The collaboration, however, got the real boost when Dr Paroda became the Director of NBPGR and set in motion the process of making it a genetic resources institution of great repute in the developing world. Because of his pragmatic approach and our mutual trust, we were able to develop arrangements for free exchange of germplasm between our two centers. NBPGR facilitated safe distribution of ICARDA's improved germplasm and yield nurseries to national partners in India, giving a fillip to ICARDA-India collaboration. NBPGR also provided opportunity to ICARDA to make 'black box' deposition of some of its valuable germplasm for safekeeping. Even after leaving NBPGR he continued his efforts to augment much needed resources and provide the leadership for the modernization of NBPGR. Thanks to these efforts, NBPGR has emerged as one of the best institutions in the world serving the cause of sustainable conservation and management of biodiversity not only for India but also for other countries in the region.

My contacts with Dr Paroda and ICARDA's collaboration with the Indian Council of Agricultural Research (ICAR) considerably increased as he became the Director General of ICAR and Secretary, DARE in 1994. The Annual General Meetings (AGMs) of the Consultative Group on International Agricultural Research (CGIAR) provided a regular opportunity for me to meet him, at least once every year, as he represented India on CGIAR as the head of the Indian delegation for nearly a decade. It brought me lot of pride seeing Dr Paroda participating in the deliberations of the CGIAR, putting effectively the viewpoints and promoting the interests of Indian agricultural research and development. He also forged alliances in the system to ensure that the CGIAR institutes addressed the priorities of the agricultural community of the developing world.

Dr Paroda also represented on the CGIAR the Asia Pacific Association of Agricultural Research Institutions (APAARI) as its Executive Secretary. Thanks to his leadership, APAARI emerged as the most effective regional forum in the system. As the process of reform in the CGIAR system set in, Dr Paroda led effectively the way for the formation of the Global Forum on Agricultural Research (GFAR) as an integral component of the CGIAR. I vividly remember how the then Chair of CGIAR depended on Raj Paroda in conceptualizing and developing the structure of GFAR in that fateful meeting in which GFAR was borne. The Forum has now become a vibrant Institution providing direction and linkages for the CGIAR and enabling its research system to effectively respond to the changing needs of agricultural development.

As mentioned earlier, Dr Paroda's contributions to the development and growth of APAARI have been enormous. He was responsible for expanding its membership base and augmenting resources making it by far the most effective regional forum in the world. I had the privilege of attending several of the APAARI meetings organized by him, generally focusing on topical subjects and coming out with solid recommendations and clear roadmap for their implementation by the membership. His diligence in meticulous planning and conduct of the meeting made this possible. No wonder, the membership of APAARI never let him leave the position of the Executive Secretary for a long period of time in spite of his repeated requests. APAARI can really be proud of its achievements and remain ever so grateful to Dr Paroda for his foresight, diligence, dynamism and leadership in promoting this institution.

Coming back to ICARDA, much of the credit for increasing its linkages with the Indian national programs and the programs in other countries in South Asia region should also go to Dr Paroda as he set this in motion with his persuasive dialogue and discussions with ICARDA management and the Board. This was important because the ICARDA Board, in the early years, was reluctant to extend its activities beyond West Asia. ICAR, under Dr Paroda's leadership, entered in formal agreement with ICARDA for cooperation and collaboration in several fields of mutual interest. He also ensured that a part of the financial contribution of ICAR, as a member of CGIAR, went to ICARDA for mutually agreed programs. I had the privilege of participating in some of the meetings of ICARDA with ICAR and got the first hand experience of witnessing how effectively he led ICAR -- one of the largest agricultural research systems in the developing world. Much of the present capacity of ICAR to respond

to the changing needs of Indian agriculture was developed when Dr Paroda was heading the ICAR. Because of his foresight and efforts, new institutions were added and infrastructure, research facilities, and manpower were expanded in the existing institutions to meet future challenges. Dr Paroda's vision for taking Indian agricultural research to newer heights and creating a coveted place for agricultural sciences in the scientific canvas of India is reflected in his contributions to the establishment of the Trust for Advancement of Agricultural Sciences (TAAS) and providing leadership to institutions such as National Academy of Agricultural Sciences, Indian Science Congress and various professional scientific societies in the field of agriculture.

While our contacts kept on increasing as I stayed on in ICARDA, the opportunity of having Raj Paroda as a colleague came when the CGIAR Program for Central Asia and the Caucasus (CAC), managed by ICARDA, selected him in 2001 as the head of that program. He led the program with distinction, earning fast the confidence of the scientific community and policy makers of the national agricultural research systems of the CAC countries, giving new direction to the program and enlisting effective participation of all the relevant International Agricultural Research Centers and Advance Research Institutions. I had the privilege of visiting several activities of this program in different CAC countries and witnessing the progress made. ICARDA was indeed very fortunate to have Dr Paroda leading that program and earning so much of goodwill for the Center. No wonder, ICARDA invited him in 2007 to take up additional responsibility at the Center as its Assistant Director General (International Cooperation).

I retired from ICARDA in 2006, but by that time I had gained a very dear colleague and friend in Raj. Since then, our friendship has grown even stronger. He has given me opportunities to be a part of multifarious scientific activities that he has been spearheading through various professional societies and institutions in the country. He and Mrs Paroda have also brought me and Mrs Saxena in their inner social circle making us close family friends. As Raj completes 75 years of his illustrious life, we wish him continued good health, happiness and success in many more years to come.



Dr R.S. Paroda: An Eminent Scientist and Modern Architect of New Age NARS of Asia

My close association with Dr R.S. Paroda began when I joined ICAR (HQ) in 1995 as ADG (ESM) but also worked as ADG (PIM), ADG (Policy) and Director, NCAP under his marvelous leadership and mentorship as DG, ICAR and Secretary, DARE till 2001. Afterwards, I was closely associated with him in his capacity as Executive Secretary, APAARI; Chairman, Haryana Kisan Aayog; Chairman, GCARD 2 Organizing Committee and GFAR Program Committee and in recent years as President, TAAS. I have learnt a lot and taken inspiration from his towering personality as an individual and an institution to look beyond excelling in our narrow scientific disciplines and specializations to contribute to enhance development value of science. In this life-long learning as a colleague closely working with him, I have seen significant changes in his personality and achievements which will inspire anybody to remain human, humble, committed, focused, punctual, and an achiever. On the auspicious occasion of his 75th Birthday, in honor of him, I am trying to recollect some anecdotes, events, feelings down the memory lane with due respect, regards and gratitude. Since I have joined him when he was at his peak as an able, outstanding science administrator and global agricultural science leader, I confess that I am not able to reflect on his abilities in hardcore science, but was hearing a lot from my friends and colleagues on his scientific achievements covering plant breeding, fodder science and legume research, genetic resource management etc.

His contributions to ICAR in particular and NARS of South and Central Asia and Caucasus in general in global exposure, contacts and Midas touch in transforming anything he touches becoming gold helped him to reorient and reshape ICAR/NARS to global reckoning. He always speaks about change, breathes change because he strongly believes that change is a sign of growth. In my view, his major contributions to ICAR/NARS among others include: i) promoting many best science management practices like Policy and Visioning, strengthening social sciences, PME, social audit of institutions, thrust on capacity development, reforms in management of AICRPs, accreditation of SAUs, voluntary enforcement of Model Act for SAUs, framing and

promoting IPR policy, partnership and collaboration with national and international centres of excellence, emphasis on production and sale of quality seed, planting materials and other critical inputs in NARS institutions to spread good science to farmers and also generate revenue, resource mobilization, several new awards to recognize merit and contributions, visiting scientists scheme, implementing GVK Rao committee recommendations; ii) unprecedented strengthening of institutional infrastructure; modernization of offices, laboratories, research stations, farm fields, student hostels, guest houses, conference halls/rooms, auditoriums; iii) introducing and implementing several administrative and financial reforms like decentralization and delegation of powers; removing anomalies in pay, designations, etc. of staff; career advancement of staff; abolition of auxiliary non-ministerial posts, reclassification of posts; framing rules, regulations and guidelines on training, consultancy, contract research and contract service to enhance resource generation capacity; streamlining and simplifying procurement procedures; reforms on reorganization of regional centres of ICAR institutes; new QRT guidelines, revision of technical service rules of ICAR; enhanced medical facilities to ICAR pensioners; emphasis on revolving fund scheme; sabbatical leave rules revision and implementation; preparation of EFC for ICAR (HQ) and many others. If the ICAR/NARS system remained alert, as a learning organization and responded with above types of reforms to the changing needs of time, perhaps we could have avoided embarrassment and dubious distinction of the most over reviewed science organization in India!

Some of his most memorable contributions which signify his un-paralleled foresight and personality are building NASC Complex, establishing National Genebank and modernizing infrastructure facilities of ICAR institutions and SAUs. He had a dream to create 'India Habitat Centre' or 'Vigyan Bhavan' type of facilities for use by agricultural scientists of India and the globe at Delhi and he created NASC Complex against all possible odds and administrative and financial hurdles. But his grit and determination even at personal inconvenience and agony to complete NASC and dedicate it to agricultural research community is something which is difficult to express in words. His own Presidential Address at the Annual General Meeting of the NAAS during 1999 on the topic 'Change We must but Change is Difficult' aptly epitomizes his ornate desire for change to transition to the next millennium met with innumerable hurdles and stiff resistance from within the system itself. Entire agricultural research fraternity owes a heavy debt of gratitude to him as NASC is now not only our community's pride but a cozy, enviable science convention place in the capital of India. His foresight of housing the offices of International (CGIAR) Research Centres in this Complex is highly cherished by global research community. Similarly, National gene bank is our invaluable national asset.

He also promoted some of the above reforms in the NARS of Asian countries working as ES, APAARI, and Chair of Program Committee of GFAR. His global engagement for transformative changes in agricultural science systems for global impact can be seen in his vision and hard work to convince world leaders and scientists to the declaration on "The GCARD Road Map" in 2010. The GCARD Road Map establishes an inclusive,

rolling process of reform and capacity development that aims to mobilize the full power of agricultural knowledge and innovations to banish hunger and malnutrition from the planet. APAARI is another great institution he has crafted and steered over 25 years of his yeoman service to cater to RD4D needs of Asia Pacific region and made APAARI a brand name among regional fora on AR4D. He made Haryana Kisan Aayog dynamic in diversifying, enriching activities connecting scientists, farmers and policy makers. His contributions as Chairman of Haryana Kisan Aayog are remembered for his vision in developing Haryana Agricultural Policy. He never stops in building and nurturing institutions and TAAS is his recent brain child and he is mentoring it as Chairman and as a caring responsive and responsible parent. Age is not a constraint but a God given opportunity to him because he has a life-long Mission to accomplish. The highly selected activities performed by TAAS speaks volumes about his vision, commitment, stewardship, concern for ARD, hard work even at 75 years of age.

What makes Dr Paroda different and great? Yes, it is his charismatic personal qualities rarely found in one person. To enumerate a few, openness, conscientiousness, extraversion, agreeableness, accessibility, ever active, highly articulate, attractive, balanced, brilliant, capable leader, caring, cooperative, highly cultured, decisive, dedicated, dignified, dynamic, fair, rational, focused, gracious, imaginative, futuristic, incisive, passionate, principled, punctual, responsive, responsible, systematic, upright, drive and determination, and many more. These words are not taken from dictionary but honestly felt by me during my association with him on different occasions. It is always a pleasure to speak to him and see him. On the occasion of his 75th birth anniversary, I humbly salute Dr Paroda and wish him and his family health and happiness and many more years of productive service to AR4D.

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Dr Raj Paroda and PGR Conservation in Central Asia and the Caucasus

First time I met Dr Raj Paroda was at a meeting organized by ICARDA for CGIAR Program in Central Asia and the Caucasus (CAC) in 2001 in Almaty, Kazakhstan. Later that year he arrived in Tashkent as a new regional coordinator of ICARDA office and head of CGIAR Program for CAC region. He immediately met each staff in his or her office to learn about their ideas on how the research could be improved and collaboration strengthened, he inquired about the weaknesses in the current situation and the opportunities for strengthening.

In a short time, Dr Raj Paroda managed to learn the state of agriculture in the region and identify key problems and barriers in its development. That time ICARDA hosted only one sister CG center - IPGRI (currently Bioversity International). Only within five years of his work in the region, until 2007, Dr Raj Paroda managed to convince the leaders of other international research centers to initiate their work in the region. Five more organizations as IWMI, CIP, Michigan State University, AVRDC and ICBA opened their offices for Central Asia and Caucasus based in Tashkent, Uzbekistan and hosted by ICARDA. This helped to intensify international cooperation for effective use of water resources, control pests and diseases of agricultural crops, diversifying agricultural production etc. The above mentioned accomplishments demonstrates extraordinary capacity of Dr Raj Paroda not only in research, but also in management. As you know, not every good scientist can be a good manager. There are well known cases when outstanding scientists, becoming managers, destroy the organization or system. Dr Raj Paroda harmoniously combines both and his arrival was a great luck for the region of Central Asia.

Strengthening of collaboration between ICARDA and IPGRI – two sister centers in area of conservation of plant genetic resources is worth a mention. It is noteworthy that this was cooperation, not competition among the centers. Both centers were well aware of the importance of the region as one of the Vavilov's centers of origin and domestication of globally important crops with joint efforts in helping national institutions and research centers in Central Asia and the Caucasus to preserve

their valuable plant genetic resources. At the initiative of Dr Raj Paroda, genebanks were established in all eight countries of the region: Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. This was a crucial action needed to be taken immediately for conservation of plant genetic resources in young independent countries of the region, facing economic and political challenges after the collapse of the Soviet Union. Dr Raj Paroda always advocated strengthening collaboration between the countries of the region and VIR, recognizing the merits of this Russian institute and personally N.I. Vavilov in study and conservation of plant genetic resources in the region of Central Asia and the Caucasus.

Due to lobbying talent of Dr Raj Paroda, considerable funds were mobilized to the region through grants for research and development funded by CGIAR, IFAD, USAD, FAO, GIZ, ADB and others.

Realizing importance of young scientists in development and adoption of new advanced technologies and approaches, he put enormous efforts in attracting young people in CAC countries in research by involving them in implementation of international projects, participation in international trainings, workshops, scientific conferences. These young scientists are working now at different positions in international and national organizations, leading research and development activities in agriculture in their countries and worldwide.

Although Dr Paroda physically left the region almost 10 years ago, he still keeps us in his mind. He continues to help national programmes on plant genetic resources by inviting scientists from Central Asia and Caucasus to various trainings and scientific conferences organized by NBPGR and ICAR tying closely South-South cooperation among agrobiodiversity-rich gene centers of Central Asia, Near East and India. His dedication to work on agrobiodiversity conservation puts his name in one line with such enormous PGR scientists as Acad. Nikolay Vavilov, Sir Otto Frankel, Dr Erna Bennett and Dr Anthony Brown.

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Dr Paroda – An Architect and Visionary of Indian Agriculture

It is an honor and, privilege to express my views on a visionary, an outstanding administrator, architect, scientist, and leader of Indian agriculture, Dr Rajendra Singh Paroda. The names of Dr Paroda, Dr Swaminathan and a few others personifying Indian Agriculture is not a euphemism.

I joined Indian Council of Agriculture Research in 1978 and by then Dr Paroda was a person of repute among the scientific community. Plant genetic conservation and utilization in India was nascent but translated into a reality with Dr Paroda assuming the mantle of National Bureau of Plant Genetic Resources. This institution today is a wealth of invaluable plant genetic resources and has conserved lakhs and lakhs of germplasm, a treasure which future generations will cherish and salute for today's effort. The creative genius in Dr Paroda is what translated this vision into a reality.

His tenure as Deputy Director General (Crop Science) and then Director General, ICAR was one of the golden periods of Indian agriculture. Dr Paroda was instrumental in taking forward the seeds of green revolution adding other dimensions (milk, fisheries, horticulture) through research and development. It was his vision to see the integration of the National Science with International Science, and he paved a way for a unique assimilation of the CG centers with the National system by housing all CG centers in one block in the NASC complex, just adjacent to Indian Agricultural Research Institute (IARI), so that both work hand in hand for the development of Agriculture, facilitating interactive scientific discussions. Today if scientists find a convenient and affordable place with amazing ambience to stay in Delhi, well, he is the architect!

It was 1999. I was having problem in regularizing my study leave sanctioned to pursue Ph.D. at Hawaii. I did not know whom to address my problems and as a last resort decided to meet Dr Paroda. Despite his busy schedule as DG, (he was about to leave for a meeting and had almost stepped out), he gave me a patient hearing to listen to my plight and advised concerned staff to help. As a scientist, I was dumbstruck with his composure, patience and walking an extra mile to sort out concerns of

his staff. What differentiates Dr Paroda from others is his towering personality coupled with a very soft voice and subtle smile which has a tranquilizing effect.

It was his vision to integrate not just PGR but the entire genetic diversity associated with animal, fisheries, insects, soil, microbial diversity and blend all interactive effects into one Agrobiodiversity so vital and essential for sustainable agriculture in India,

which resulted in the first International Agrobiodiversity Congress organized under his guidance and leadership in November 2016.

In short, India needs a person of his knowledge, eminence, vision, dedication, and commitment for many more years and decades. I take this opportunity to wish Dr Paroda Sir all the best and pray the Almighty to shower him with long, healthy, and prosperous life and may his contributions for India agriculture continue.



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I came to know about Dr RS Paroda from Dr AB Joshi, former Deputy Director General (DDG-CS), Indian Council of Agricultural Research (ICAR) who was a guide and mentor of Dr Paroda. In early 1980s, Dr Joshi was a member of Governing Board of the International Board for Plant Genetic Resources (IBPGR), one of the CGIAR institutes based at Food and Agriculture Organisation of the United Nations (FAO), Rome, Italy. Being a staff member of IBPGR and FAO, I used to meet Dr Joshi very often, and during one of the meetings in Rome, we discussed about the development and expansion of National Bureau of Plant Genetic Resources (NBPGR). Dr Joshi and I discussed the possibility of a dynamic person with good scientific credentials and innovative ideas, like Dr RS Paroda, to lead National Programmes on PGR. Subsequently, Dr Paroda became the Director of NBPGR in 1985.

I met Dr Paroda in 1985 for the first time and was impressed with his plans and developmental programmes about both infrastructure and science. During his tenure, he was able to attract international funding like Indo-US project which helped develop the infrastructure and research facilities not only in New Delhi but at several other regional stations in India.

While Dr Paroda was the DDG (CS) of ICAR, (1987-92), he continued to support the programmes and development of NBPGR and other ICAR research institutes and SAUs towards supporting and developing PGR activities. When the FAO's Regional Plant Production and Protection officer position became vacant in 1992, I encouraged Dr Paroda to apply for the position and he joined the position in September 1992. As regional officer of FAO, he helped all the countries of the region to develop the agricultural research programmes including PGR. Dr Paroda was also Secretary, Asia Pacific Association of Agricultural Research Institutions (APAARI) from 1993 in which he continued to serve until 2014.

As DG, ICAR & Secretary, DARE, Government of India, he used to visit FAO to participate in FAO as well as CGIAR meetings, which subsequently helped attract World Bank funding for National Agricultural Technology Project (NATP). During his visits to FAO, we used to meet regularly and exchange our views on several aspects of

R&D programmes of India and other developing countries. He became the Chairman, Global Forum on Agricultural Research from 1998 to 2002

Dr Paroda also participated in the negotiations related to the development of international binding agreements on Plant Genetic Resources for Food and Agriculture (PGRFA). Dr Paroda played a major role to reach consensus on article related to “Farmers’ Rights” (Article 12 of International Treaty on Plant Genetic Resources for Food and Agriculture - ITPGRFA) and also chaired a session related to the crops that could be considered for inclusion in the Multilateral System of the ITPGRFA. Dr Paroda’s contributions in PGR and biodiversity areas are several and he organised many national and international meetings, conferences and workshops to promote the agro-biodiversity in general and PGR in particular.

Dr Paroda is humane, affectionate, warm and friendly person and his wife Shashi is also a learned scientist, very hospitable, friendly and treats her guests as her own family. I wish Raj and Shashi Paroda a peaceful, healthy and very happy long life.

N N Singh

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My Long Journey with Dr R.S. Paroda

I first came in contact of Dr RS Paroda in the year 1964 when he joined PG School, Indian Agricultural Research institute, New Delhi as Ph.D. student under Dr AB Joshi, Chairman of his Advisory Board. Although his dissertation topic was on wheat but often he used to meet Dr N.L. Dhawan in the maize section and there he used to interact with me also a great deal. That was the time when my journey with Dr Paroda started. Seeing my helping attitude to one and all, it was very easy for him also to take liberty and approach me for any big or small thing and I used to see that he is satisfied to the fullest extent. Probably this has created his great confidence in me and from those days till now, the level of confidence has not receded at all.

After obtaining his Ph.D. in 1968, he proceeded to University College of Wales, Aberystwyth, UK under Commonwealth Post-Doctorate Fellowship and remained there up to 1970. After returning back to India, he worked both in ICAR system at CAZRI Jodhpur and at Haryana Agricultural University, Hisar for so many years as Forage breeder. During the period, I was a very good New Delhi link for any kind of work or help required by him. Whenever he used to visit Delhi, he always made it a point to see me in person. He is a great human being by heart. He joined NBPGR, New Delhi in March 1985, and from then the association with him has been further



strengthened a great deal. Then I was Project Coordinator (Maize) in the ICAR system. I am often told by NBPGR colleagues that Dr Paroda is a hard task master but an unassuming person beyond imagination. Although he was there only for two and half years but within that period of time, NBPGR has been placed on World map. It has become a vibrant institution in country. With USAID support, he has established most

modern state-of-the-art Indian National Gene Bank (NGB) at NBPGR which is the second largest Gene Bank in the world. India considers him as doyen of PGR and 'Agrobiodiversity Champion'. President of India conferred on him Padma Bhushan - a prestigious civilian award in India for his contribution in the field of plant genetic resources and National Gene Bank. The National Gene Bank in Kazakhstan and the Gene



Bank of ICRISAT, Hyderabad have been named after Dr Paroda in recognition of his notable contributions in the field of plant genetic resource management.

We call him Shahjehan of ICAR. He has put his heart and soul in strengthening and modernizing the whole National Agricultural Research System (NARS) by providing world class state-of-the-art laboratories, infrastructure and manpower across the ICAR system. He mentored the National Agricultural Science Complex (NASC) which is a life line today for agricultural science fraternity. It was his dream project which he accomplished successfully in record time. The complex being a national focal point and an interactive platform for the international, national institute, socialites, agencies including SAUs/CAUs and all other public sector organizations engaged in the promotion of agricultural research coordination and its extension. It has full occupancy round the year for organizing national and international conferences, symposia, and other activities involving national and international visitors on a regular ongoing basis. It is a great facility which is comparable with Vigyan Bhawan. In most of his endeavors, I have been with him whole heartedly.

Besides, his contribution in ICAR and SAUs, he has been instrumental in global activities as well. He was Chairman, Global Forum on Agricultural Research (1998-2002); Head, CGIAR Program for Central Asia & Caucasus, Tashkent, Uzbekistan, 2001-2007; Assistant Director General (Int. Coop.), ICARDA, 2007; Executive Secretary, Asia Pacific Association of Agricultural Research Institutions (APAARI), 1993-2014 and Chairman, Haryana Farmers' Commission, 2010-2014. He was General President of the Indian Science Congress Association during 2000-2001 in this millennium. In 2001, he presided over the Indian Science Congress held at the Indian Agricultural Research Institute, New Delhi which was inaugurated by the Prime Minister of India Shri Atal Behari Vajpayee. I served with him as Secretary of the Congress to see that Congress is organized successfully. He was elected as the first Chairman of the Global Forum on Agricultural Research (GFAR), FAO, Rome from 1998-2001. He also served as Chairperson, Board of Trustees, ICRISAT, Hyderabad, member of IRRI Board, Los Banos, Philippines and member of Advisory Council of Australian Centre for International Agricultural Research (ACIAR), Canberra, and the Commonwealth

Agriculture Bureau International (CABI), London. In 1996, he organized the second International Crop Science Congress in New Delhi. In 2012, he organized the first Global Conference on Women in Agriculture (GCWA) in New Delhi which was attended by the President of India Mrs Pratibha Patil. He served as Chairman of the Organizing Committee of Global Conference on Agricultural Research for Development (GCARD 2) organized jointly by GFAR and CGIAR in October, 2013 at Punta del Este, Uruguay. As Executive Secretary, APAARI he has organized by now more than over 20 regional expert consultations on thematic areas of high regional importance. Also he is instrumental in bringing out more than 40 success stories from different countries in Asia Pacific region. He also served as the President of National Academy of Agricultural Sciences (NAAS) from 1998-2000.

Once ICRISAT Director General Dr William Dar said 'Dr Paroda has a clear vision of what is needed to enhance the lives of poor farmers – not just in his own country but throughout Asia, and indeed throughout the whole developing world. Dr Paroda, a recipient of the Padma Bhushan - a prestigious civilian award in India, has made significant contributions in the field of crop science and towards strengthening the national agricultural research systems in India and in Central Asia and the Caucasus.'

Despite heavy workload due to his wide expertise, he is able to execute and complete a large number of assignments and academic works in no time. My association with him has been very cordial all through and I found him a very sincere, dedicated, hard working and systematic person par excellence with extreme dynamic leadership quality and down to earth nature. One felt privileged to work with him. When responding to his requests to provide him with some help, one ended up learning something new. Dr Paroda is generous in sharing his ideas and conclusions and we were free to question and criticise him. With my strong association with him and in turn his full support, I picked up from him all tricks of the trade which was very useful to me in discharging my duties successfully as Director, Indian Institute of Maize Research (then Directorate of Maize Research) and also as Vice Chancellor at Birsa Agricultural University, Kanke, Ranchi. I learnt from him as to how important it is to be consistent, fair and inclusive in making decisions within the approved policy framework. In his association, I have developed and refined managerial skills in terms of planning, organizing, actuating and monitoring for successful completion of tasks and also high level of confidence and technique of fund- raising activities independently, as well. I would say that I have been with him all along, helped him profusely and learnt also from him enormously.

Now also, it is a great opportunity for me to work closely with him from 2001-02 as Secretary for the 'Trust for Advancement of Agricultural Sciences (TAAS)' since its inception where he is the Chairman. We are working together on various aspects for advancement of agricultural sciences in the country. He is a role model for many scientists including me. When recently I met an accident and was in ICU for over 2 months, he enquired about my welfare almost everyday over phone or through Ms Simmi Dogra or meeting me personally in the hospital. Really, he is a great human being beyond imagination. I admire his generosity. I always cherish my association with him a great deal and it provided me a great opportunity to share my views both in personal and official work.

उदयपुर उल्लुमनी के अवसर पर

श्री राजेन्द्र सिंह जी पर है हम सभी को नाज़, तू अजमेरा की शान, राजस्थान की आबरू।
हे शक्ति मूर्ति आज तेरे अशक को सलाम, रखा हम सभी का मान हिन्दुस्तान की आबरू।।

श्री रामकरण सपूत, सब को कृषि सिखा गया, अरू केन्द्र सरकार का भी दिल लुभा गया।
अनुसंधान परिषद् में भी अपनी शान दिखलाकर, आर सी ए का मान से तू सर उठा गया।।

उच्चाधिकारी जब बना तू केन्द्र शासन में, कृषि क्षेत्र के हिम्मत सहित सोपान चढ़ गया।
आजीविका है आज भी कृषि मौसमी जुआ, कृषकों की भलाई के हित तूफानों से अड़ गया।।

जब क्रातियाँ हरित, पीत और धवल बढ़ी, तब इस क्षेत्र की वह बागडोर तेरे हाथ थी।
पर यह न सोचना कि साथी आप एकल थे, हम सब की भी दुआयें मात्र तेरे साथ थीं।।

मुमकिन था जमाने की हवा ले उड़ा जाती पर हौसले घटे न इरादे बदल सके।
विश्व बैंक भी तुम्हारी तरफ देखता फिर किसान आयोग में भी तेरे ही दखल दिखे।।

सीने में दर्द था मित्रों की आन का जब भी मिला तो प्रेम के आंसू निकल पड़े।
जब भी जरूरत पड़ी हम सबको तुम्हारी, ये साथ तब-तब आपके बस मदद को बढ़े।।

जीवन में तेरे प्रेम को हम अब न भूलेगें माना कि तुमको भी हमारी याद आती है।
तेरी वो मुस्कुराहट जब भी दिखती है हमको तो वो साथ का सपना दिखाती है।।

साथियों

ये खिदमत गुजारे खल्क हैं, खिदमत गुजारे काम अपने उसूल अपने इरादों में फर्द हैं।
ये खुद बढ़े थे बड़प्पन से सबके साथ थे, बड़ी ही शान से जानें, अजब आजाद मर्द हैं।।
करो कितनी ही पूजा अर्चना अरदास या सिजदे अगर हो आचरण गंदा तो निष्फल प्रार्थनाएं
हैं।
मेरे इस मित्र की ताकत को कोई कम नहीं आंके, क्योंकि हम सब की ताकत भी तो इनकी
ही दुआयें हैं।।

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Dr Raj Paroda – Our Role Model

I met Dr Raj Paroda, a few months after he assumed the position of Director General of ICAR in Delhi. I made an unscheduled visit to his office with a request for a brief meeting. He called me immediately and extended a warm welcome with a pleasant smile. He became even more cordial after knowing my agricultural education background. Even before I could start explaining about BAIF's activities, he started appreciating our work of promoting livestock development through transfer of appropriate technologies. His interaction during our first meeting comforted me so much that I gained confidence that BAIF will be able to count on the support of ICAR for any scientific development programme. He appreciated our contribution under the ICAR sponsored Coordinated Research Projects in Forage Production, Animal Genetics and Animal Nutrition, which continued to receive excellent support, without any operational hurdles. His sharp memory in remembering me and warm smile always boosted my morale. I felt as if I had a mentor in Krishi Bhawan.

A few years later, I met him in Morocco, at a conference organised by him on behalf of APAARI. He saw me from a distance at the registration counter and called me by my name even before I went to meet him. Soon, I realized that he was very friendly with almost all the delegates coming from over 50 countries. His skills in organising mega-international meetings and humane touch was superb. He took special interest in enrolling many Indian organisations as members of APAARI, which gave them good exposure to international research and good business opportunities. He encouraged the Indian delegates to interact with others during these meetings.

In 2009, I visited the ICARDA - CGIAR Program for Central Asia & Caucasus, Tashkent, Uzbekistan, where Dr Paroda served as the Head of the Program and Assistant Director General of ICARDA (International Cooperation) from 2001 to 2007. The staff over there, extended a warm welcome to me and almost everyone asked me whether I knew Dr Paroda. They had such admiration for his administration and leadership that the legacy of Dr Paroda had continued even two years after his departure from Tashkent. He had administrative skills to manage the people without hurting them.

I met him again in Punta del Este in Uruguay in 2013, where the Global Conference on Agricultural Research for Development (GCARD 2) was organised jointly by GFAR and CGIAR, under the leadership of Dr Paroda as the Chairman of the Organising Committee. This was an important meeting, which was attended by the Prime Minister of the host country and several ministers from the region. The most significant aspect was participation of the largest delegation from India under the leadership of the Director General of ICAR. and Many senior scientists from ICAR and other organisations had come well prepared to present their research papers in different technical sessions. I could feel that Dr Paroda had long interactions with these scientists and their institutions, preparing them for this meeting. In spite of his very busy schedule, Dr Paroda provided adequate time to all the Indian delegates to interact with him. He arranged special vegetarian meals in his Conference Secretariat. We could easily realise his affinity and concern for fellow scientists and countrymen. As usual, Dr Paroda was a true leader, with his dynamism and charisma. He was attending to every VIP, and still he was very relaxed, ever smiling. It was a very proud moment for every Indian to see the glory of our countryman. He earned a lot of praise for successfully organising this global event.

In India, Dr Paroda as the chairman of TAAS, identified various scientific issues of national importance and invited renowned scientists to discuss on a scientific platform in search of suitable solutions. Even in such meetings, Dr Paroda remained very active and hospitable to every delegate. With his professional excellence and modesty, he attended to everyone and appreciated others on every occasion. He has been equally friendly with farmers by listening to their questions and finding practical solutions. With brilliant academic accomplishment, he started his career as a plant breeder and rose to various important positions in India and abroad with his inborn leadership qualities and hard work. We can rarely find such eminent people who can comfortably work with policy makers, scientists, students and farmers at all levels.

It was my great fortune that I could meet and interact with Dr Paroda on many occasions and be inspired by his good qualities of human engineering and professional excellence. Dr Paroda is a born leader who works silently, without ever losing his temper. He is a role model and mentor for young scientists and treasure house of knowledge and wisdom for our farmers. Truly he is our National Pride.

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Dr R.S. Paroda – A Leader *Par* Excellence

Once someone said that a teacher is not necessarily a person who has taught you lessons in the classroom. We learn important lessons from many in our lives. Some prepare us for unknown situations by setting examples of excelling through the most challenging times, while others teach us to explore our own inner strengths and move ahead. Rarely we come across such persons who broaden our horizon, instil self-confidence, teach us to be responsible for our growth and gracious to our successes. In Dr R.S. Paroda, one finds that rare combination of a leader and a mentor, who does not solve your problems, but helps you to resolve the situation logically and pragmatically. He is a role model to agriculture professionals of post-Green Revolution India.

Our association with Dr Paroda is not very long, considering that for a good 20 years of our career, he remained just an enigma to us. He dazzled everyone, made some jealous, but put most of us in awe for that unmatched vision, strong leadership, and passion for the organisation he led. We were among those who admired his dynamism and looked up to his leadership from a distance. It was only in the last 15 years or so, that we had the good fortune of interacting with Dr Paroda on many issues related to the science, policies, technological advances and growth of agriculture in general, and of seed sector in particular. During these interactions,

debates and discussions, we came to realise that what sets Dr Paroda apart from others is his ability to fathom beyond the visible horizon and chart ways to integrate Indian agriculture firmly in the global scenario. He comprehends a situation in its totality and thinks of a solution which would keep Indian agriculture in the forefront.



Dr Paroda's understanding of the seed sector is holistic and forward looking. Being a true son of the soil and a champion of conservation of the plant genetic resources, he advocates sustainable use of plant genetic resources for developing more efficient and improved crop varieties with the application of conventional breeding and modern molecular technologies, and also equitable sharing of benefits accruing out of it. At every stage of his professional career, he made conscious efforts in recognising and utilising India's rich heritage of PGRs in breeding new improved crop varieties, which are superior in yield as well as their tolerance to abiotic and biotic stresses. From establishing the state-of-the-art National Gene Bank at NBPGR, to making the breeder seeds of notified crop varieties available to the public and private seed producing agencies, he contributed in developing a modern system of plant variety improvement and linking it to a strong seed sector.

On many occasions, we found that his vision for India's seed sector goes far beyond meeting the quality seed requirements of every farmer, small or big. Dr Paroda not only believes



that India has the potential to emerge as one of the top three nations in the global seed trade, but also has a clear road map for the same. The Hooda Committee Report prepared under his capable technical guidance, clearly brings out the strengths, weaknesses, opportunities and threats of our system to strengthen the sector with viable partnership between the public and private sectors. During the first National Seminar on Public- Private Partnership in Seed Sector, which

was jointly organised by IARI, NSAI and TAAS in 2010, he stressed once again, the need for a partnership between the public and private seed sector benefitting from each other's respective strengths.

He has always been deeply involved with the international platforms for agriculture research, education and research, which we witnessed on several occasions. During the Global Conferences on Women in Agriculture (GCWA), held in New Delhi in 2012 and on Agricultural Research for Development (GCARD-2) held in Punta del Este, Uruguay in 2012, we saw the profound respect he commands at the international scientific forums. He firmly put forward his concerns the livelihood and empowerment of farm women and the small and marginal farmers, particularly in the view of the challenges of climate change and addressed the scientific community to work together to come out with an appropriate technological solutions and adoptable management strategies. The success of the First GCWA was in many ways the result of his foresight, meticulous planning and close involvement in its management from beginning to end. He could salvage many a possible calamity by his mature handling.

I (Malavika) was fortunate during my tenure as Joint Director (Research) of IARI, to have many in-depth interactions with Dr Paroda, as the Chairman of the Research Advisory Committee. I learned from him to prioritize research agendas addressing problems of national importance and maintain IARI's scientific leadership. He always reminded us that among many of IARI's strengths, one must value its brilliant young PG scholars, who must be mentored well by inspiring and motivating scientists, through their excellence in research. He wished that IARI should be at the forefront in undertaking research of global importance, but with a strong national perspective and initiated many vibrant discussions. In him one sees a person who truly thinks globally and acts nationally with equal ease.

We have always seen him giving his 100% to whatever he is working on at any given time. But the cause of conservation and sustainable use of plant genetic resources, perhaps, is at the top of all his agenda. His passion for the cause of conservation of biodiversity was yet again manifested during the organisation of the First International Agrobiodiversity Conference in 2016 under his leadership. His vision, meticulous planning, remarkable organisational capacity were key to the success of this grand conference, which brought together most prominent national and international leaders, scientists and policy planners at one platform for the conservation of one planet, the earth, for today and tomorrow.

He always placed the interests of the organization above that of a person. While supervising the building of the NASC Complex (one of the finest in the country), he held weekly (every Saturday, when in town) meetings with the builders and a small advisory group of his officials and guided on the minutest point of comfort to be built in to make it truly user friendly for all sections of the Complex, except for the large DG Bungalow, of which he would have been the first occupant.

For a person of this magnitude, 75 is just another number. Because, for him perhaps there are no milestones, only miles before he could sleep. But for us, celebrating your 75th birthday is an occasion to convey our tributes for enriching our thoughts in many ways. Wish you a very happy birthday and many more glorious, healthy and fulfilling years ahead.

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Soon after my retirement in 1995, I was asked by Dr Paroda to join NAAS as Assistant Executive Secretary to extend support in scientific matters. Working in NAAS under the leadership of Dr Paroda who was the President of NAAS at that time was a great experience for me. I had known Dr Paroda earlier as a scientist but this was the first time for me to see him as an administrator. My impression of him was that he is a strict taskmaster and likes prompt action and the best from people working with him. I had the chance of having first experience of this quality of his in 2001 when he became the President of the 88th Session of the Indian Science Congress.

Science Congress Session is a mega event and is organized at different educational institutions every year. The sessions are always inaugurated by the Prime Minister and the function takes place in the first week of January every year. The 88th Session was to be inaugurated on 3 January 2001. The opening ceremony was to take place in an open pandal. It so happened that on the night of 2 January, it rained so heavily that the entire pandal was flooded with water and the chairs were all wet. At places, the pandal also gave way and got damaged. This was a grave situation as the next morning the PM, Shri Atal Bihari Vajpai was to inaugurate the Science Congress. Dr Paroda was extremely worried. He came to the site to find out what could be done to ameliorate the situation. At that time Dr N.N. Singh arranged truckloads of bricks and arranged to spread them on the ground. This gave people the walking space and also removed the slush from the ground. Seeing this, Dr Paroda heaved a sigh of relief. This really worked and the next morning the inaugural function took place without any difficulty.

Mr Vajpai in his speech mentioned that such conferences should not be an end in themselves and our goal should be to take science to people and create scientific temper in them.

Dr Paroda was quick to grasp this message. He conceived the idea of creating a body which could act as an interphase between scientists and the people. Thus TAAS (Trust for Advancement of Agricultural Sciences) was formed in 2002 with a core group of trustees consisting of Dr R.S Paroda, Chairman, Dr Anupam Varma, Vice-Chairman,



Dr N.N. Singh, Secretary and Dr B.S Dhillon as Treasurer and Dr R.K. Arora, Dr N.S. Nagarajan and myself as trustees.

Dr Paroda provided and continues to provide excellent leadership to the Trust. He is very sensitive to issues related to Indian Agriculture, particularly farmers. He has always maintained that it is misnomer to call India as 'Krishi Pradhan Desh', it should be called as 'Krishak Pradhan

Desh' because it is the farmer who is the key to our agriculture. His role is crucial. Secondly, he has emphasized that in extension activities our approach should be bottoms up rather than bottom down. We must first understand the need of the farmer and then decide on the knowledge or technology to be passed on to him. He is a strong advocate of nutritional security along with food security. He has organized relevant meetings in this connection and ensured that recommendations emerging out of such meetings are passed on to the concerned authorities so that the ideas generated get implemented.

Dr Paroda is very receptive to new ideas. He encourages all such ideas and provides all help to implement them. I have found him to be a very kind and considerate leader. He takes care of his associates and ensures that they get necessary support in their work.

In keeping with the mandate of TAAS, he has organized a number of meetings involving top people in the subject and ensured that proceedings of these meetings are promptly brought out and passed on to the concerned authorities for implementation of the information generated.

His current emphasis is on conservation of natural resources, empowerment of women and retention of youth in agriculture.

People generally feel that he is a strict person and it is difficult to work with him. But the fact is that whatever he takes up he does it with sincerity and dedication therefore, laxity does not go well with him.

I have found working with him very inspiring and encouraging.

Nawab Ali

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I joined ICAR on 09 October 1978 at CIAE, Bhopal and since then worked there and later on at ICAR-HQ, New Delhi, at various Scientific and Research Management Positions and finally superannuated on 31 December 2008 as DDG (Engg.), ICAR after 30 years & 83 days of total service to the Council. I came in close contact with Dr R.S. Paroda during the late 1980s when he was the DDG (Crops), ICAR and also the Nodal Officer of the ICAR for Indo-USAID Subprojects under the major Indo-US Agricultural Research Project (386-0470) and Director, MM-I of TMO, GOI and later on when he became Secretary, DARE & DG, ICAR during 1994-2001. Our close association continued even after our superannuations from the regular services of the Council.

Under Indo-USAID Agricultural Programme, one of the subproject was on Soybean Processing and Utilization (SPU) at CIAE Bhopal of which I was the Project Director (PD). Hence, I used to meet Dr Paroda quite often and interact with him. We are still in close contact through various national/international meetings/seminars/conferences; emails, mobile and so on.

While working with Dr Paroda during late 1980s, whole of 1990s, and 2000s, till now (July, 2017), I observed his working very carefully and found that Dr Paroda is an established scientist, an able administrator and more than that, an excellent human being. Though he was one of the very Senior Officers of the ICAR and had many important & urgent national and international responsibilities, Dr Paroda, always found time to interact, encourage, appreciate and motivate his colleagues to do better than what they had been doing and thereby many of his colleagues who critically analysed and followed his relevant suggestions & advice have performed better and moved towards higher and responsible positions of the Council and their outputs have been translated into useful outcomes of Indian agriculture and allied activities. I am one such lucky colleague of Dr Paroda. He always speaks to his colleagues with a smile on his face and that touches the heart of many and consequently such people get motivated to work harder and perform better.

As a scientist, Dr Paroda is an accomplished plant breeder and geneticist. As DG, ICAR during 1994-2001, he was instrumental in strengthening and modernizing

the National Agricultural Research System (NARS) not only in India but also in Central Asia and the Caucasus (CAC). He also played a significant role in establishing the Asia-Pacific Association of Agricultural Research Institutions (APAARI) and the Asia-Pacific Seed Association (APSA), while serving with FAO in early 1990s.

Dr Paroda contributed significantly in establishing one of the world largest and most modern National Gene Bank at NBPGR, Pusa, New Delhi and also planned and executed the establishment of the National Agricultural Science Complex (NASC) at New Delhi having residences for senior officers of the Council including DG; an International Guest House; auditoriums & lecture halls for meetings & conferences; National Agricultural Science Museum; spaces for the offices of national and international scientific institutions/associations/societies; a gymnasium for guests and other related & relevant facilities. The NASC is a unique infrastructure/facility in India.

I had an opportunity, under the dynamic leadership of Dr Paroda, to participate and contribute in an Expert Consultation Meeting on Biofuels which was organized by APAARI in collaboration with IRRI, CIMMYT and ICRISAT during 27-29 August 2007 at IRRI, Philippines. The major focus of the Expert



Participants of Expert Consultation on Biofuels at IRRI, Philippines, 27-29 August, 2007 organized by APAARI, CIMMYT, ICRISAT and IRRI



Dr R.S. Paroda (1st row, 2nd from right), Dr Nawab Ali (2nd row, 4th from right)

Fig. 2: Participants of ICT/ICM Sensitization and Awareness Building Workshop for NARS Leaders and Senior Managers. (PCARRD, Los Banos, Laguna Philippines, 30 August, 2007)

Consultation Meeting was how bioenergy production may have an impact on global and regional food security and the sustainability of key agricultural systems in Asia and to identify key options and research priorities for designing & evaluating integrated food-bioenergy production system. I also participated in a Sensitization and Awareness Building Workshop on ICT/ICM in ARD for NARS leaders and senior managers. The workshop was organized by APAARI in

collaboration with GFAR and PCARRD, Philippines on 30 August 2007 in the Philippines. It provided an opportunity to discuss progress and status of various National ICT/ICM Projects and share experiences of various National Agricultural Information Systems (NAIS).

Under the guidance and leadership of Dr Paroda, Brainstorming Workshop on Soybean for Household Food and Nutritional Security was organized during 21-22 March 2014 at NASC, New Delhi. It was organized by TAAS in collaboration with ICAR and NAAS and I was the keynote speaker. Dr R. Chidambaram, Chairman, Scientific Advisory Committee for the Cabinet was the Chief Guest at the Plenary Session.



Dr R.S. Paroda (left), Dr R.Chidambaram (Centre) and Dr Nawab Ali (Right), observing the display of soyproducts which are nutritionally and economically beneficial for house-hold food and nutritional security, on 22 March, 2014, NASC, Pusa, New Delhi-12, India

I also had an opportunity to work for Haryana Kisan Ayog (HKA) in 2013-15 when Dr R.S. Paroda was the Chairman of the HKA. I along with other three members prepared and submitted a Working Group Report on Post-Harvest Technology and Value Addition for Haryana, to the HKA in December, 2014.



Dr Paroda (1st from left) Explaining the Importance and Use of a Gender Friendly Groundnut-decorticator to a Foreign visitor. Dr Paroda always appreciated small tools & gadgets, because these are handy, beautiful and perform better

Recently, under the dynamic leadership of Dr Paroda, a TAAS-IFPRI-ICAR National Conference on Sustainable Development Goals: Preparedness and Role of Indian Agriculture was organized at NASC during 11-12 May 2017. I also had an opportunity to participate in it. One of the major outputs of the Conference was that NARS must now be reoriented towards farming systems with an integrated natural resource management to make India hunger & poverty free and also that from the malnutrition.

To summarise, it may be said that Dr R.S. Paroda is an accomplished plant breeder and geneticist by profession, an able R&D manager and a fine human being, always ready to help and advise his colleagues for their betterment. Dr Paroda used to say that to exist as a forceful organization, scientists, will have not only to compete but also to attain the required excellence in frontier agricultural and livestock technologies and this calls for appropriate policies, plans and programmes which are relevant and forward looking. Dr Paroda has always emphasized on linking science with society through appropriate policies and work for the overall progress of the resources poor farmers. He always put farmers interest first and said that we must change to benefit the human beings especially the farmers and agricultural workers, because change and challenges with time are a must for the overall progress and benefits of the humanity. Dr Paroda is a great scientist, administrator and a humble human being. We all wish him and his family members, a healthy, happy and long-life, with the blessings of the Almighty, the Creator of the Universe and its inhabitants.

Neelam Sharma

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Association of Dr Neelam Sharma with Dr R.S. Paroda (1985-till date)

A famous English saying goes 'A mentor is a brain to pick, an ear to listen and a push in the right direction' and I can think of none else who fits the bill more perfectly than Dr R.S. Paroda. He has truly been a mentor, a life coach, an ideal leader, a perfect manager (of genetic resources, human resources and financial resources), a great visionary, a troubleshooter and above all a superb human being – a father figure, and a guide to not just me, but anyone who has had the privilege to work with him.

It is the greatest testament to his illustrious professional career that an accomplished plant breeder and geneticist by profession and an outstanding research administrator, Dr Paroda is known for modernization and strengthening of the national agricultural research system (NARS) in India as well as in Central Asia and the Caucasus. He continues to serve the cause of agriculture R&D through the two current portfolios as Chairman of the Trust for Advancement of Agricultural Sciences (TAAS) and President of the Indian Society of Plant Genetic Resources (ISPGR), New Delhi, India.

I will always cherish my long association with him, full of vivid memories and invaluable life lessons along the way. In 1985, when Ruchira and I came to invite Dr Paroda (the then Director NBPGR) to deliver lecture for Delhi University Botanical Society, little did we know that this would be the beginning of our long-term association with him. In 1986, when I joined NBPGR as newly recruited enthusiastic scientist, he channelized our energy by posing confidence in young scientific brigade including me and involving in creation/establishment of erstwhile National Facility for Plant Tissue Culture Repository (NFPTCR). It was only his futuristic vision that this initiative of PGR conservation, using new (then) techniques for conserving vegetative crops/plants with recalcitrant seed species, put India on world map as the only country with this unique multi-crop repository. He not only posed confidence in young scientific brigade including me, ensured freedom of speech and work, but also successfully worked improving professional and financial growth of scientific community *per se*. When in a professional/ethical dilemma, I find the most apt and fail-safe resolution by asking myself "What would he have

done in this situation?” On a personal front, he has been a father figure and has always kept in touch by enquiring wellbeing of all. I recall a particular incidence that really touched me. Way back in 1987, I had an injured foot and was climbing stairs of office (old building, near telephone exchange). Dr Paroda saw me limping from a distance and immediately came to enquire. He called out my name asking as to what had happened. In response when I tried to climb down to answer, he didn't allow me saying, “You will not come down since you have an injury, I will come up”. This showed his concern and thoughtfulness, which is very rare in today's world.

He groomed us by way of involving us in organization of various meetings/ workshop/ conferences at National, Regional and International level and motivated us to fearlessly put forth ideas. “*Jahan jahan inke paer pade, wahan wahan barkat ho gayi*” – both in terms of finances, facility and PGR.

Creator of one of the world's largest and most modern National Genebank in India and modernization of Institutes/ like NBPGR (New Delhi), NFPGR (Lucknow) and facilities such as National Agriculture Science Complex - National Science Museum, International Guest house etc., he managed funds for any quality work/proposal.

Recently during the organization of 1st International Agrobiodiversity Congress 2016 (IAC 2016), he led the team with the same enthusiasm as we witnessed way back in early 1980s. He has always been very humble despite having many laurels, such as Rafi Ahmad Kidwai Prize, FICCI Award, Om Prakash Bhasin Award, Borlaug Award, Mahendra Shiromani Award and the prestigious Padma Bhushan awarded by the Government of India.

For his immense contributions for the cause of Indian Agriculture including farmers, PGR conservation and Utilization, Dr Paroda – whose name to me is synonym to Genebank, must be honoured with prestigious Bharat Ratna. May we witness the day very soon!

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Dr R.S. Paroda – Strong Supporter of International Crop Science

Dr Paroda was a member of the Department of Plant Breeding at Haryana Agricultural University when I spent two months in Hisar in 1978 assisting the Department of Agronomy establish PhD courses in crop physiology and irrigation science. Although we never cooperated together in research projects, Dr Paroda's interest in genotype by environment interaction, particularly drought, has meant that we have had many fruitful interactions over the years since then. He visited Australia in 1982 to learn about wheat breeding for drought-prone environments and I was privileged to have him visit my home, and subsequently I was honoured to visit him in his home in New Delhi. His contributions to plant breeding, germplasm conservation and crop science in general are well known and have been widely recognised by the international crop science community.

Dr Paroda's skills in management, oversight and foresight were recognised by the Government of India by appointment as Director of the National Bureau of Plant Genetic Resources in New Delhi, Deputy Director General (Crop Science) of the Indian Council of Agricultural Research (ICAR), and ultimately as the Director General of ICAR and Secretary of the Department of Agricultural Research and Education. While Director General of ICAR, Dr Paroda was instrumental in ensuring that the Australian Centre for Agricultural Research (ACIAR) project on "Traits for yield improvement of chickpea for drought-prone environments of India and Australia," on which I was the Project Leader, was satisfactorily signed off and implemented in India and Australia. Once alerted to the problem, Dr Paroda quickly cut through some of the bureaucratic delays that were holding up finalisation of the project.

Dr Paroda's insights and organisational abilities have also been sought out in organising several international conferences in India that I have attended. He was a key organiser of the Golden Jubilee Symposium of the Indian Genetics Society on 'Genetic Research and Education: Current Trends and the Next 50 years' held in New Delhi in February 1991 and Executive Chair of the National Organising Committee of the 2nd International Crop Science Congress held in New Delhi

in 1996, at which he gave a key-note paper on 'Sustaining the Green Revolution: New Paradigms.' As a member of the Board of The International Crop Science Society and member of the organising committee of the 4th International Crop Science Congress held in Brisbane, Australia in 2004, which was approved in Delhi in 1996, I sought advice and insights from Dr Paroda regarding the requirements needed to organise such a large and successful congress. As Chair of the International Advisory Committee, I had to work closely with Dr Paroda and local scientists in organising the 2nd International Congress of Plant Physiology held in New Delhi in 2003 for which he was a key advisor.

Dr Paroda is still active in developing policy for crop science throughout the world. In February 2017 he was the co-chair and significant contributor of a specially-convened workshop on 'Climate Smart Agriculture' at the 5th InterDrought Conference held in Hyderabad, India.

It has been a pleasure to know and work with Dr Paroda and I wish him well on the occasion of his 75th birthday. I trust that our paths will continue to pass many years into the future.

Nguyen Van Bo

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Raj S. Paroda – The One Who Connects Vietnam with Agriculture Science in Asia Pacific Region

I met Dr Raj Paroda for the first time in 1998 when I attended the 5th APAARI General Assembly Meeting in Suwon, Korea. He was the General Secretary of Asia-Pacific Association of Agricultural Research Institutions (APAARI), a network of agriculture science involving many countries and territories and reputable international organisations from developed countries as well as research centres under CGIAR.



*First meeting of Dr Nguyen Van Bo with Dr Raj Paroda
in Suwon, Korea on 15 October 1998*

My first impression about him was that he was a serious, diplomatic but sociable man. We have contacted and exchanged information regularly since then, either through emails or direct meetings at international workshops and seminars. These regular conversations and communications have helped to promote Vietnam from an observer to a full member of APAARI.

It is possible to say that we benefit a lot from being a member of international and regional organisations and agriculture science network. Since Vietnam is a developing country with low level of technology and limited investment in scientific researches, it will save a lot of resources for us to access available technologies in the world. As a result, the Vietnam agriculture science level has reached the medium level of the world. I feel that Dr R.S. Paroda has always given a special favour to Vietnam and myself by giving many opportunities for Vietnamese scientists to attend international training courses and workshops.

After many years of scientific research and management in India, Dr Raj Paroda has spent a lot of time for Asia-Pacific Association of Agricultural Research Institutions. The name of APAARI is associated with him since he has managed the institution



Ambassador to Vietnam, Mr Ranjit Rae received the Medal for the cause of Agriculture and Rural Development on behalf of Dr Raj Paroda on 29 January 2013

from the beginning from 1993 to 2014. With his own reputation and experience, he has built up APAARI from a very small scale organisation to a large and reputable international network. Moreover, I am also impressed that he can mobilise a large number of members, dividing them into Regular, Associate, Affiliate and Reciprocal Members. By this division, all members can participate in APAARI with different roles. Apart from the full members, he also invites many developing countries to participate as observers, which creates more opportunities for many countries in accessing advanced and diversified technology in the region and the world.

I really like the idea of publishing the book of “Success Stories” introducing successful lessons about science and agriculture production of some member countries.

It can be seen as the quickest and most effective way of communication and technology transfer between the countries. Some of the “Success Stories” that we have applied are: Sustaining the Green Revolution in India, Linking Farmers to Market; Integrated Pest Management in Rice in Indonesia, Direct Seeded Rice in Malaysia, Agro-Tourism in Australia, Orchids in Thailand, Transformation in Korean Farming, Hybrid Rice in China, Tilapia Farming in the Philippines and Baby Corn Production in Thailand, etc. Following this approach, we have published many brochures introducing farmers to technologies for each specific crop and livestock animal, which are supported by the farmers and agriculture extension staff.

Beyond the framework of APAARI, Dr Raj Paroda has effectively connected the scientists with other international organisations such as IRRI, IFPRI, ICRISAT, CIMMYT, ISNAR (former), RDA, which expand our international outreach.

From my personal point of view, I highly appreciate his attention and good care to myself. I see him not only as a colleague but also as a long-time friend. The friendship has been maintained and taken care of by both of us and therefore we still think about each other even when we are no longer working together.

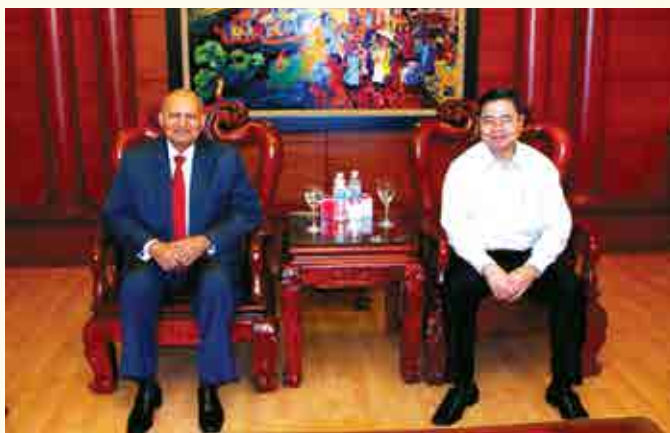
A remarkable memory that is worth reminding is that he has been awarded by the Government of Vietnam the “Medal for the cause of Agriculture and Rural Development” to recognise his contribution to Vietnam. During his visit to Vietnam on 25 April 2014, the Minister of MARD, Mr Cao Duc Phat met him and thanked him on behalf of the Vietnamese Government.



Minister of Agriculture and Rural Development of Vietnam, Mr Cao Duc Phat received Dr Raj Paroda in Hanoi, 25 April 2014

I am very pleased that this book will be published recording the contributions of Dr Raj Paroda on the occasion of his 75 years of age. It is my great honour that I am invited to write some personal feelings about him, an excellent scientist, manager and a great friend of Vietnam agriculture scientists and myself.

I would like to wish him good health, happiness and hope that he will continue to contribute to the science of India and the world.



President of the Vietnam Academy of Agricultural Sciences, Dr Nguyen Van Bo received Dr Raj Paroda in Hanoi, Vietnam on 25 April 2014

O P Toky

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I know Dr RS Paroda since 1985, the time I joined HAU, Hisar as Associate Professor of Forestry. I had received a research project from the Ministry of Non-Conventional Energy Sources, Govt. of India in 1986 for the development of a germplasm bank of multipurpose trees in the campus of the university over an area of about 100 acres. While in the process of collection of germplasm and establishment of trees, we realized that it was a huge task and needed expert's advice. I thought of contacting Dr R.S. Paroda. I had read one of his articles on bio-diversity conservation of Himalayan and Indo-gangetic plains. I had also seen a progeny trial of *Prosopis cineraria* which he established at Bawal. Luckily, he was at Hisar while attending to his ailing mother in Sapra hospital. I contacted him in the hospital; to my request he promptly agreed to accompany me in the field. His critical suggestions were extremely helpful not only in the planning part but also publishing several papers in the leading international journals. I appreciate his big heart and great love for trees particularly *Khejri* (*Prosopis cineraria*) a lifeline tree of Indian dry landscapes. I admire his deep knowledge of Botany.

Dr RS Paroda always emphasized the importance of agroforestry for the restoration of soil fertility and conservation of bio-diversity mainly in the arid and semi-arid parts of India. While he was working as Secretary, DARE and DG, ICAR, New Delhi, he always encouraged All India Co-Ordinated Project on Agroforestry for strengthening the education and research on agroforestry trees and models of agroforestry. Agroforestry as he said assures security of livelihood to small and marginal farmers and also time ensures long time sustainability of the agricultural systems. In Haryana, for example, poplar based agroforestry flourished providing livelihood to several people. Yamuna Nagar area became the hub of plywood and other tree based products. Poplar trees are having compatibility with wheat and farmers are growing wheat in the interspaces of even 4 to 6 years old tree plantation.

Khejri (*Prosopis cineraria*) *Kalp Taru* of Indian dry parts remained a choice tree species of the farmers. This tree has an excellent mutual benefit sharing relationship with arid and semi-arid crops such as pearl millet, chickpea and guar. Dr R.S. Paroda always encouraged research work on *Khejri*. He collected the germplasm of *Khejri*

and established an excellent trial at Bawal in the year around 1977, which remained a great source of inspiration for us. I am also fortunate to work intensively on this species. We made an extensive collection of germplasm of *Prosopis cineraria*, *Albizia lebbek* and *Acacia nilotica* and tested the progenies for a long time at Hisar. He always praised the work we did on MPTs. He also encouraged us to develop agroforestry models to combat the problem of waterlogging in the western parts of Haryana. We developed farmer's models of agroforestry by integrating the elite clones of *Eucalyptus tereticornis* to ameliorate the waterlogged soils.

I am glad to say that I received the certificate of Fellowship of National Academy of Agricultural Sciences in 1999 from his hands as then he was the President of the NAAS. This was a matter of great honor and pride for me. Our work done on germplasm of multipurpose trees helped me to great extent to achieve this award. I always enjoyed the meetings held at the NAAS office under his chairmanship. He has been friendly with his colleagues and fellows. The NAAS activities received tremendous boost for developing the linkage with the Govt. Departments and other national academies in India and abroad. His broad thinking always helped the fellows and the academy. Several new programs were started. Young scientists were particularly encouraged. The corpus funds of academy increased substantially. This was the period when academy developed a strong foundation and was recognized as one among top academies of the country. Several policy papers were prepared in the key areas of agriculture. This period remained a golden period for the NAAS.

Whenever, I get an opportunity to stay at the International Guest House in the campus of NASC, New Delhi, I do remember Dr Paroda who was the person to develop this multi-utility complex. The facilities here are at *par excellence*. The environment of the campus gives a great feeling. The campus stands as one the best in the capital region; it speaks of his great imagination and farsightedness. What he created long back, have been serving the scientists community to all satisfaction in the NCR Region where finding accommodation is a big problem. We are always grateful to him.

Apart from his leadership in the field of agriculture, he has been blessed with several human qualities. He is very energetic and always encouraging and helping his colleagues. I wish that God bless him with excellent health and happiness.

O P Yadav

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It has been a matter of great honour and privilege for me to have professional relationship with Dr R.S. Paroda for more than three decades, first as a student and then as a professional. These professional interactions grew much stronger when I was leading maize and pearl millet research programme of the country during 2010-2016. I consider myself very fortunate that I am now heading the ICAR-Central Arid Zone Research Institute, where Dr Paroda worked as Head, Division of Plant Sciences during 1977-1980. His dynamic leadership in grass and crop improvement

at CAZRI is fondly remembered by colleagues as a wonderful period of research accomplished in range management at the institute. During my interactions with him, I came to know him not only as a scientist and administrator of highest calibre, but also as a great human being and a true leader who inspires younger generations to accept greater challenges. Working under his dynamic leadership has been a rewarding experience for me.





His love and dedication for farming and farmers is exemplary. On behalf of CAZRI and all fraternity of people having association with CAZRI, I extend our best wishes on his 75th birthday.

Om Parkash Dhankher

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Dr Rajendra Singh Paroda is one of the most prolific agriculture scientists of our time. A recipient of the Padma Bhushan award and the Norman Borlaug Field award, Dr Paroda's passion for and outstanding achievements in the development of modern agricultural science are unparalleled. I was absolutely delighted when I heard that the Indian Society for Plant Genetic Resources was publishing this book to commemorate Dr Paroda's cherished lifetime and accomplishments, and it is my humble honor to contribute my sentiments about this remarkable individual.

Dr Paroda's journey from the small village of Saradhna in Rajasthan all the way to Director General of the Indian Council of Agricultural Research (ICAR) and Secretary of the Department of Agriculture Research and Education (DARE), Government of India, is a testimony to his vision, discipline, and sincere dedication towards his work. During his tenures with ICAR and DARE, he was instrumental in framing policies that would link laboratory research with farmers' lands, and ultimately, improve incomes and productivity in the agriculture sector.

I had first heard about Dr Paroda when I was a student in M.Phil. in 1988. I saw that he was staunch supporter of using modern, science-based approaches for sustaining food production and economic growth, which further motivated my own ambitions. Even as a policymaker, Dr Paroda always maintained that government policy should not

be based on biased perceptions or political ideology, but rather on scientific fact and research. As a young scientist myself, I was inspired by his dedication to agricultural research, food security, and farmers' welfare.

Rather truly, Dr Paroda has always been a champion of the farmers. Having grown up in a farming village, he understood the challenges that farmers face



Om and Veena Dhankher with Dr and Mrs Paroda and Grand daughter Ariana

firsthand. So, when he went on to become a scientist, he maintained a vision of what he could do for farmers as a scientist, and thus changed the landscape of research to focus on the benefits to society. In addition to founding the Indian National Gene Bank in New Delhi, one of the largest and most modern genetic material biorepositories in the world, Dr Paroda also established more than 30 National Research Centers dedicated to specific crops, all with the aim of ensuring the



Lunch Dr Paroda with Dr Dhankher's lab group at UMass Amherst



Dr Dhankher with Dr Paroda in Boston

biodiversity and success of crop varieties for the use of farmers.

It is not, however, his achievements and vast endeavors alone that make Dr Paroda the great man that he is today, but moreover his character and conviction. Dr Paroda does not hold himself on some higher moral pedestal. His humility, openness, and overall down-to-earth personality truly make him the successful individual he has become.

When I met Dr Paroda, I deeply admired his friendly and encouraging nature. I considered myself incredibly lucky to be in the presence of so great a scientist, for whom I had the highest regard. Yet, when he spoke to me, he did so with tremendous respect and interest for my research work. Perhaps the most admirable engagement in which Dr Paroda partakes is that he always encourages people-especially young people-to be engaged in research and advocacy. In the conversations I've had with him, he never ceases to pursue this form of outreach.

Although he is now retired, Dr Paroda still continues to impact agricultural policy. When he presided the 88th session of the Indian Science Congress as its President, then Prime Minister Shri Atal Bihari Vajpayee announced his vision for a hunger-free India by 2020. Dr Paroda responded to this call to action by founding the Trust for the Advancement of Agricultural Sciences (TAAS). The Trust works as a think tank under the mission of promoting the “growth



Dr Paroda and Dr Dhankher in Boston

and advancement of agriculture through scientific interactions and partnerships,” and to this day Dr Paroda serves as its chair. Additionally, he has chaired several agricultural policy commissions-including one under the UN Food and Agriculture Organization-and he also wrote an open letter, signed by 60 other prominent agriculture scientists, to Prime Minister Shri Narendra Modi in support of adopting GM crops and modern approaches in Indian agriculture.

It is difficult to summarize all of Dr Paroda’s vast accomplishments and contributions to agricultural research and society as a whole, and this letter certainly does not do them justice. His dedication to the virtue of science in all his pursuits, even today, is nothing short of inspiring. Knowing him, he will certainly continue his drive to make the world a better place through science and advocacy. Even now, he is working to modernize his native village by building drinking water systems, sanitation, and tree plantation, and providing scholarships, books, and clothing to children.

But for now, Dr Paroda has certainly earned the right to enjoy farming in his native village, where he is applying his knowledge of dryland farming to grow amla, chikku, kinnu, lemon, date palm and other fruits! I wish to convey my sincere appreciation and best wishes to him on his 75th birthday for his friendship, valuable guidance, and dedication to the welfare of farmers and society as a whole.

P B S Sarma

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Although I am not a genetics scientist, I had several occasions to interact with Dr Paroda. As a person, I find him very warm and friendly. The first time I had an interaction with him was, when as Director General, ICAR he came to Water Technology Centre (WTC), IARI, to inaugurate a special training course on computer applications in agriculture organised by Prof. S.K. Sinha. I had an active role in conducting that program.

Dr Paroda used to occasionally visit WTC to meet with Prof. S K Sinha. On such occasions, he used to pass by my room (which was next to Prof. Sinha's room) and I used to come out and pay respect to him. On one such occasion, when I was Project Director of WTC, he casually asked me "Sarma ji what is happening in WTC? How are things?" I said "Sir, you please give some time for a visit to WTC to see the activity". While getting into the car he said, "Call me, I shall surely come and see WTC." When I informed Prof. R.B. Singh, the then Director, IARI about this, he readily made a request to Dr Paroda to visit WTC., and Dr Paroda promptly gave time slot of 2 hours on a Saturday between 9:30 am and 11:30 am for the visit.

It was a very happy occasion for all the scientists of WTC when Dr Paroda was very pleased to see the work done at WTC and instead of just two hours, he stayed almost up to 4:00 p.m. seeing displays in the museum, the reports of all the work done, various laboratory and field facilities, etc. After lunch, an interactive meeting was held with all the scientists of WTC wherein he graciously sanctioned on the spot six fellowships for the WTC scientists to travel abroad and familiarise themselves with the latest developments. He also announced a Centre of Excellence in Water Management at WTC. Subsequently, he saw to it that the announcements were followed up by his office.

Later in 2005, WTC faced the crisis of being degraded from the Project Directorate to a Division of IARI. ICAR had issued the necessary orders to shift the position of Project Director to some other Project Directorate. This was a rude shock to all the then working scientists as well all those retired scientists of WTC like me. Fortunately, Dr Paroda, was the Chairman of the Board of Management of IARI at that time. I sent an email to him appraising him of the situation and sought his

help. By that time, he was also aware of the issue. He readily agreed to help and called for a meeting with Senior Scientists of WTC. Dr Gajendra Singh, former DDG (Engg.) and myself were also invited for the meeting. After detailed discussions, he assured that he will take up the matter with the then DG ICAR to resolve the issue. Subsequently, the Project Directorate Status of WTC was restored to its original position and all the scientists of WTC were happy.

I had also several more occasions to meet with him in his capacity as the President of NAAS as well as PARAS. In all, I have had pleasant, memorable interactions with him and hope to enjoy the same in the future too. I wish him good health and happiness.

P K Joshi

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My heartiest greetings to Dr R.S. Paroda on his birthday. I wish him many happy returns of the day. I am very fortunate to have closely worked with him during various stages of my career. I saw his outstanding leadership, great vision and creative actions. I knew him more closely after he took over as the Director General of the Indian Council of Agricultural Research (ICAR). He shouldered the responsibility of ICAR at a time when majority of the staff was demoralized, funds were negligible and research was directionless. His positive attitude and principle-centered decisions solved problems one after another. The ICAR was revived, scientists were motivated and research was given a new direction. The National Agricultural Technology Project (NATP) brought a big change. There was a new enthusiasm of identifying research priorities by researchers in ICAR and agricultural universities. The programs were developed in multidisciplinary, multi-institutional mode, and mandatory of including social scientists. ICAR was heading towards a big reform. I enjoyed that period under the leadership of Dr Paroda. I happened to attend various meetings chaired by him. It was a great learning experience to me.

My next close interaction was with him, when he was the President of the Indian National Science Academy. National Center for Agricultural Economics and Policy Research (NCAP) was given the responsibility to prepare a vision document on “Achieving Food, Nutrition and Environment Security by 2020”. The vision document was to be released by the then Prime Minister Shri Atal Bihari Vajpayee. I worked on this document and prepared a draft version. To discuss the draft, he used to visit NCAP regularly and we used to discuss the document word-by-word and interact for several hours. We used to discuss for hours few key words and their message. We never realized that we were interacting with the head of the organization. He would agree if there were useful suggestions made. That was the richest experience I have had on preparation of a document in a participatory mode.

All agricultural economists owe to him for strengthening social science research in ICAR. He was instrumental in strengthening NCAP and promoting agricultural economics profession. NCAP became a platform for ICAR to participate in policy

debate. NCAP researchers started taking part in high level policy formulation. Today, NCAP is being rated as one of the think tanks on agri-food policy in India. It would not have been possible, if Dr Paroda had not extended full support in strengthening NCAP. He has developed and nurtured several such institutions which are making remarkable contribution.

After his retirement, he continued to promote and strengthen agricultural research, education and extension. When I was director at the National Academy of Agricultural Research Management (NAARM), he asked me to think how leadership could be built in the national agricultural research system. We organized a conference on 'Building Leadership in National Agricultural Research System'. He personally helped in developing the program, identifying outstanding resource persons and monitoring the whole program. The conference was a grand success and we prepared recommendations for implementation by the ICAR. We jointly organized various programs together. Every program was a great learning experience for me.

After I joined International Food Policy Research Institute, I could see that he is not only respected as a leader in agricultural research at national level but also globally recognized by top leaders. His views are seriously received at various global forum. He made his best efforts to strengthen agricultural research in Asia and Pacific. At global forums, he has made strong arguments on the challenges the South and Southeast Asian countries are facing. He argued for more research resources for agricultural research.

His selfless service for promoting agricultural science for human welfare is praiseworthy. There are very few leaders like him.

I have many more reminiscences working with him and learning something new at every time. I found in him a great and visionary leader, outstanding human being and most caring personality.

I wish him a long, healthy and peaceful life.

P K Khosla

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Dr Raj Paroda: A Man of Compassion and Benevolence

In this article, I am sharing my memorable experiences that I had with Dr Raj Paroda and the values of life that I learnt from him. I treasure the most, my first interaction with him. It was in December 1997, I had gone to receive him at the Kalka Railway Station for which I was deputed by the then Vice Chancellor of Dr YS Parmar University of Horticulture and Forestry. During the one-and-a-half-hour drive to Solan, we talked about various activities and achievements of the university. I vividly remember his curious remarks, “Strange, a number two teacher in the university’s hierarchy is speaking so highly of his Vice Chancellor whereas the seniors in the university mostly enumerate plethora of complaints about irregularities in the university and inefficiency of the incumbent VC”. I was completely floored by his straightforwardness and humility.

Being an agriculture scientist, Dr Paroda was curious to know about my researches on forestry with which he was not much conversant with. Impressed by my work, he on his own later on recommended my candidature for the FAO consultancy in Agroforestry in Myanmar. I was also favoured as he agreed to fund my visit to South Africa for attending the Board meeting of the IUFRO as a nominee of the ICAR. It shows his magnanimity and large heartedness in recognizing the work of a scientist who was from a different discipline. A day later, as per the telephonic call, I was asked to send my brief bio-data which I did thinking it was for the Myanmar Consultancy.

During February 1998, I happened to meet Dr Paroda in a meeting on ‘Extension Strategies in Agriculture’. He asked me as to what was my preference - the job of a National Professor or the post of Vice Chancellor. My preference, of course, was for the vice chancellorship. With a mystic smile he said, “I was right in recommending your name for the Vice Chancellorship of HP Krishi Vishvavidyalaya (HPKVV), Palampur”. But that became a mystery to me as I had not offered my candidature for the post and the panel of three names had already appeared in the media. Finding me perplexed, he explained, “The said panel has been cancelled by the Chancellor of the University and your name now figures at the top in the panel”.

Dr Paroda has an innovative mind and is a great visionary for inter disciplinary collaboration. As soon as I became the Vice Chancellor of HPKV, Dr Paroda happened to visit the Research Station Salooni, Distt Chamba, which was on the verge of closure as the crops grown there were being destroyed year after year by the simians. Dr Paroda was accompanied by Dr Mashelkar who was Director General of CSIR. Seeing the pathetic condition of the farm at Salooni, Dr Paroda in concurrence with Dr Mashelkar took a spontaneous decision whereby he entrusted the responsibility for cultivation of aromatic plants to the farm at HPKV and the processing of the produce for aromatic oil by the CSIR. Thus, the acceptance of this proposal by the two visionaries helped to adequately use the existing resources.

I also experienced Dr Paroda's benevolence in his address during the Vice Chancellor's Meet, which distinguishes him as a person who is touched by the pain of his colleagues. The High Court of Himachal Pradesh had passed strictures on the university in general and the Vice Chancellor, in particular, in an admissions case. It took one year to get the legal injunction nullified through the Supreme Court of India. On this score, he addressed the Vice Chancellors by saying that this had happened with Dr Khosla for no fault of his and anybody could be a victim of circumstances. It would have been in the fitness of things if the Vice Chancellors Association had passed a resolution which surely would have hastened the process for nullification of the case. I find short of words to express my gratitude that the support he rendered during the period of my aforesaid academic upheaval.

My association with Dr Paroda became further cemented with the passage of time including the period when he was also surmounted with political interventions.

He is a brave fighter who believes in 'karma' hypothesis and does not belong to the school who takes things to heart. I appreciate his broad thought process that pleasing and sad events are the two sides of the same coin and none of these are static, and one should do one's duty honestly and leave the rest to the Almighty.

I revived my association with Dr Paroda when I invited him to be the Guest of Honour during the Second Convocation of Shoolini University of Biotechnology and Management Sciences, which I had founded in the sylvan environs of the Himalayas at Solan in Himachal Pradesh. The convocation was chaired by the Nobel Laureate, Prof. Robert Huber. On stepping in the university campus he remarked, "I am wonderstruck to see the efforts of Dr Khosla in creating this university which in just five years has earned laurels". He further remarked, "You are an entrepreneur". I could see glimpses of loving emotions in his eyes when he gave that statement in his Convocation Address. I bow before this great soul who takes pleasure in the achievements of others.

God bless him.

P L Gautam

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It is generally said that the coming events shed their shadow in advance. This is also pertinent about the charismatic persona of the like of Dr Paroda.

After joining IARI in 1968 as PG student, during leisure time we used to discuss about work and excellence of the leading as well as budding personalities in agriculture research. Amongst the budding and future leaders, Dr Paroda figured prominently. My first interaction with him took place in September 1974 when I faced him as an external examiner for my Ph.D. thesis viva. Academically, it was a very interesting, gainful and learning experience for leading universities in North India.

Thereafter, we met in many scientific events. Dr Paroda aroused lot of interest amongst the participants in these assemblies as a learned, interesting and impressive orator. He has left his distinct footprints in all the institutions that he served in India and abroad. He is popularly known as a hard task master, dynamic, team / institution builder, visionary and above all a caring gentleman.

I was one of the fortunate persons to work with him very closely. In fact, every day was an exciting experience to work with him. There are many cases which can be cited but space allotted shall not permit me to do so. Hence, I am quoting a few recollections only. I joined as Director NBPGR on May 23, 1997 during his stewardship of ICAR. After assuming this job, I paid a courtesy call to him in his office. The meeting started and ended at dot, which we rarely hear of now. After a formal exchange of greetings and pleasantries, he gave me a patient hearing. Thereafter, he enquired about accommodation and logistics and realizing the difficulties of an outsider to ICAR and Delhi, ordered allotment of house in Krishi Vihar. He knew NBPGR more than anyone else. Hence, I was asked to expedite completion of QRT, auditorium, construction of residences, shifting from old building, full commissioning of the new gene bank, etc. The timeline for each work was also decided. He did not leave it at that point and took the weekly update. Hence, fully realizing that business as usual will not work, we geared to address his concerns. Accordingly, we shifted to the new building of NBPGR in record time to commemorate World Environment Day on June 5, 1997. The completion of auditorium was a big concern

and with his guidance and intervention, it was made operational in record time. Similarly, other issues were addressed amicably, thanks to his foresight, regular monitoring, guidance and intervention even for minor issues.

During his leadership, the ICAR witnessed an era of expansion, rejuvenation, empowerment of scientists, delegation of powers, modernization, creation of NASC complex, launching of NATP, new national and international partnerships, reforms, etc. Vision documents of all institutes and SAUs were also expedited and published.

In fact, Dr Paroda had strong likes and dislikes and had conviction and courage to say spade a spade. This might have earned exasperation from some corners. Hence, in order to fulfill the mission and grueling tasks, he had to encounter problems, obstacles, bottlenecks, criticism, etc. Knowing it well that occasionally your performance invites ire of some overzealous elements; Dr Paroda played his cards with bravery, dignity and humility in fulfillment of the slated agenda. The council will ever remain grateful to him in times to come for his great services to the science and society.

I join the fraternity of scientists, friends, relatives and well-wishers in commemorating and felicitating Dr Paroda on the 75th birthday. I wish him a long, happy, peaceful, productive, satisfying and healthy life.

P N Takkar

INSA Emeritus Scientist
Former Director ICAR-IISS (Bhopal), Project Coordinator ICAR-AICRP of
Micronutrients, Principal Scientist, IARI New Delhi, and
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Dr R.S. Paroda – A Fervent Agricultural Scientist, Visionary Research Manager and A Great Motivator

Padma Bhushan Dr Rajendra Singh Paroda, former DG ICAR and Secretary, DARE, Government of India, is one of the most talented and decorated Plant Breeder and Geneticist of national and International fame besides an outstanding research manager and administrator. His zing, determined dedication, devotion and leadership helped in boosting the agricultural research and development of National Agricultural Research System (NARS) and the vision of ICAR. He reoriented the research priorities to address the current and emerging issues of national importance and put in place viable policies that have and are aiding in boosting agricultural production, productivity, nutritional security, environment quality, as well as conserving natural resources and development of human resource base. A very long list of most of the coveted national and international awards, honours, and prestigious positions he earned and bestowed on him, proved his mettle of par excellent intelligence, capabilities, qualities, and capacity in evolving practicable prudent strategic policies, missions and objectives of the organisations he served and affiliated and these are paying rich dividends.

A visionary and a hard taskmaster, Dr Paroda brought significant improvements in the ICAR system by creating modern infrastructure facilities congenial for conducting innovative basic and strategic researches, national and international conferences, workshops and other important meetings, both at the institute level and at the headquarter (e.g., Modern National Gene Bank, National Agricultural Science Complex, etc.). His laudable efforts to “change the mind-set” of scientists, research managers, administrative staff from a fixed mind-set to a performance-orientated through “change in management” by decentralizing the financial and administrative powers linked with responsibility, helped the individuals and the system to perform sincerely at their potential level. His initiatives to bringing out “Vision Documents” of the institutes based on critical analysis of their strength, weakness, opportunities and threats (SWOT) and elucidating therein the programmes, projects, milestones for achieving the goals of institutes within a time frame, execution of research programmes/projects in mission modes, inter-institution collaboration modes of multi-disciplinary programmes/ projects, publishing of success stories of innovative researches and the benefits accruing from the adoption of developed technologies have helped immensely in upscaling the skills and knowledge



*Dr RS Paroda DG ICAR inaugurating IISS Farm
-cum Office Building -1*



*Dr RS Paroda DG ICAR inaugurating IISS Farm
-cum Office Building*

of the scientists, research managers and in achieving the sustainable high agricultural production goals and productivity. These initiatives have rewarded many individuals and institutes with prestigious awards and honours that further instilled competitive spirit and motivation in them to keep performing for better career and others to follow to earn rewards and recognitions.

I got an opportunity to meet the stalwart scientist and visionary research manager for the first time during workshop meetings of All India Coordinated Wheat and Barley Improvement Project (AICWBIP) at the Govind Ballabh Pant University of Agriculture and Technology at Pant Nagar, Uttarakhand in which I participated and the Nobel Laureate Dr Norman E. Borlaug addressed the participants. I was highly impressed with the researchable issues flagged by Dr Paroda in a side-line discussion with Dr I.P. Abrol. Subsequently, I further interacted with him in many such workshop meetings that were chaired by him in which I highlighted the adverse impacts of emerging micro and secondary nutrient deficiencies on wheat-rice cropping system productivity and how their management options have helped mitigating these for achieving sustaining high productivity of wheat in Punjab. He got highly impressed with the findings and applauded the micronutrient research work. Dr Paroda's encouragement and appreciation enormously inspired and motivated me to keep up the momentum of research work on micronutrients that later richly rewarded me in my career.

Another incidental meet happened at CIAE, Bhopal during the lunch hour. Dr Paroda was surprised to notice many police personnel taking lunch along with the staff of Indian Institute of Soil Science (IISS), Bhopal and enquired from me "What is going on?" I explained that the Tahsildar and Patwari were handing over the possession of 50-acre private land to the Institute, just opposite to the CIAE, and some of the land owners had threatened us with dire consequences, therefore, the police support was required and the possession of the land had been taken and video-graphed without any untoward incident. Dr Paroda felt very happy to hear this news and not only congratulated the staff of the ICAR-IISS for the land-mark achievement but also encouraged us to create excellent enabling infrastructure facilities for conducting cutting-edge researches on soil science matching with the mandate of the Institute and that the Council would hopefully provide adequate funds.

After joining as DG, ICAR & Secretary, DARE, Dr Paroda visited the Institute housed in a rented building, as a makeshift arrangement, in MP Nagar, Bhopal. He assessed the progress of work

of the institute, visited laboratories and interacted with the scientists who acquainted him with the research they had conducted and were doing so. Dr Paroda admired the achievements, research activities and enthusiasm of the young scientists for working under the constraints of limited facilities and space available in the rented building. He encouraged them to keep up the momentum and mentioned that soon the Institute would have its own infrastructure with much better facilities conducive for undertaking innovative researches. Dr Paroda also reviewed the cadre strength, budget and structure of the Institute and made critical observations and suggestions that the Institute needed to be restructured into Divisions from the Sections, and the cadre strength from a mono-discipline of soil scientists to multi-discipline with positions of Agronomists, Plant Physiologists, Biochemists and involving Agricultural Engineers from the sister institute CIAE in an inter-institution collaboration mode. Based on these recommendations, the sections were converted into divisions and some posts of soil scientists were converted into those of agronomist, plant physiologist and biochemist with the approval of the Council. Later, Institute shifted to its own land in a Farm sheds and building, which Dr Paroda inaugurated. He advised to speed up the development of the farm and construction work of the institute's buildings.

Dr Paroda though was tough at certain times, but was very considerate and humble for the genuine cause. At one of the Zonal meetings he was not satisfied with the work on "land use planning (LUP)" component of the NBSS&LUP, Nagpur as neither the programmes/projects addressed the subject matter nor had done any commensurate work on the LUP. He remarked that a plastic surgery was needed to either refine the programmes or the need to change the very name of the institute. At another Zonal meeting in Goa, I apprised Dr Paroda with the progress of construction work of IISS main building that required additional grant of Rs. 50 lakh for the completion of its second floor. Realizing the genuine difficulty and compelling requirements, Dr Paroda agreed to provide the needed grant provided the submitted proposal would be in order. Institute got the sanction order of Rs 50 lakh within a fortnight. Such was the decision taking abilities of Dr Paroda.

Under the strong leadership of Dr Paroda, the Council and its institutes made landmark progress and achievements on all fronts of agricultural research and development. He was instrumental in modernizing and strengthening the NARS enabling the researchers to develop cutting edge technologies. He will be remembered forever by the present and future fraternity for his unique scientific and directorial down-to-earth contributions and raising the image and prestige of the agricultural fraternity, NARS, the ICAR and its Institutes. He is still very active and is providing upfront prudent guidance and advice on issues of national importance to many premier public and private organisations. Of late, Dr Paroda is showering his sincere advice to the retired scientists and colleagues to spend their hard-earned income on themselves, besides meeting reasonable requirements of their children and dependants, to maintain their good health and enjoy the life travelling around the beautiful places in the country and abroad. He emphasized the need of doing regular meditation, yoga, recommended physical exercises besides taking balanced diet to remain fit and self-sustaining.

I salute and admire Dr Paroda, the stalwart Plant Breeder & Geneticist and farsighted passionate Research Manager, for his down-to-earth unique contributions to agriculture research and development. From the core of my heart, I wish Dr Paroda a very healthy, happy and contented professional and family life and a wonderful and fruitful 75th birthday.

P S Lamba

Former, Vice Chancellor, University of Udaipur
Former, Vice Chancellor, Haryana Agricultural University, Hisar
Former, Chairman, Central Warehousing Corporation, GOI

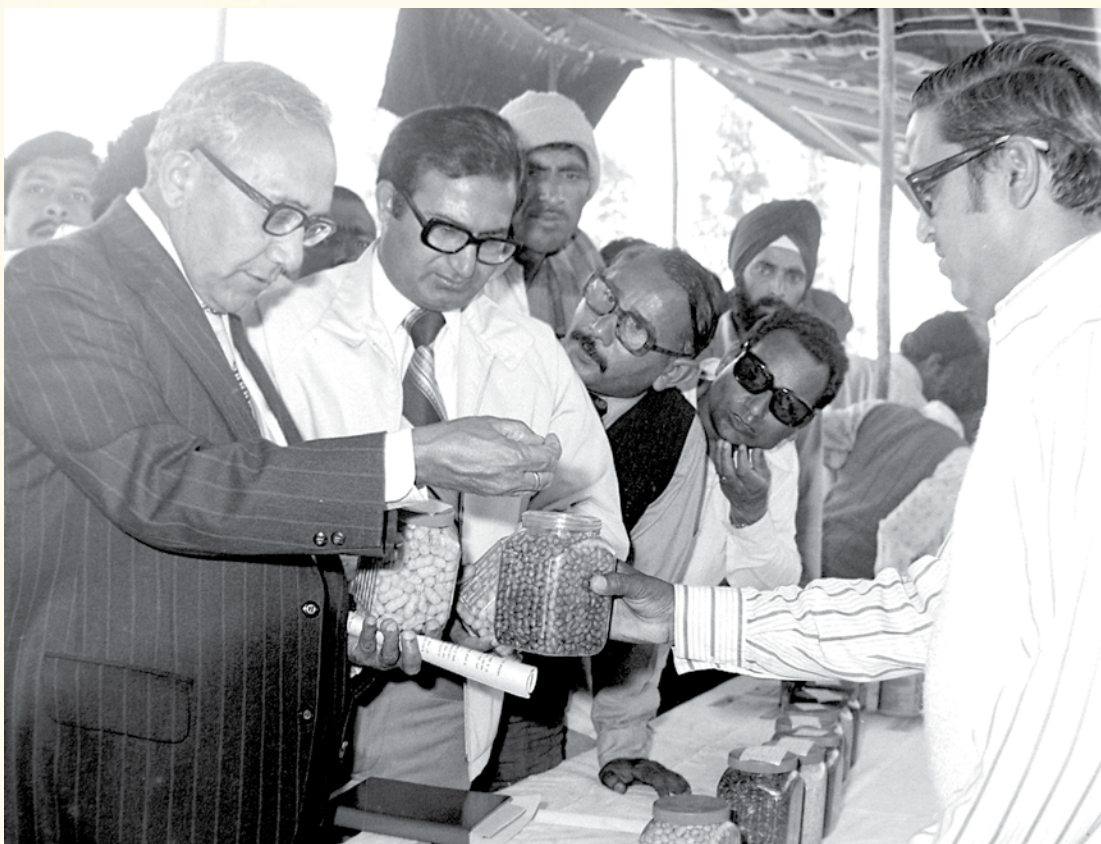


Dr. R.S. Paroda – A Dynamic Person

It is a pleasure to write about Dr. Paroda whom I have known for a long time. He always captured my attention for his dynamism, sincerity and hard work. I came into contact with Dr. Paroda when he appeared for interview for the post of Fodder Specialist when he returned after his Ph.D. from U.K. He was a fresh Ph.D. without any experience and therefore, Vice Chancellor suggested that he may be appointed on a lower post. I told the Vice Chancellor that he would not join as Assistant Professor because scientists in fodder crops are in great demand. Ultimately, the Vice Chancellor agreed and appointed him as Associate Professor. After working for few years he went to Jodhpur as Head of Department when I had gone to Udaipur University as Vice Chancellor. After I joined as Vice Chancellor at Hisar he appeared



for the post of Professor of Plant Breeding and when appointed he did extremely useful work. He has good organizing ability and has very high technical knowledge. He did useful work and went to ICAR from HAU. Dr Paroda did excellent work not only in ICAR but also in FAO. He was appointed as Director General ICAR where he did exceptionally good work. His work has been appreciated not only in India but also in other countries. He did excellent work for Haryana Kisan Ayog and brought out very useful literature by holding seminars and meetings. This literature is so good that it could be utilized by scientist as well as policy makers



for acquainting the farmers with latest development in various fields. Even after retirement Dr. Paroda has been doing excellent work not only in India but in many other foreign countries.

I am personally obliged to Dr. Paroda because he had suggested to organize function on my birthday when I was 90 years old. My birthday was celebrated with exceptionally good function inviting large number of friends and producing a book at that time. Dr. Paroda has exceptionally good organizing capacity and wherever he has gone his work has been highly appreciated.

I wish him very-very long life and pray to Almighty to give him good health to continue the excellent work for development of Agriculture.

P S Sirohi

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I am privileged to have known Padma Bhushan Dr R.S. Paroda, former Director General, Indian Council of Agricultural Research (ICAR) and Secretary Department of Agricultural Research and Education (DARE), Govt of India for almost last 20 years. I recall with immense pride my first meeting with him at ICAR-Indian Agricultural Research Institute, New Delhi in the year 1998, when he as Director General, ICAR & Secretary DARE, came to visit experimental fields and laboratories. He took keen interest in my research experiments on vegetables and appreciated my work. During all these years, I have had a good fortune of interacting with him on several occasions and got his valuable guidance for improving vegetable research programmes.

Dr Paroda held several positions in ICAR, New Delhi in India and abroad. He has left behind an indelible mark with his outstanding performance everywhere. Besides as DG ICAR & Secretary DARE, he held several important positions *viz.* DDG (Crop Science); Director, NBPGR, New Delhi; Chair, Global Forum on Agricultural Research; Head, CGIAR Programme for Central Asia and Caucasus, Tashkent; ADG (International Cooperation), ICARDA; Executive Secretary, Asia Pacific Association of Agricultural Research Institutions (APAARI); Chairman, Haryana Farmer's Commission, etc. Presently, he is Chairman, Trust for Advancement of Agricultural Sciences, New Delhi and President of the Indian Society of Plant Genetic Resources (ISPGR), New Delhi, India.

He organized the second International Crop Science Congress in New Delhi in 1996. In the year 2001, he presided over the Indian Science Congress held at the Indian Agricultural Research Institute, New Delhi which was inaugurated by the then Prime Minister of India, Shri Atal Bihari Vajpayee ji. In 2012, he organised the First Global Conference on Women in Agriculture (GCWA) in New Delhi which was attended by the then President of India, Mrs Pratibha Patil. He served as Chairman of the Organizing Committee of a very successful Global Conference on Agricultural Research for Development (GCARD 2) organised jointly by GFAR and CGIAR in 2013 at Punta del Este, Uruguay.

He is a recipient of large number of Awards and recognitions, a few being Rafi Ahmed Kidwai Prize, ICAR Team Research Award, Federation of Indian Chamber

of Commerce and Industry Award, Omprakash Bhasin Award, Asia Pacific Seed Association Award, FAO World Food Day Award, Dr B.P. Pal Gold Medal, Borlaug Award, prestigious Padma Bhushan Award by the Govt of India and many more awards. Fifteen academic institutions have awarded him D.Sc. (*Honoris Causa*) degree including Ohio State University, Columbus and I.A.R.I., New Delhi. He is the Fellow of almost all the important Science Societies and academies in the Country and abroad. He has written and published a large number of books, bulletins, research papers, reports and other kinds of articles on Agricultural Sciences.

Dr Paroda has made significant contributions in the development of Indian agriculture mainly in Crop Science research. He is known for modernization and strengthening of the National Agricultural Research System (NARS) in India as well as in Central Asia and the Caucasus region. He is the main architect of establishing National Agricultural Science Centre (NASC) and one of the world's largest National Genebank in India. He has been profoundly enriched by the unbounded knowledge, information and vision. He is not only an outstanding world class scientist, administrator, planner, visionary but also a brilliant teacher and noble personality. He is known for his unparalleled leadership and planning and has provided a modern shape to ICAR and also for establishing large number of Institutes of ICAR based on different areas of agriculture in the country. His long-range visionary projections had changed the entire scenario of ICAR Institutes in the country. His stamina to work and produce results is unparalleled.

Dr Paroda is a stalwart and an 'Institution' in himself in agricultural research and management. He is a towering personality with clear and crisp expression. He is a legendary figure for uplifting ICAR and has a place of eminence, respect and honour among the Indian Agricultural Scientific Fraternity. I personally feel that Dr Paroda's life is synonymous to a success story which has effectively provided a long-term road map for research, education and transfer of technology for development of Agricultural Sciences in the country.



On the historic and auspicious occasion of his 75th birthday, I congratulate him on his outstanding and marvellous achievements, of which we all are proud. May God grant him long, happy and healthy professional life in the service of Indian Agriculture and the farmers' community in our country. My family members and I wish him a very Happy Birthday and many happy returns of the day.

Pratima Dayal

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Dr R.S. Paroda – A Human Being Par Excellence

I heard of two stalwarts within days of my entering the portals of Krishi Bhawan in June 1988 when I moved to Delhi from genteel Lucknow. One was the Secretary of the Agriculture ministry and the other Secretary of Agriculture Research - and I was warned about both! The first I encountered in my first week and was mortified by his high handedness in dealing with a joint secretary of the department for wasting government money on sending 5 teleprinter messages to some states on the upcoming annual Rabi conference. The second one came next week when as Director, Agricultural Extension, I attended a strategy meeting being chaired by Dr Paroda as Secretary DARE. As I entered and introduced myself, I was greeted by a smiling affable looking man and wondered where his reputation came from? He was a hard task master for his officers who demanded the commitment he brought to the job, and he expected answers. And because agriculture extension was essentially the technology message carrying arm of his departments' outputs and information, he expected close coordinated functioning. I found nothing wrong in that expectation because the training and visit (T&V) system, as it was popularised by the World Bank in India, was rooted in this collaborative effort. That accepted and understood, we worked closely together for the two years that I dealt with the subject, without any problems.

The official relationship was cordial, but more importantly, a very warm personal relationship developed that continues after almost thirty years. He moved from the ministry to the regional office of FAO in Bangkok and then to the CGIAR in Uzbekistan. Our paths started crossing more and more as after completing my term in the ministry, I moved to the Asian Development Bank, Philippines as their lead agriculture person and the CG coordinator.

I found another home in their home - especially when his wife managed to get away from her job in India and be with him. In fact that was another point of bonding- the respect that he bestowed on his wife for wanting to pursue her career and not give up everything to manage her husband's official and personal life! So here we were, four professionals who were committed to their work and sometimes lived for long periods separately but neither family life nor work suffered for any four of us!

My fondest memory is of a trip I took to Tashkent for a meeting that he had organised with ADB for project support and I was not particularly well but at his insistence, went for it but got my daughter to accompany me. The meeting was very useful for both parties but what was truly special was the extra three days that we decided to spend to experience the life, the food and the people of Uzbekistan with him and his two very committed young employees, completed with the famous Swan Lake performed at the Bolshevik Theatre.

I know as a great scientist, like a doctor, he will never retire and continue to give what he has to the sector. All I can say to Dr Paroda is - good luck and God bless! You are a super scientist, you are a super human being, and a great friend to have. All good wishes for a healthy and happy life to both of you from Naresh and me.

Prem Narain

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Former Dean and Joint Director, IARI, New Delhi
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Dr Rajendra Singh Paroda – A Scientist & Administrator Par Excellence

I am very happy at the initiative of the Indian Society of Plant Genetic Resources (ISPGR) to commemorate the 75th birthday of Dr R.S. Paroda on August 28, 2017 by bringing out a Commemorative Book on him. At the outset, I express my very warm greetings to him on this happy occasion and wish him a very productive, prosperous, long and healthy life.

My association with him began in mid-eighties when he was Director of National Bureau of Plant Genetic Resources (NBPGR), New Delhi and I was Director of Indian Agricultural Statistics Research Institute (IASRI), New Delhi. The Bureau is a shining example of an institute that is admired the world over for its basic repository of plant germplasm and tissue culture in several species of crops with the world's largest National Gene Bank much to the efforts and far sighted vision of Dr Paroda in nurturing it when he was its Director. I received ample cooperation from him then in our mutual activities.

I was fortunate in having a partnership with him and others in the deliberations of the Federation of Agricultural Sciences and Technologies (FISAST) as its Secretary-General, the Federation having been conceived due to the vision of late Dr B.P. Pal and a precursor to the National Academy of Agricultural Sciences (NAAS). Both of us, along with others, were founding Fellows of this Academy which rose to its present status due to the efforts of several of its Presidents and which happily includes Dr R.S. Paroda.

When Dr Paroda rose to the position of Director General of Indian Council of Agricultural Research (ICAR) & Secretary, Department of Agricultural Research and Education (DARE), he became the President of the Indian Society of Agricultural Statistics (ISAS). It was during that time that I had the pleasure of working with him closely as the Executive President of the Society. He took a keen interest in guiding the activities of the Society and encouraging the development of agricultural statistics in India. Under his leadership, the Society achieved several of its targets.

There is hardly anyone in the field of agriculture who has not heard of or interacted with the famous Complex in Pusa, New Delhi known as National Agriculture Science Centre Complex (NASC Complex). One person behind its architecture, development and painstaking efforts is Dr R.S. Paroda. But for him, the Complex would not have taken its present shape in providing with a national facility and interactive platform for not only national institutes involved in agricultural research, education and extension but also international organizations dealing with agriculture along with an international guest house and residences for elite officers of the ICAR. The agricultural scientists and related people of the ICAR system would ever be indebted to him for this exemplary service.

Soon after his return from ICARDA, Tashkent, Uzbekistan, he founded a Trust for Advancement of Agricultural Sciences (TAAS) and as its Founder Chairman started working earnestly to further the cause of agricultural development in the country from several angles. It took up its roots soon and became a shining example of an institution for the benefit of farmers who are the backbone of the country in providing us food. He did not however forget the issue of recognition of scientists and instituted a prestigious annual award named as 'Dr M.S. Swaminathan Award for Leadership in Agriculture' for outstanding contributions in agriculture. He has also become visible since his return to India through his lectures at various forums and as chairman of important committees for the benefit of agriculture – the hallmark of a true scientist. No doubt due to his passion for science and development behind his manifold achievements as well as due to his concern for the farmers, he can be aptly described as *evergreen scientist*.

In addition to his multifaceted contributions and successes thereon, Dr Paroda remains at the core of his heart a great human being who is ever ready to help one and all and to acknowledge the contributions of others. Just to mention one example, in speaking at various forums as well as in his writings he mentioned and I quote "I learned biometrical genetics from Prof. Prem Narain at the Indian Agricultural Statistics Research Institute (IASRI), while I was a Ph.D. student at the Indian Agricultural Research Institute in mid-sixties." Few, who have risen to such high positions, would have ventured to do so.

Prem Narain Mathur

Honorary Research Fellow, Bioversity International
National Consultant (Agrobiodiversity), FAO-India
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Dr Raj Paroda, former Director General, Indian Council of Agricultural Research (ICAR) & Secretary, Department of Agricultural Research and Education (DARE), Government of India, is an accomplished plant breeder and geneticist by profession and is well acknowledged agricultural research administrator not only in India but globally. He has made significant contributions in the field of crop science research. He is well known for modernization and strengthening of the national agricultural research system (NARS) in India.

Globally, he has played key roles in the management of the Consultative Group on International Agricultural Research system and in regional organisations like the Asia-Pacific Association of Agricultural Research Institutions (APAARI). This has greatly helped in strengthening partnerships between the international agricultural research centres and Indian research institutions.

Dr Paroda has been an active participant in the national and international consultations on plant genetic resources. He has the unique distinction of being the main architect of one of the world's largest and most modern National Gene Bank at ICAR-National Bureau of Plant Genetic Resources in New Delhi.

He has received numerous awards and recognitions, including the prestigious Padma Bhushan awarded by the Government of India. Many national and international

scientific societies, committees and forums in agricultural sciences have been benefitted by the presence and advice of Dr Paroda, especially his contributions for the organisation of the 2nd International Crop Science Congress, 1st International Agrobiodiversity Congress, where I was closely associated with him, and in strengthening



FAO Commission on Plant Genetic Resources and Global Forum on Agricultural Research, are significant.

I know Dr R S Paroda since early seventies, when I was M.Sc. student of Plant Breeding and Genetics at Rajasthan College of Agriculture, Udaipur. During those days, he visited our college immediately after his completion of Post-Doctoral at the University College of Wales, UK and delivered a presentation on the work he undertook in biometrical genetics. That inspired me to take up my research in the field of biometrical genetics and I decided and undertook my research work for Master as well as for PhD degrees on similar lines using biometrical models. Following completion of my studies, I constantly followed Dr Paroda's ideology in my research career, first as a forage breeder at ICAR-Indian Grassland and Fodder Research Institute, Jhansi and later when I joined National Bureau of Plant Genetic Resources, New Delhi, when Dr Paroda took over as Director of NBPGR.

I consider my moving to ICAR-NBPGR and working in close association under his great leadership as a turning point in my research career as after working for almost 10 years at ICAR-NBPGR, I moved to Bioversity International (earlier known as International Plant Genetic Resources Institute), where I worked for over 21 years. My association with Dr Paroda become stronger to promote research and development activities at global and regional levels and with his great support to regional plant genetic resources programme in the Asia-Pacific region, we strengthened our regional networks on plant genetic resources (SANPGR, EA-PGR, RECSEA-PGR and PAPGREN) under APAARI umbrella. His contribution to programmes of Bioversity International through APAARI's partnership is also considered significant in promoting conservation and use of plant genetic resources at regional level.



Dr Paroda has a great vision with positive thinking that has helped Indian agriculture research and education programmes to achieve greater heights and is considered as one of the best agricultural research and development infrastructure in the world. I still remember when we were together at Iowa State University, Ames, Iowa, USA to participate in the First Crop Science Congress in 1992, when he represented as DDG (Crop Science), ICAR, and during our discussion we mentioned the significance of Crop Science Congress and appreciated the facilities for the organisation of such events at Iowa State University Campus. His response was that given an opportunity, we would make a better campus in India where we could

organise such international events. His dream came true when India organised the Second Crop Science Congress under his leadership and the building of National Agricultural Science Complex (NASC), where we recently organised the 1st International Agrobiodiversity Congress. NASC complex has now become the most popular facility in the country for the organisation of such events. Another significant contribution is to bring 10 out of 15 CGIAR Centers under one roof and providing all necessary facilities for the successful operation of their regional offices from NASC complex. This has helped strong partnership between CG-Centers and Indian national programmes.

There is no end to describing his contributions to Indian agriculture, however, due to limitation, I will say that his contributions are never ending and he is still contributing to strengthen our national system and in achieving food and nutrition security of the growing Indian population. To me, he has always been a great supporter and advisor from time to time, that helped me to achieve my targets. I learned so much from him and continue to do so.

I wish him all the best for his seventy-fifth birthday and many more to come and for a very healthy life ahead.

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Padma Bhushan Dr Raj Paroda, Former Secretary, Department of Agricultural Research and Education (DARE), Government of India & Former Director General, Indian Council of Agricultural Research (ICAR) is an internationally renowned plant breeder and geneticist. He is also an able research administrator who has made Indian Green Revolution sustainable over a long period. A luminary among agriculturists, he provides vision, vitality and leadership in transforming Indian traditional agriculture into vibrant technology driven agriculture. At ICAR, he immensely contributed to the creation of IT infrastructure, architecture as well as establishment of NASC complex, in New Delhi India.

Dr Paroda is known internationally for his contribution towards promotion and conservation of biodiversity. He held several prestigious portfolios and assignments at the national and international levels. In recognition of his contribution, International Crop Research Institute for Semi-Arid Tropics (ICRISAT), Hyderabad has named its Gene Bank as 'Rajendra S. Paroda Gene Bank'. Presently he is serving in various capacities, currently, notably as Chairman of the Trust for Advancement of Agricultural Sciences (TAAS). He is also known for modernization and strengthening of the national agricultural research system (NARS) in India as well as in Central Asia and the Caucasus. He has the unique distinction of being the main architect of one of the world's largest and most modern National Gene Bank in New Delhi. During his period as DG, Indian Council of Agricultural Research attained maximum height in terms of infrastructure, collaboration, freedom to scientists to work, many innovative projects/programs.

And last but not the least, he is a pro-scientist research administrator who always motivated the young scientists to confront the challenges boldly in their professional carrier. He always stands for the farmers' rights.

R B Singh

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Dr R.S. Paroda: A Global Science Leader

I am pleased to have known Dr Rajendra Singh Paroda since the mid-1960s when he was a Ph.D scholar at the Indian Agricultural Research Institute (IARI), New Delhi, and found in him a great science leader in making. I am delighted that my perception has more than been realized and Dr Paroda had emerged as a highly decorated leading national and international scientist and science leader. Notwithstanding his outstanding contribution to the Green Revolution process, and to national food and livelihood security, which several friends will be elucidating, I wish to give glimpses of my association with Dr Paroda at the international platform.

To me 'P' in Paroda means three Ps – Partnership for People's Progress. During my 18 years with FAO, at Bangkok and Rome, I had the opportunity to closely interact, collaborate and partner with Dr Paroda at India, Asia and global levels in agriculture and food systems. I am grateful to him for having acceded to my request to serve as the FAO Regional Plant Production and Protection Officer, Asia-Pacific Region, Bangkok. During the early 1990s, we consolidated our FAO/UNDP/CGIAR collaborative efforts in the areas of hybrid rice, coarse grains and legumes, quality seed production and distribution, and biotechnology. Very often, we travelled together and organized joint meetings in different countries, such as the hybrid rice meetings in China, which in those days were often well attended by Indian scientists, mutually sharing successful Indian and global experiences.

We had partnered in the globally famous regional initiative – the Asia-Pacific Association of Agricultural Research Institutions (APAARI). Dr Paroda had been the most accomplished and longest serving Executive Secretary of this Association from 1992 to 2014, rendering it as the leading regional forum for strengthening agricultural research for development. The veritable APAARI meetings, consultations, and conferences, and the publications emerging from them, under the leadership of Dr Paroda, have greatly enriched National Agriculture Research Systems, especially in the areas of science-informed policy formulation and research priority setting.

Admiring his national and regional level leadership in Agricultural Research for Development, Dr Paroda was elected as the first Chairman of the Global Forum for Agricultural Research (GFAR), 1998-2001. Through his dynamic leadership and advocacy, he laid a strong foundation of a unique multi-stakeholder global forum for generating and supporting research, technology, and innovation towards sustainable development. I must express my gratitude to Dr Paroda for associating me with the very first Global Conference on Agricultural Research for Development (GCARD). We steered the Asia-Pacific AR4D leadership at the GCARD1 in Montpellier, 2010. This gave me an opportunity to prepare the GCARD Roadmap impacting the GFAR planning framework for creating and sharing knowledge, skill, and technology at national, regional and global levels towards humanizing science-led development. Through his outstanding leadership at the Trust for Advancement of Agricultural Sciences (TAAS), he continues to enrich the partnerships.

At personal level, it is most gratifying that our families are great friends. More personally, in him, I possess the treasure of “Rajendra Bhai”, which he warmly reciprocates as “R.B. Bhai”. My family joins me in wishing Dr Rajendra Singh Paroda continued success and happiness in enriching science-led transformation of agriculture to reshape India.

R C Agrawal

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Dr R.S. Paroda: Difficult to Match Pace With

“We are what we repeatedly do. Excellence, then, is not an act, but a habit.”

This famous quote by Aristotle is the best way to describe the personality of Dr R.S. Paroda who provided the Indian Agriculture Research a new direction with excellence. When I started my career at National Bureau of Plant Genetic Resources (NBPGR), not many people knew the name NBPGR. The only way to explain to them was that I have joined “Dr Paroda *wala* Institute”. That was the kind of impact Dr Paroda left with NBPGR. Whatever we could see around NBPGR during 1990s, including the Genebank module, construction of the new building of NBPGR, the professional training of every scientist and technical staff in USA, etc. were the startups of Dr Paroda.



Unfortunately, I could not get a chance to work directly under the stewardship of Dr Paroda, but I had a chance to frequently discuss and seek his guidance during his tenure as Deputy Director General (Crop Sciences) and Director General, ICAR.

When I joined Protection of Plant Varieties and Farmers' Rights Authority in 2011, I had the opportunity to seek his guidance while he was the Chairman of Committee of Plant Genome Savior Community Awards in getting a new vision in framing the guidelines which resulted in identifying and giving these awards to maximum possible communities.

Another opportunity to directly work under his able guidance was during the organization of 1st International Agrobiodiversity Congress (IAC 2016). As the President of Indian Society of Plant Genetic Resources, a Scientific Society founded by him, which organized IAC 2016 jointly with Bioversity International, he asked

me to shoulder the responsibility as the Member of Core Committee. I could see closely his motivational and managerial capabilities during the IAC 2016, as he wanted everything in a time bound manner with excellence. He was always available for any kind of advice and guidance through any kind of communication channels. He supervised each and every activity closely. Even during the Inauguration, when he was not well, he managed to supervise even the minutest detail of the inaugural ceremony which was inaugurated by Hon'ble Prime Minister of India. It has been a life time opportunity to work under his able leadership. I salute his great vision and leadership that he has provided to Indian Agriculture Research in general and Plant Genetic Resources, in particular. I wish him a very Happy 75th Birthday by saying that he is only 18 with 57 years of experience. I wish him best of health and happiness and pray that all his wishes come true.

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Dr R.S. Paroda – A Born Leader with a Great Vision

I have the honour and privilege to write something about Dr RS Paroda, though, it is an arduous task to write about a person whose stature is so high in Indian and global agriculture arena. Nevertheless, I have tried to gather the courage to narrate few sentences about my association with Dr Paroda. I joined Agriculture Research Services in 1986 and my first posting was at ICAR-National Bureau of Plant Genetic Resources (NBPGR), New Delhi. When I entered the premises of NBPGR (presently old campus), to tell you truthfully, it was very unimpressive and I was in a fix whether to join NBPGR or not. I discussed with my well-wishers and all of them unanimously advised and encouraged me to join NBPGR because of two major reasons - (i) 'Director of NBPGR (Dr Paroda) is very dynamic and a great visionary who is extremely competent to make NBPGR an institute of repute international repute' and (ii) 'plant genetic resources will be most-sought-after commodity for improvement in agricultural production at national and global level'. Encouraged by my folks, I met Dr RS Paroda, the then Director, NBPGR, in his office through his Senior Personal Assistant Mr Bishamber Lal. A person sitting in the chair of Director with a radiant and pleasant face welcomed me and started asking about myself and telling about NBPGR and its importance. During nearly 20 minutes long discussion in the first meeting, Dr Paroda encouraged me so much and made me to realize myself as 'one of the most valuable scientists in this country' – and I, who had entered with dubious mind was motivated so much and started seeing a bright future by joining NBPGR as a scientist.

We, about 16-17 young scientists, joined NBPGR almost at the same time and all of us were full of energy and enthusiasm, because of having frequent discussions with Dr Paroda at any given opportunity. Dr Paroda left NBPGR after about two and half years of his joining as Director and then he joined as Deputy Director General (Crop Science) in ICAR. But these two and half years were boon to NBPGR for development of huge infrastructure, human resources and most importantly state-of-the-art National Genebank at NBPGR-a pride of India. It was possible only because of his visionary approach and outstanding administration and managerial capabilities. During his tenure as Director General, ICAR, almost all institutes of

ICAR were transformed into world-class research infrastructures and new buildings under his leadership. National Agricultural Science Complex is a unique facility which was created out of vision and untiring efforts – that was the era of institution building in ICAR and Dr Paroda was recognized a great ‘Institution Builder’. Not only in India, but he has been leading a group of policy makers, researchers in Central Asian Countries (CAC) and established many genebanks in that region – and he is fondly remembered as a great leader and true friend by the people involved in research and policy development of CAC region for his outstanding contribution in establishing genebanks and providing leadership in research and development of agriculture in that region.



In 2009, I joined as Head, Division of Germplasm Conservation at NBPGR. During lunch hours in a meeting, I asked Dr Paroda, "Sir, how was it possible for you to create a huge infrastructure in ICAR, in such a short period of your tenure as Director General, ICAR? Please



give us also some tips!" He laughed and told that he had no tips as such but two important points he shared “whatever administrative position one occupies, a person can be laid back and enjoy the position, he may be happy and could progress also but the organization would never progress”. He also added, "I never enjoyed (in above terms) my position ever rather many nights were sleepless and I always had wonderful people with me, from whom I sought support and

I got more than what was required”. Friends, above mentioned two facts described his whole personality – he is hard working, great visionary with absolute commitment of executing the vision, a great leader to lead a national or international team of any size and above all a humble, simple person with pragmatic approach. If you are a member of his team, irrespective of your position/post, you are an important member of his team and he will infuse so much energy into you, even if you are exhausted, you will not feel it. Even at the age of 75 years, he has tremendous capacity to work to surpass all the team members – because Dr Paroda is a born leader!

During recent times, I was honoured to work as General Secretary, Indian Society of Plant Genetic Resources (ISPGR) – the society which was founded by him in 1987 of which currently he is the President. After assuming the charge of President of ISPGR in May 2015, he announced that ISPGR will organize the 1st International Agrobiodiversity Congress 2016 (IAC 2016) in November 2016. Time was too short and task was not easy. I knew about



his working style (as hard taskmaster) but never knew that age has not affected his level of energy to accomplish the insurmountable tasks. From day one, he started envisaging the structure of IAC and executing the same through series of meetings. And as a result, IAC 2016 was organized in India which was inaugurated by Sh. Narendra Modi, Hon'ble Prime Minister of India, on November 6, 2016. About 1000 participants belonging to over 60 countries participated. All the 'who is who' from every corner of the world were present during November 6-9, 2016 in India to deliberate the issues related to efficient management of agrobiodiversity. Here, I am prompted to mention that on November 6, 2016, Dr Paroda was unwell and medically he was advised to have complete bed rest, despite that, he not only attended the inaugural function and delivered welcome address but delivered a plenary lecture also. His determination and will power are exemplary. If you work with such a leader, you feel honoured and privileged. Fortunately, I am also one of them!

On the occasion of his 75th birthday, I pray to Almighty to bless him with a very long, healthy and successful life along with his all family members!

R P Dhir

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Since there are so many people better qualified than me to write about Dr R.S. Paroda's legendary contributions as a scientist, science manager and policy maker, I limit myself more to his personal qualities and my experiences with him. I have the good fortune of knowing Dr Paroda from quite early, when he came to IARI as a PhD scholar in 1960s'. The introduction was through late Dr Y.P. Gupta, a biochemist in Dr N.B. Das's laboratory and known for his outstanding analytical ability. He was also a "guru" for Dr Paroda and his close group, just as he was for me several years ago. From those early days to date, my association with Dr Paroda remains intact despite that our disciplines of research and workplaces were far apart. I attribute this to his qualities of fellowship, sincerity and accommodation. A coincidence in year 1977 brought him to Central Arid Zone Research Institute, that has been my work centre almost all my professional life. He came as Head of the Division of Plant Studies, which had several disciplines not common in other institutions, including Haryana Agricultural University, the place he came from. Besides, this Division had several research stations and field units, where massive work on interaction between grazing treatments, climate and pasture land productivity was going on for decades. Dr Paroda took upon himself to document and highlight the achievements, something that had not been comprehensively attempted by any of his predecessors for various complexities involved. *Khejri* (*Prosopis cineraria*) is a king amongst the desert trees and integral to the traditional and world-famous agro-forestry system of Rajasthan arid zone. Though not a part of a research programme then, Dr Paroda noted during his field travels, the diversity that existed in the population of tree and motivated scientists to exploit the same for better utilization of its potential.

From CAZRI, Dr Paroda moved back to HAU and later to NBPGR as its Director. Some time after that on one of my visits, I thought of making a courtesy call on him. The very entrance of the building wore a charming look. When taking leave, Dr Paroda, despite his numerous engagements, took upon himself to personally show me all the laboratories and the work, something which was not necessary and he could have easily asked anybody else. This personal touch remains etched in my memory all the time and bespeaks of his humility and care for past association. As Director General, ICAR, Dr Paroda visited CAZRI several times. During one such

visit, he was taken to experimentation on saline water in farmers' fields, something which satisfied him the most. When Dr D.C. Joshi, scientist at CAZRI, was explaining the remarkable improvement in productivity of crops in an otherwise barren land, Dr Paroda interacted with the farmer to know his views and even tasted the water to satisfy himself of the claim. Such thoroughness and rigor in assessing technologies is uncommon but equally big was his enthusiasm and appreciation that inspired the deserving scientists the most.



*Visit to farmers fields and see science at work gave Dr Paroda
has always been a source of happiness*

Dr Paroda's career has risen by leaps and bound and several times we felt how his young shoulders are going to cope with the responsibility that the exalted positions demanded. But when he left, he made the same chair look small for him. This is an eloquent testimony to his capacity for hard work, innovativeness, professional competency and far sightedness - a rare combination. Dr Paroda's concern for ambience in laboratories, conducive atmosphere for and a sense of pride in a 'good work done' has been hallmark of his personality and vision, a shining example of which is the National Agricultural Sciences Complex.

R R Hanchinal

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In 1961, five European countries initiated *sui generis* Intellectual Property Rights (IPR) Protection to Plant Varieties and formed International Union for the Protection of New Varieties of Plants (UPOV) and entered in to force in 1968. This development in developed countries was followed by the concern for Farmers' Rights, in developing world. Meanwhile there was discussion within the developed world to bring on Intellectual Property (IP), regime which led the ratification of General Agreement on Tariff and Trade (GATT) and establishment of World Trade Organization (WTO). The biodiversity countries including India, raised concern on conservation, sustainable utilization of Plant genetic resources (PGR) and sharing benefits arising out of such use in equitable way. As a result the convention on Biological Diversity (CBD) came in to force in the year 1993. Article 8 (J) of CBD recognizes contributions of local and indigenous communities to the conservation and sustainable utilization of biological resources through traditional knowledge, practices and innovation and provides for equitable sharing of benefits with such people arising out of their sustainable use to achieve food and nutritional security. One of the visionaries and distinguished personalities who participated in the international forum to defend on behalf of biodiversity rich countries to protect the interest of farmers was Dr R.S. Paroda. He also strongly defended with the international community to include article 9 in International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), which recognizes the enormous contribution of local and indigenous communities and farmers in the conservation of PGR for sustainable use. He also proposed to include the clause of Protection of Farmers' Rights through national legislation. This is how Indian legislation on Protection of Plant Varieties and Farmers' Rights Act-2001 (PPV&FRA) was enacted with substantial provisions on Farmers' Rights and became unique. In drafting the Act, the contributions of Dr Paroda are worth mentioning.

Though India is cradle of agricultural biodiversity, after independence due to urbanization, industrialization, climate change, indiscriminate devastation of forest wealth, the country was losing valuable PGR at a very fast rate. At this stage, Dr Paroda made sincere efforts in protecting Indian agro biodiversity. It is he who has the unique distinction of being the architect of one of the world's most modern National Gene Bank with more than 400,000 collections. In addition to *ex situ*

collections, he made efforts to establish genetic gardens/field gene banks of *in situ* collections of economically important trees and vines. Due to his vision and continued efforts, today India possesses Bureaus of plant, animal, insect, fish and microbial genetic resources. His services were not only restricted to India but also to central Asian countries. He facilitated in the conservation of temperate plant genetic resources. As a result, today, we can see excellent PGR conservation facilities in Central Asian countries also.

To brief my personal experiences with such a great visionary, an administrator with human touch and a distinguished plant breeder, my memory goes back to late 1980, when he visited University of Agricultural Sciences Dharwad. Along with then Associate Director of Research Late Dr S. J. Patil, I requested him to visit our wheat research program. He promptly agreed and asked us to be in the guest house next day early morning at 6.00 am. When we went to receive him at 6.30 am, he was already in the wheat fields! That day is still memorable for me as not only I learnt many things about wheat breeding from him but also value for time. Second time I met him was in CIMMYT Mexico. After the field visit, I brought to his attention the thorn less cactus being used as vegetable in Mexico. As he was to travel back to India next day morning, asked me and Dr Sanjay Rajaram to get the cactus material packed for taking it to India for planting in arid regions of India. While delivering the container, I politely requested him to get the permit. Immediately he said, for my country, I am totally devoted. This incidence taught me the patriotism. Third time I met him was on the last day of wheat workshop during August 1991 in Kanpur. At the breakfast table, when I greeted him, he congratulated me and advised me to keep on doing good work. On that day my first wheat variety DWR-162 was identified for notification. This was the encouragement and affection he showed to young scientists like me.

During 1995, when we were to celebrate the Silver Jubilee of the Wheat Improvement Program of Dharwad Centre, on our request, he not only granted permission to host the All India Coordinated workshop at Dharwad but also personally graced the occasion with Tony Fisher, the then Director of CIMMYT Wheat Program and inaugurated Sanjay Rajaram Wheat Laboratory. This was a heart touching occasion for me as this incidence reflected his tall personality.

As Secretary DARE & Director General ICAR, Dr Paroda was to visit UAS Dharwad to address the convocation as chief guest, the responsibility to receive him from Goa airport was assigned to me. When we were about to leave for Dharwad, I casually informed him about the sad demise of one of the scientists of ICAR Institute at Goa in accident. He immediately advised me to take him to the aggrieved family, though he was to reach Dharwad urgently. He visited the family to pay his respect to the departed soul and from there itself he directed the concerned to not only to arrange for the last rituals but also for all pensionary benefits to his family. This is the kind of concern he has for each and every person he comes across.

Dr Paroda is also responsible for promoting Plant Variety Protection and Rights of the Farmers in India. During my tenure as Chairperson of PPV&FRA, he was a great source of

inspiration to me. As a result, I could make record progress particularly in the registration of farmers' varieties and also providing IPR certificates. One of the provisions in the Act is to recognize farmer/farming communities with plant genome savior awards. During my whole tenure, he guided me to attend this difficult task efficiently. Today, with great satisfaction, I am happy to say that within four years, the Authority has recognized 19 communities and 83 farmers during my tenure. This was achieved because of the whole hearted support from Dr Paroda.

Due to his visionary approach and hard work, today we all are enjoying the NASC facilities which is again a unique contribution where in all national scientific societies and international organizations are housed under one umbrella along with conference facilities.

When I was the vice chancellor of UAS Dharwad, my university had the honour of recognizing the great services of Dr Paroda to Karnataka state with Honorary Doctorate. Like my university, many universities from India and abroad have recognized his well-known service to the human kind.

Finally, on the occasion of attaining 75 fruitful years of age for the cause of serving humanity worldwide, I take this opportunity to wish him and his family with prosperity and long and healthy life.

R S Bhandari

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With great pleasure, I would like to express my deep sense of gratitude for having worked under revered Dr R.S. Paroda Saheb and having known him officially as well as personally in my capacity as Principal Staff Officer attached to him during the entire period of his tenure when he was Secretary to Govt. of India in the Department of Agricultural Research & Education and Director General, Indian Council of Agricultural Research. Unlike the other Scientific Departments in the Govt. of India such as, Department of Bio-Technology, Department of Oceanography, Department of Science and Technology, etc., he had a unique distinction of holding the dual charge of the office of Secretary to the Government of India, Department of Agriculture Research and Education and Director General, Indian Council of Agricultural Research, which I believe, is the most challenging, unparalleled and unique in the entire Central Government setup. I may say that my service period under his able and dynamic leadership was the golden era of my entire service of 42 years in the Government of India.

Dr Paroda Saheb had a great passion and zeal for the reputation and advancement of the Indian Council of Agricultural Research in its every sphere of work from the very beginning of his taking over charge of the Chief Executive of this vast organization. He was firm to take the organization to greater heights in every respect and would not tolerate a single unwanted remark against its prestige whether in meetings at Ministerial level, Governing Body, Parliamentary Standing Committee, Annual General Meetings, etc. In case of any deadlocks, he used to meticulously handle the situation to come out of the odds successfully.

Dr Paroda Saheb besides his other official pre-occupations, was very fond of cleanliness. I happen to remember that on the very first day of my joining his office, in the evening on that day while departing to his residence (normally, very affectionately before leaving for home, he used to depart via my room to say bye) he entered my room, which was just in front of his chamber and on seeing and picking up one or two all-pins lying on the floor carpet in my room, pointed out smilingly, *"Bhandari ji, what is this?"* and observed, *"Since the visitors calling on me, enter your room first before visiting my chamber, your room is also required to be neat and tidy!"* I very much relished his instructions and made it a point to

see that our chambers and surroundings also looked neat and tidy. He further instructed me to motivate others as well for this cleanliness drive. He used to hold regular meetings at different intervals with Secretary ICAR and other concerned officers and staff as well in this regard.

Dr Paroda Saheb had a great vision and passion for providing face-lift to the various office rooms and corridors belonging to the ICAR. I recollect that soon after his taking over as Secretary (DARE) and D.G. (ICAR), he instructed the Secretary ICAR, and other concerned senior officers to immediately start providing facelift by restructuring the various office rooms and corridors in *Krishi Bhawan* followed by the offices of ICAR located elsewhere such as *Krishi Anusandhan Bhawan*, ICAR Institutes, Agricultural Universities, etc, which was done forthwith step by step. I remember that on seeing the renovated D.G. (ICAR) Committee Room, Secretary (Department of Agriculture and Cooperation) also got renovated his committee room as well, in matching with D.G. (ICAR) committee room. He was a great visionary and the huge National Agricultural Science Centre Complex was his vision and his dream project. He ensured that this project be completed at the earliest and saw that the same was completed well before his tenure in spite of many bottlenecks and financial constraints. Lot of work was done on ICAR Vision 2020 Documents during his tenure.



Personal Staff of Dr Paroda at the dinner hosted by him on his retirement

It is said, *"It behooves the great to be always active."* Dr Paroda Saheb was blessed with this kind of ability and wisdom. He always used to tell us, *"Go on doing your duty but never give up."* He always meant business and howsoever was the load of work, his desk would be clean on account of his meticulous and efficient handling of files and papers. Thus, whether in office, residence or elsewhere he was always

found alert, receptive and responsive.

Dr Paroda Saheb had always shown a very courteous and affectionate attitude towards his staff whether it be at office or his residence or outside. At times, staff car drivers, PAs, etc. whosoever visited him at his residence used to tell me that Saheb was so hospitable that in spite of his busy schedule would not allow anybody to come back without having a cup of tea. Such was his courtesy and care for his subordinates and visitors. I also witnessed the same kind of ardent love and care being showered on us all the time. I further recall that in a party hosted by him at his residence in Director General's



Dr Paroda at the farewell meeting with personal staff members



Dr Paroda at the farewell meeting with personal staff members

bungalow at NASC on the eve of his retirement from service, Dr Paroda Saheb amongst other VIPs and office colleagues, invited all and sundry working in his personal staff along with their spouses too. Every one of us was presented a beautiful gift on that occasion as a token of his affection towards us. Later when we, in D.G.'s personal section, hosted a farewell party to honor him, he cheerfully spared his valuable time for the same

despite his busy schedule. Not only that, whenever he went on visits abroad, he never missed bringing presents for the staff working in his personal section as a token of his affection. The photographs herewith depict his ardent affection, care and love towards his staff.

Respected Dr Paroda Saheb richly deserved, amongst other awards and recognitions, the prestigious Padma Bhushan Award, Dr Borlaug Award and other recognitions conferred upon him, which speak volume of his outstanding achievements, performance and untiring efforts in the field of science and development and we all are proud of such a versatile genius.

As I have seen Dr Paroda Saheb from the core of my heart, he is a person enriched with excellence, caliber and eminence. Everyone of us enjoyed his personal guidance, motivation, stewardship and above all touch of love, affection and well wishes. For him, work was worship and was a perfect disciplinarian, hard task master and industrious with clarity of thoughts having ability to present them as per expediency. But on the contrary, on many occasions, he was found humorous and pleasing. I am, indeed, indebted to him for his inspiration, motivation, encouragement and guidance.

"Growing old is mandatory but feeling old is optional." Sir, May God bless u with wonderful times ahead! Wishing you a very Happy and Prosperous Birthday!

R S Dalal

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Dr R.S. Paroda - A Towering Personality

It is an honour to write about Dr RS Paroda, who is a towering personality in the scientific world and the agricultural profession. It is also a difficult task as writing about Dr Paroda is like the famous saying in Hindi which means, "Showing lamp to the sun". I still dare to make a humble attempt.

I know Dr Paroda, since he was a young Professor at Haryana Agricultural University, Hisar. We still recall his distinguished personality. He was handsome, always well dressed, with excellent communication skills and a master of his subject. He was in fact a hero and role model for the students and younger teachers on the campus. There was no option but to be impressed by him whenever you had a chance to interact or work with him.

I was Assistant Professor of Extension Education with hardly 2-3 years of service and he was Professor and Head, Department of Plant Breeding and as such there was little opportunity of working with him. But his multifaceted personality and his delightful presence in different walks of campus life made it possible to have greater opportunities of his warm companionship. He would assign one or the other duty to me while organizing seminars and workshops in the Plant Breeding Department. There, I was greatly impressed by his meticulous planning and his urge to improve the best and make it better. He also used to visit the village where I had taken up extension work. On one occasion, I had organized farmers meeting in the village on fodder crops with Dr Paroda chairing the meeting with farmers. As we were about to initiate the proceedings, farmers raised problems in their standing 'Arhar' (pigeon pea) crop. Dr Paroda first visited the "Arhar" fields, satisfied the farmers and then returned to continue the meeting on fodder crops. It was a lesson in extension which he demonstrated to me that one should first solve the problem in hand and then talk about the next crop.

Eventually, he rose to higher responsibilities in the University and ICAR and reached to the top most position in agriculture, in the country. I made courtesy calls on him in ICAR sometimes and more often when I moved to the Planning Commission for a small stint, for no particular reason. He was always as warm as ever.

I observed and followed him and his achievements. I always wondered how a person could achieve so much not only in India but globally - the awards that he rightfully bagged nationally and on foreign soils, the lectures he delivered and publications that he brought out. He created history in modernization of ICAR institutes and was the architect of the NAAS complex which stands as a living monumental testimony of his vision and leadership to the national agricultural research system. The NBPGR well known as one of the world's largest and most modern National Gene Bank in New Delhi is his brain child. He perhaps worked and achieved in a year what we may not do in ten years. I always wondered if I could ever get an opportunity to work with him, who is head and shoulders above the rest.

It came as a pleasant surprise one day that I received a call from him, when he was at Hisar, asking me to see him. He informed me that Haryana Government is constituting a State Farmers' Commission with him as its Chairman and he wanted me to join him as Member Secretary of the Commission. It was like good luck falling on me from heaven. I was about to complete my tenure as Registrar of CCS Haryana Agricultural University and I was to join back as Professor in my department and there could be nothing better to work in this important organization under the leadership of Dr Paroda. At last, at the fag end of my career, it was a dream come true.

In the Farmers' Commission, I worked under his direct and close guidance on a day to day basis. This opportunity revealed many new facets of his personality. First thing was his speed at work and restlessness till the job is complete. The Headquarter of the Commission was at Hisar and his office was in Gurgaon, but the distances never mattered because of his ease with new communication technology. He would work on his lap top and pad even while travelling. He could keep a track of what was happening. He responded to mails on an hourly basis. He would ask for reports as if he was around even when he was abroad. It appeared difficult to match his promptness. This resulted in quicker outputs. With speed, there was no compromise on quality. He would return proposals several times, till it was to his satisfaction. Same was the case with academic papers and mostly the draft was fully revised by him. The papers returned were full of comments/revisions.

He is an academic giant. Besides a leader in science, he was equally a great administrator. He handled the bureaucracy and politicians in the government with ease. He kept a watchful eye on all the activities and work of the staff and sorted problems in minutes.

Being a towering scientist, an able administrator, he has qualities of head and heart. We found him to be a caring and considerate boss. Many times, he went out of way to help and support his subordinates, be it a scientist or a peon. I can never forget an incidence when a person having personal issues with me and occupying an important position in Haryana started feeding the Chief Minister against me. I was told by another officer how Dr Paroda snubbed the person before the Chief Minister. He always spoke his mind without mincing words to higher ups as well as his subordinates. Many times, we also faced his ire, but we soon realized that it was always for our improvement and would not harm

anybody, professionally. He also never kept any such thing at his heart. He was always an excellent human being. Even during crisis and problems that he faced in his life, he exhibited unmatched courage with coolness and came out of the crisis as a stronger man. He still remains a friend with those who allegedly created problems for him. All these gave us great lessons for moral, ethics and values in life, which go beyond science, agriculture and the profession.

In the farmers' Commission, he followed and implemented the policy of "Farmers First". This policy was introduced by him in the ICAR. It won the heart of farmers in the state. The farmers still remember him as their mentor and patron.

On his 75th birthday, we wish him many many more years of active life as a leader and mentor in the agriculture profession.

Rai S Rana

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A Shared Vision and Its Implementation: Team Effort for Developing An Institution

It is a matter of great pleasure for me to learn that the Indian Society of Plant Genetic Resources is celebrating the 75th Birthday Anniversary of its Founder, Patron and current President, Dr R. S. Paroda, by bringing out a Commemorative Volume recollecting some memorable activities associated with him. Accordingly, some interesting events shared by me with him, spanning over nearly three decades, are mentioned here while joining this happy occasion.

The beginning

My first meeting with Dr Paroda happened at Aberystwyth in Wales (UK) where he had gone in 1968 to work at the Welsh Plant Breeding Station on 2-years Post-doctoral Fellowship, soon after obtaining his Ph.D. degree in genetics & plant breeding from the IARI. I was then working as the Cytologist in the Division of Genetics at IARI and had won the British Council Award under Indo-UK Programme for Exchange of Scientists, offering study visits to leading research centres in UK in their subject of specialisation. My itinerary included visits to selected research institutions and university departments across England, Wales and Scotland launching from two base centres, the University College in London and the University College of Wales. I reached Aberystwyth in early January 1969 during the second phase of my schedule to visit Botany Department where research work by Prof. Rees on cytophotometry of DNA was of keen interest to me. Dr Paroda and I met there quite often and also interacted with other foreign research scholars working there. I also remember one of our common associates at that time, Dr I.M. Bhatti became Director General of Pakistan Council of Agricultural Research later on and strongly supported greater collaboration with the ICAR.

On his return to India, Dr Paroda joined the newly established Haryana Agricultural University as Head of the Forage Section in Plant Breeding Department and worked with great distinction. He founded the Indian Society for Forage Research in October 1974 and was its first President and Patron. We were then residing in Patel Nagar and Dr Paroda used to visit us quite often accompanying Dr P.S. Lamba, Vice Chancellor (HAU) who was always keen to know about new research developments. I moved

to CSSRI at Karnal in 1974 as Head of the Division of Genetics & Plant Physiology and Dr Paroda also shifted to CAZRI at Jodhpur in 1977 as the Head, Division of Plant Improvement, Propagation & Pest Management. I met him there during one of my exploration programmes for collection of seed samples of salt tolerant *Kharchi* wheat cultivars. I still remember one of his drivers who could tell correct scientific names of several native plants like *khejri*, winning appreciative smiles from the visiting scientists.

Dr Paroda returned to the HAU in 1980 as Head of the Department of Plant Breeding and also worked later on as the Additional Director of Research. He received the Rafi Ahmed Kidwai Award for his outstanding work on cluster bean and his research associates were also honoured with the ICAR Team Research Award. I was then Professor of Eminence at the CSSRI and had the privilege of becoming an honorary member of the HAU's Post Graduate Faculty. It led to an exciting phase in research collaboration between the HAU and an ICAR Institute.

Implementing the Shared Vision for NBPGR

On 2 January 1989, I joined as the Director of NBPGR, an institution remarkably strengthened and galvanized by Dr Paroda during his tenure of just three years. During our meeting that day, Dr Paroda shared his vision with me for developing the NBPGR and trusted me to take it forward by consolidating the gains already made and nurturing its foundations further by developing a new campus for this young institution.

I recall that the NBPGR was functioning at that time from the old building acquired from the Food Corporation of India, located near the National Seeds Corporation headquarters. It may sound strange now but the DDGs at the headquarters, the Director, IARI and the Director, NBPGR were in the same pay scale at that time. Apart from the monumental contributions of Bureau's scientists towards collection, safe introduction and utilization of plant genetic resources, a distinct feature was the attention devoted to scientific storage of collected seed samples. A dual refrigerated module, manufactured by Watford and capable of operating one



On left: Approval of the site in November 1989 by Technical Consultants Dr Steve Eberhart and Dr T.T. Chang in discussion with Dr R.S. Rana (Director), Shri R.S. Kaushal (CPWD Senior Architect) and Shri P.P. Khanna (Head, Conservation Division). On right: Four long term seed storage modules, installed in 1987 at the old NBPGR Campus, marked the classic beginning of the Indian Genebank.

section at 4°C and the other at -20°C, had been provided by the British Council Division for experimental purpose in 1983. It goes to Dr Paroda's credit, however, that he expanded this approach to its logical end by importing four more modules and getting them assembled on-site providing thereby an opportunity for hands-on experience to Bureau's technicians. These modules were then used for long term seed storage at -20°C and the concept of the Indian Genebank took shape with this landmark achievement.

One more module, added later on through DBT funding as part of the G-15 genebanks for medicinal and aromatic plants, is now storing reference seeds samples of the PPV&FR Authority. All the seed materials kept earlier under long term storage in these five modules have now been moved to the new National Genebank, constructed in a basement of the new building of the NBPGR Head Quarters that was designed and equipped under the Indo-US Project. The five modules in the old campus are still in use but for medium term storage only.



Model of the of the new NBPGR Campus with the National Genebank located in the basement, below the grassy platform on the left side of the new NBPGR building

The new National Genebank has 12 large modules operating at -18°C for long term storage of seeds and one module for medium term storage. It also has six cryo-tanks for preservation of seeds/embryos/gametes using liquid nitrogen technology. Medium term storage modules have also been installed at Bureau's seven Regional Stations located at Hyderabad, Jodhpur, Shimla, Bhowali, Akola, Thrissur and Shillong. In addition, twelve national active germplasm sites (NAGS) have also been provided such medium-term storage modules.

Indo-US and Indo-UK Projects on PGR and strengthening of the NBPGR

In 1984, the Indo-US Sub-commission on agriculture had selected plant genetic resources conservation as a top priority area for joint collaboration. Two project design teams from the United States visited India in 1986 and 1987 to jointly develop the project document which was refined by the second team led by Dr John Pino [seen with Dr Paroda in the picture]. The Project Grant Agreement between the GOI and the US was signed on 31 August 1988.

Following my joining the NBPGR in January 1989, a project implementation workshop was organised by me on 8 February involving representatives of all the participating organizations/agencies with a view to understanding the conditions precedent to disbursement of funds and also developing a joint understanding of the time bound actions to be taken by the Director, NBPGR to abide by the indicated timeline by developing year-wise scheduling of technical assistance and training programmes, developing specifications for the screen-houses, preparing list of required equipments and drawing of construction plans for the genebank & headquarters



Left: Dr John Pino, Leader of the US Team visiting India in May 1987 with Dr R.S. Paroda, Director, NBPGR. Right: Dr Henry Shands, US National Programme Leader for genetic resources, and Dr B.P. Srivastava of USAID discussing the site plan for the new Campus of NBPGR to be constructed under the Indo-US PGR Project in February 1990

building. These requirements appeared to be formidable at that time but we succeeded in meeting all of them in time largely due to the rapport we were able to develop with the teams of the USAID, USDA, Winrock International and the CPWD along with the trust reposed in me by my seniors in the ICAR/DARE.

We succeeded in achieving all the set targets by timely and effective implementation of the 7-year Indo-US project on capacity building of

NBPGR and strengthening the Indian National Plant Genetic Resources System. My Team also implemented another significant project, the Indo-UK Project on capacity building and strengthening the Bureau's Regional Stations/Base centres, initiated in 1993, with an outlay provision of pound sterling 843,000. Our Team effort and vigorous support received by Dr Henry Shands and Dr Steve Eberhart from the USDA, Dr B. P. Srivastava from the USAID and Dr Dave Astley and Dr Mike Wilson from ODA, succeeded in providing the NBPGR with modern research facilities, well equipped laboratories, state-of-the-art technologies for medium and long term storage of plant germplasm, plant quarantine screen-houses at three locations, strengthening its four Regional Stations and also by organizing advance training of its scientific and technical staff. It is noteworthy that nearly one hundred scientists and four technicians [sent for training abroad for the first time] were provided opportunities for working in leading USDA regional stations and departments of selected universities in USA and UK. This was the unique achievement made under these two projects, setting an all-time high mark.

It was also remarkable that the outlay of the Indo-US PGR Project was raised from USD 23.45 million to USD 27.95 million following strong recommendation of the Mid-Term Review Team in 1993, making it globally the largest US-funded biodiversity activity in which USAID was involved. It may be appreciated that the foundation stone of the new NBPGR building complex was laid by Hon'ble Union Minister for Agriculture Shri Baram Jakhar on 29 July 1992 and the new building was inaugurated by Hon'ble Vice President of India Shri R. K. Narayanan on 18 November 1996 [in just 4 years]. The NBPGR won the ICAR Best Institution Award in 1997.

Collaboration with IARCs

NBPGR attached high priority to promote active collaboration with IARCs and MoUs were signed by the ICAR with ICRISAT and ICARDA agreeing to provide safety duplicate facility to ICRISAT's global collection of pigeon pea and ICARDA's collection of lentil. Dr Melak H. Mengesha of the ICRISAT and Dr Mohan C. Saxena of ICARDA played key roles in this development. Joint training programmes with the help of ICRISAT and IPGRI were conducted at the NBPGR. International Workshops of global networks of Sesame and Okra were



Left: Dr Leslie D. Swindale, DG ICRISAT, accompanied by Dr R. S. Paroda, DDG (CS) on a visit to NBPGR in January 1989. Right: Dr R.S. Paroda DG, ICAR & Secretary, DARE (First President of the ISPGR) with Dr R.S. Rana Director, NBPGR (Second and then current President of the ISPGR) during the Society's annual GB meeting held in May 1995

conducted at the NBPGR Headquarters at New Delhi in 1992 and the Regional Station, Akola in September 1993. International Observation Nurseries and breeding materials received from CIMMYT and IRRI were grown at the Bureau and shared with the breeders by organizing field days with the participation of breeders that made them exciting experiences. Dr T.A. Thomas and Dr S.K. Mithal played the pivotal roles in organizing these memorable events.

Looking back over my seven years with the NBPGR, I feel happy considering that my Team succeeded reasonably well in implementing Dr Paroda's vision that he shared with me in January 1989 and even extending it in many ways. Just to name two items, thirty National Active Germplasm Sites were established to link on-field conservation with the ex-situ base collection kept under long term storage in the National Genebank and four Crop Germplasm Advisory Committees were constituted led by eminent national scientists.

Dr Paroda went on deputation with the FAO as the Regional Plant Production and Protection Officer based at Bangkok in Thailand during 1993-94 and I met him there in December 1993. He eagerly enquired about the implementation of Indo-US and Indo-UK projects and seemed to be happy with the accelerated pace of activities under both these Projects.

All these accomplishments could be achieved largely due to the full support of the successive Directors General of ICAR and Secretaries, DARE, including Dr N.S. Randhawa, Prof. V.L. Chopra and Dr R.S. Paroda [also in his earlier tenure as the DDG (CS)], along with wholehearted cooperation extended to me by my Seniors' Team comprising Shri P.P. Khanna, Dr B. P. Singh, Shri Ram Nath, Dr K.P.S. Chandel and Dr M.N. Kopper (Heads of Divisions at the main campus), Heads of Regional Stations/Base Centres, IPGRI Coordinator for South & SE Asia Dr R.K. Arora, Senior Consultant to USAID (New Delhi Office) Dr B.P. Srivastava and Senior Architect (CPWD) Shri R.S. Kaushal to name just some of them. All of us together had realized that working as a strongly motivated and dedicated Team was the only way to move forward towards developing an outstanding institution like the NBPGR.

Raj Kachru

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Dr Rajendra Singh Paroda, as seen from my Prism...

The probability of a certain set of circumstances coming together in a meaningful way is so low, that it simply cannot be considered as a mere coincidence. How else can one explain that two individuals, both born in the “Summer of ‘42”; one in the holy city of Ajmer and the other in the paradise on Earth- the Kashmir Valley, end up with the same first name, Rajendra (Raj), and their lives professionally intertwined? There is definitely a higher plan, of which this coincidence has the shadow of God’s anonymity.

Much is spoken about the leadership and great leaders, but the CEOs, we come across in our life are often not fully extolled. One such exceptional real-life leader was Dr Paroda, who rose from his modest beginnings, to an internationally acclaimed scientist and administrator. His contributions to agriculture science and the farming community have led to several awards and distinctions being conferred on him, including the coveted Padma Bhushan in 1998. He has held every senior position possible in his distinctive career at ICAR and has been recognized with every possible national/ international award. Such has been the persona of Dr Paroda. It is thus, just impossible to write a treatise on Dr Paroda and encapsulate in a few pages.

I have no hesitation in admitting that in my professional career spanning several countries rarely has someone impressed me as much as Dr Paroda. I consider myself fortunate to be a part of his team during his tenure, which allowed me to broaden my own vision, working style, and depth of knowledge. It was definitely a golden period of my professional career working at KB. Dr Paroda redefined the perception of a “Boss,” in the organization replacing ‘fear’ and ‘power’ with ‘respect’ and ‘encouragement.’ We cringed at the seemingly unattainable targets he set for us, but realized how easily he helped us blow those away each time and raised the bar for the next.

Bosses come in all shapes & sizes, but very few, like Dr Paroda, come across as the complete package. He brought out the best in each and every team member. I remember how he would not hesitate in taking hard and unpopular stands and he

made us realize that the complex problems can never be solved with an excess of caution without some risk taking. That, I believe, was just a brilliant piece of advice. With his level of performance, dedication and professionalism, the bar of Agriculture Research Management, HRD needs vis-à-vis the overall governance within the ICAR/NARS, was significantly raised by Dr Paroda. We need to work out his legacy and take it further.

Of the many firsts and contributions made by Dr Paroda, some of them deserve to be highlighted here:

- He was instrumental in introducing sound management tools in research and management practices, stressing on moving from Project to Programme mode research, which helped in appropriately channelizing efforts towards higher goals. Also, he emphasized on Matrix and System approaches, bringing about Paradigm shift in research project planning, management and administration of NARS.
- Introduced the concept of preparing Vision Documents for effective Perspective Planning of the ICAR, respective Institutes and SAUs. This helped in chalking out the road maps for developing bankable technologies on a short and long-term basis.
- He introduced a series of measures to streamline the technical, administrative, and auxiliary workforces; which became instrumental in the removal of anomalies in promotions.
- Court cases against the ICAR reached an all-time low, revealing his administrative acumen.
- Several decisions taken by him and the way he handled the internal pressures clearly demonstrate how much he valued organizational interests, while serving the ICAR. One such instance is how shrewdly he handled the takeover bid of CIRCOT, Mumbai, by a powerful private industrial group.
- Dr Paroda, ushered a series of reforms and modernization measures including computerization, ARFIS for finance management, and establishment of ARIS in the NARES, encompassing the ICAR HQ, as well its constituent institutes and SAUs.
- As said by, John Maxwell; “Leaders become great, not because of their power system, but because of their ability to empower others.” This was emphasized by Dr Paroda by implementing a decentralized power system at the HQ and the constituent institutes; a clear display of his great leadership quality.
- As a scientist, Dr Paroda believed in modernization of the ICAR Institutions and indispensability of sophisticated and modern equipment needed in the laboratories for world class and cutting-edge research. The decisiveness he showed in approving a purchase of an instrument, costing over Rs.60 Lakhs (a huge sum of money in those days) and funding the establishment of a much-needed Centralized Facility at CIRCOT, at about Rs.45 Lakhs, is another example of his commitment to organizational development.
- One more feather in his cap is the World-Bank-funded National Agricultural Technological Project (NATP) - a significant direction and boost to the agricultural research funding in the country. I remember how Dr Paroda bargained forcefully and convincingly with

the World Bank for getting the funding on his terms without sacrificing the interests of the country. This project not only led to the conception and the implementation of several Organization & Management reforms, and began a digital revolution in the ICAR information and management system, but also led towards significant research output. The success of this project later paved way for NAIP, a sequel to NATP.

- A very significant testimony of Dr Paroda's visionary approach is the establishment of NASC, that spread over 22 acres of land, strategically located in New Delhi. He will always be gratefully remembered by the present and future agricultural scientists of the country for his conceptualization and establishment of this complex. The Mogul Emperor, Shah Jahan, was known as architect of India. He left behind a grand legacy of structures constructed during his reign. Similarly, Dr Raj Paroda can rightly be called the Shah Jahan of the ICAR by establishing this complex, which in no way is less than any monument.
- Dr Paroda had also some shades of Jahangir, a Mogul Emperor famous for believing in Justice (read Adil-e-Jahangir) "Adil" meaning Justice. Jahangir is remembered for installing the golden chain of justice. Similarly, Dr Paroda was always accessible and approachable to all and sundry. The way in which he helped in sorting out the huge overstaying charges of the widow of a scientist (who died in office) in the staff quarters of an institute showed his humanitarian and compassionate dimension.
- Once, while returning from attending a Regional Committee Meeting in NE sector, Dr Paroda waited at the Delhi airport and asked all the other members, including myself, whether or not anyone needed a ride back to their respective residences. Despite being only a small gesture, his kindness overwhelmed me for his genuine concern for his subordinates and colleagues.
- He would always go through the tour reports of all his senior officers at the HQ with seriousness and respond with his crisp and constructive comments. One such report of mine was highly appreciated by him, so much so, that he got it circulated to all of the RMPs, in an effort for future reports to be similarly written- showing his ability to recognize and highlight exemplary work. He was never too busy to mentor and promote talented colleagues.

Leaders like him are rare and they don't make like him anymore. As I said earlier, this space is too small to capture the full essence of his persona and contributions. Dr Raj Paroda was a leader with a vision, who has left a great legacy in all the institutions he had served in key positions. Anyone who reminisces the times of working with him would always recall him as an affable human being, a great scientist, and an able administrator. He is a man of different strokes in real time, a passionate visionary with a touch of compassion.

“Log aate hain, log chale jaate hain,
Aur log aate rahenge,
Lekin Paroda Sahab,
Aap saa koi na aaya hai
Na koi aayega!”

Rajeev K Varshney

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Dr RS Paroda: A visionary, inspiring agricultural scientists

I am delighted to learn about the commemoration of Dr RS Paroda's vast achievements and passion for science and development with a book release on him on August 28, 2017 during his 75th birthday celebrations. It is my proud privilege and honour to contribute to this book by sharing my interactions and experiences with Dr Paroda.

Dr Paroda, who is not new to ICRISAT family, has served as the Chair of ICRISAT Governing Board during 1997-1998. The ICRISAT Genebank, which falls under Global Research Program Genetic Gains led by me, named after him, is one of the world's largest repositories of genetic resources of its mandate crops, and at present conserves more than 120,000 accessions from 144 countries. I started to have close interactions with Dr Paroda after joining ICRISAT in 2005 either in conferences or meetings at ICRISAT or at different places in India. I had several opportunities to meet and interact with him over various topics of common interest including biotechnology, genetics, germplasm research, crop improvement and GMOs. I had the privilege to participate in couple of Expert Consultation on topical subjects organized under his leadership as Executive Secretary/ Chairman of the Asia Pacific Association of Agricultural Research Institutions (APAARI)/ Trust for Advancement of Agricultural Sciences (TAAS).

Over the years, I had the privilege to invite him and have his presence in conferences/meetings organized by me at ICRISAT, to share his experiences in the field of genomics and biotechnology. For instance, and to name few key meetings, we had an honor of having the expert talks/blessings by him during "4th International Workshop on Next Generation Genomics and Integrated Breeding for Crop Improvement" and most recently, he co-chaired Panel Discussion on "Climate Smart Agriculture" during February 2017 at InterDrought-V international conference.

It is always a pleasure to listen to him, as he is one of the very few visionaries who have embraced new tools and technologies that could contribute to agriculture for improving the livelihoods of smallholder farmers. In particular, he has always stressed on the need to explore and exploit the contemporary biotechnology tools



Photo 1: (L to R) Kadambot HM Siddique, Arabinda Kumar Padhee, Swapan Kumar Datta, Shobhana K Pattanayak, William Dar, RS Paroda, David Bergvinson, Usha Barwale Zehr, Shadrack Moeophuli, Gurbachan Singh, Jeff Ehlers and Rajeev Varshney.

and applications to address the most pressing issue of our time, which is, to help smallholder farmers to have reduced inputs cost, increased productivity and better income. I recall an instance when I shared one research paper on molecular breeding leading to development of superior lines for resistance to foliar diseases in peanut with him. He congratulated ICRISAT team and me for this work and also shared that paper in his network including high profile personalities in Indian agricultural fraternity and mentioned that we need to have similar kind of work in the Indian agricultural system. Such words coming from an agriculture stalwart really inspire and encourage young people like me.

I am highly impressed with Dr Paroda being an intellectual geneticist and very able administrative researcher. His contributions to global agricultural systems in general and Indian agricultural system in particular are exemplary and invaluable. Dr Paroda is a man of head and heart and personally, for me he has been great source of inspiration.

On this occasion, I wish him many more years of good health and greater success for his continued service for the global scientific community and to the smallholder farmers. I am sure he will keep inspiring the younger generation of researchers and I look forward to being a fortunate recipient of his knowledge and wisdom in future.

Raju Barwale

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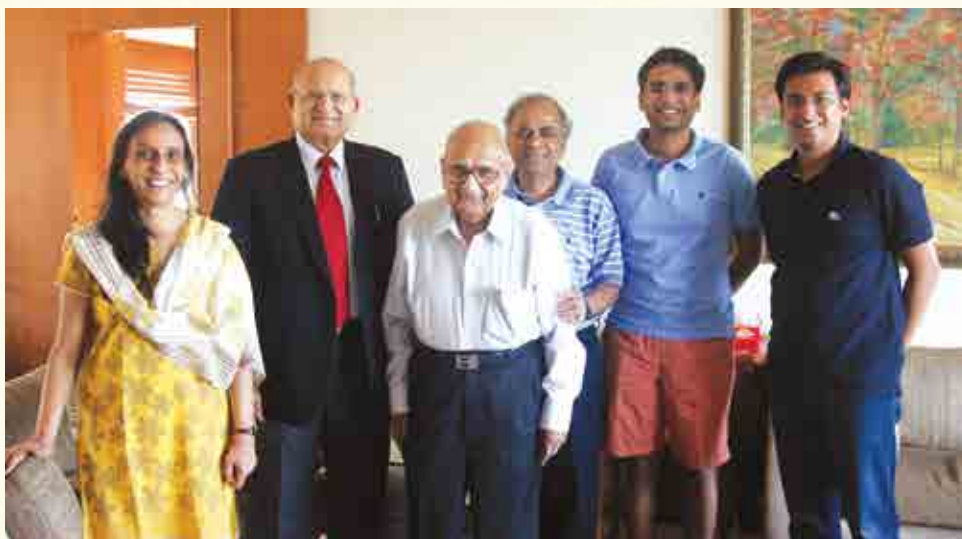
Dr Rajendra Singh Paroda – An Indian doyen amongst International Agricultural Scientists

Dr Rajendra Paroda is amongst the most prominent agricultural scientists of India. His immense contribution to progress of science in Indian Agriculture for the larger benefit of our farmers and the country is chronicled well to elaborate here. Apart from being an eminent scientist with deep interest in genetics and plant breeding, his leadership in shaping India's leading Agricultural science institutions and scientists' bodies is unparalleled.

My first interaction with Dr Paroda was in Australia where both of us were participating in the First World Cotton Research Conference (WCRC-1) at Brisbane in February 1994. It was also the time when we were in discussions with Monsanto to introduce the breakthrough technology of Bt Cotton in India. Prior to our discussion, Govt. of India was in discussion with Monsanto, evaluating the technology for getting it to India and our Chairman had instructed to also understand the perspective of the Government as they were already discussing the same.

I requested Dr Paroda to guide us on the same and he was candid to share their experience during the visit of the Government's delegation to Monsanto's Headquarters at St Louis in USA, and the performance of the technology working well in the field trials. It was a reflection of the larger interest of the farmers and Indian Agriculture close to his heart, that he encouraged me to pursue the unique technology for the benefit of Indian cotton sector, and assured of all the support and guidance in the process. This discussion was a great confidence booster for us to follow up with Monsanto further for a strategic arrangement to introduce this technology to India.

True to his words of support during our first meeting, Dr Paroda provided constant guidance and support with his forward-looking approach during the years of regulatory trials and approvals for Bt Cotton technology. As this was the first of its kind efforts to go through a very rigorous process of regulatory protocols including large scale trials spread over years, Dr Paroda's support was inspirational and decisive for us to persevere with the system. Bt Cotton technology was approved for



commercialization finally in 2002. While the Bt Cotton technology introduction changed the face of Indian cotton and textile sector, creating great value for our cotton farmers over the years, the role played by Dr Paroda in making this fructify has been a critical one.

We are familiar with the significant contributions of Dr Paroda as an able administrator. One of the biggest achievements under his leadership is the creation of National Academy of Agricultural Science (NAAS) Center at New Delhi, which has been aesthetically designed to reflect traditional values, and at the same time with all the modern amenities. This is a state of the art conference venue, popular for various scientific and technical symposiums in the capital.

Dr Paroda is a very warm hearted, and caring person. I have had multiple opportunities of memorable interactions with him, Mrs Paroda, and Prashant, and had the privilege of enjoying their warm hospitality on multiple occasions.

Dr Paroda continues to be a friend, philosopher and guide to all of us. It is delightful to see his energy and enthusiasm to constantly encourage the youngsters to bring innovations, and scientific solutions for resolving the challenges of agriculture. Another quality that we can emulate from Dr Paroda is his ability to create teams with commitment for a cause, and at the same time being able to earn the confidence of superiors in taking up challenging tasks. His passionate interest to further the cause of Indian agriculture and the well being of our farmers is always reflected in various scientific activities he pursues at various forums under his leadership.

On this momentous occasion of completion of 75 years of age, our prayers would be for the continued blessings from the Almighty to him and his family. We would require many more years of his guidance, and contributions in the interest of millions of our farmers, and for the betterment of Indian agriculture.

Ramanatha Rao

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Dr R.S. Paroda, Former Secretary, DARE & DG, ICAR and Chairman, TAAS (Trust for Advancement of Agricultural Science), New Delhi etc. --- all of you know this!! And there is also no need to for me to echo here what others have said about his scientific acumen, vision etc., about which, as I am sure, you are quite aware. Here are a few things that you may not know.

Although I used to meet with him occasionally when I worked with ICRISAT during 1976-89, our more direct interactions started after I moved to Bioversity International; more familiar name was the International Plant Genetic Resources Institute. We met almost always when I came to New Delhi for some work or the other and it was always enlightening to talk to him, especially about the status and future of plant genetic resources programme in India and then Asia after he took the helm of APAARI. I remember very clearly when I visited NBPGR during the period when the present facilities were coming up and the way he explained to me about each part of it. I had suggested that, since there was substantial funding, part of that could be put in a trust fund and used for the upkeep of the facilities to reduce dependence on grants. He agreed that it would be a radical move, but we decided that it was not practical under Indian conditions. It gives me immense pleasure to see that the organization that was built based on his vision is flourishing well.

When Dr Paroda was based in Bangkok, looking after APAARI in early 1990s, I moved from IPGRI HQ in Rome to its Regional Office for the Asia, Pacific and Oceania that was established in Singapore. I used to travel to Bangkok quite often. These travels were for either APAARI meetings or for meetings with Thai National PGR Programme, but I used to end up meeting with Dr Paroda. He is a generous being and took care of us (including any meeting participants from India and me) by driving us (me) around for any shopping or a meal, in addition to a mandatory dinner at his home graciously hosted by Mrs Paroda. When he took over as the DG of ICAR, our meetings were restricted to chance meetings at one conference or the other or conference dinners, at which we never missed on an extended friendly chat, most which used to centre around how to enrich India's genetic resources.

Later, when he spent time in Tashkent during 2001-2007 as the Head CGIAR Program for Central Asia & Caucasus we only met once in Kuala Lumpur, though I forget which year it was. I still have the small stone figurines, typical to Uzbekistan that Mrs Paroda gave us. Although we did not meet as often as we did earlier, we both were working on national programme building in developing countries and that gave us a chance to exchange notes of some aspects of it especially those related to plant genetic resources.

After I 'retired' from Bioversity International' in 2007, I continued as its Honorary Research Fellow until about 2014 and was also associated with the development of the recently launched ICAR-Bioversity GEF project. During this period, I travelled to New Delhi on numerous occasions and we used to meet almost every time, continuing our discussions or exchanges on advancement of plant genetic resources (and agricultural research and development in general). I trust that this will continue well into the future.

I am sure, Dr Paroda, wherever he is and whatever he does, will continue to spread the knowledge and wisdom that he has gained over decades of hard work and determination.

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Dr Rajender Singh Paroda – An Icon of Indian Agriculture

Dr Rajender Singh Paroda is one of the most dignified scientists and his work as a scientist, research manager and as a policy maker has brought him in the league of great value creators, administrator and policy makers in agriculture. Since late 1970s, I personally have long followed his way of handling projects, innovating new ideas during the time when Dr Paroda was an Economic Botanist, Forage Breeder, Project Coordinator (1971-1978), as Professor and Head of the Department (HOD) of the plant breeding department and as Additional Director of Research (ADR) from 1978 to 1985 at Chaudhary Charan Singh Haryana Agricultural University (CCSHAU), Hisar. I also envied him as HOD and also as ADR who never triggered any argument and always encouraged healthy discussion and created new opportunities for the University and its faculty. He brought name and fame to the university when he won the 'Rafi Ahmad Kidwai Memorial Prize' in 1983 and the 'Team Research Award' in 1985. I saw him growing in stature while many of his colleagues stood still. I have seen him staying focused on the growth of an Institution and in the process, introduced so many reforms. The reputation of CCSHAU during those days rested on the laurels of person like Dr Paroda. That is where we got inspiration from him.

He created niche of his own that made him famous and now he can safely be called a visionary in the field of Agriculture in India. Self-made Dr R.S. Paroda has number of milestones starting from his first job at CCS Haryana Agricultural University, Hisar to the level of Director General and Secretary, Department of Agricultural Research and Education (DARE). After he joined ICAR, people like me still followed his work culture and the way he managed people around his work. Dr Paroda was the first post-green revolution scientist to make a mark in the global agriculture. At national level, the change in the work culture was already apparent with meaningful impact when he created commodity institutions including NBPGR leading to diversified research in all facets of agriculture. Dr Paroda launched a goal oriented, time bound national project on hybrid rice in December 1989 which was implemented through a well-organized national network with centres across the country. Systematic research on hybrid rice in India started only after this initiative of the

Indian Council of Agricultural Research (ICAR), focusing on hybrids for irrigated cultivation. Subsequent research programs, totalling approximately \$8 million, have been funded by the United Nations Industrial Development Organization (UNIDO) and Food and Agriculture Organization (FAO) (1991–96 and 1999–2001), the Mahyco Research Foundation (renamed the Barwale Foundation since 2005) (1997–2000), the Asian Development Bank (ADB) and IRRI (1999–2000), and the National Agricultural Technology Project (funded by the World Bank) and India's Ministry of Agriculture (2003–08)

To further increase the impact at scale, he pushed for the creation of a strong extension system and introduced a network of Krishi Vigyan Kendras (KVKs). Lot of things changed when he launched special projects with funds from externally aided projects from different donors to introduce reforms in education (AHRD), and research, extension and infrastructure (NATP and NAIP), which made a big impact on agriculture development in India. After launching projects like AHRD, and NATP, number of new initiatives like computerization, revamping libraries, upgrading the knowledge of skill of teachers, extension reforms (the pilot testing of ATMA model which later went to DOA). There is crucial link between his experiences at CCSHAU and in ICAR that made him the chief architect of NASC complex in New Delhi.

Rice-Wheat consortium (RWC) for the Indo-Gangetic plains of South Asia, an eco-regional initiative of the World Bank and subsequently CGIAR involving NARS of India, Pakistan, Bangladesh and Nepal was established by Dr Paroda with a goal to maintain food security and improve livelihoods of the farmers mainly dependent on rice-wheat production system focused specifically on deployment of resource conserving technologies (RCTs). He has been able to establish and maintain excellent relations with CG system and helped in fully integrating the National Agriculture Research and Extension System (NARES) and International Agriculture Research System (IARS) which is a good example of transactional leadership of Dr Paroda.

When Dr Paroda was the Chairman, Farmer's Commission, Haryana, he introduced some ambitious programs and suggested reforms in natural resource management and diversification for sustaining the growth in agriculture in Haryana. As Chairman of the Trust for Advancement of Agricultural Sciences – a think tank, he has published large number of supplementary documents and suggested reforms in teaching, research, extension, gender and the processes of conducting research in multidisciplinary and multi-institutional mode. From now onwards, the farmer's participatory process (see photo) is likely to play a pivotal role in developing new technologies. With increased emphasis on farmer's participatory process, we are



gradually turning into a more productive research process that is more demand-driven rather than supply-driven. One motivation for this process is to bring the new technologies faster and at much lower research cost. Dr Paroda has been one of the rare bright lights of Indian Agriculture and is the second person who earned the name and fame after his teacher, Dr MS Swaminathan. Dr Paroda is more dynamic in his approach and now also focuses on more attractive options and framework like “Agronomic management” and farmers' participatory process of R4D for improved growth in agriculture. He has stayed connected with farmers on one side and policy maker on the other side of the spectrum. The success of Dr Paroda is very well depicted through so many prestigious awards including Padma Bhushan Award in 1998.

Indian Agriculture Research Institute (IARI) that trained him as a student and the CCSHAU, from where he started his journey and created his own school of thought are proud to have given a great scientist, a great research manager, a great administrator and a great policy maker to Indian agriculture. He has always been the first mover and followed the virtuous cycle rather than vicious cycle. Dr Paroda's example of leading from the front is still fresh in our mind. That is what has brought him to this delightful stature as he kept creating opportunities for self-advancement and the advancement of Agriculture Science in India with his footprints at global level. This is what I personally envied in him and still follow the same school of thought, to be the first mover rather than a follower.

When I initiated to construct new building of Directorate of cropping Systems Research at Modipuram, it was found that the entire land was not yet transferred in the name of Directorate/ICAR. I started approaching Dr Paroda to show me the way out. One day, in great irritation and anger, he shouted, "Instead of coming to me so frequently why don't you go to Shahjahanpur/Pantnagar to talk to V.C. and Director for this purpose. Turn the steering of your vehicle in the opposite direction rather than coming to Delhi". When I started going to Pantnagar regularly for this purpose, some unanimous letter reached ICAR headquarters complaining that I was visiting my daughters, who were studying at Pantnagar. Based on this complaint, an enquiry was set up against me by ICAR, and I was shifted from Modipuram. At that time, Dr Paroda had already left ICAR.

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Dr R.S. Paroda, a plant geneticist and breeder by profession, is among the most eminent agricultural scientists of India, South Asia and of the world. He advanced the science, teaching, practice and national/international outreach of farming by his long and illustrious career spanning over six decades. Native of Ajmer, Rajasthan, Dr Raj Paroda was awarded “Padam Bhushan” by the Government of India (1998) for his pivotal role in advancing agriculture.

I have known Raj since 1964 when we were fellow students at the Indian Agricultural Research Institute (Pusa Institute) and were also members of the “Kesri” vegetarian cafeteria of the Post Graduate (PG) Hostel. I remember him as hardworking, studious, dedicated and mission-oriented, and at the same time extremely courteous, polite and helpful to his fellow students. During his illustrious career, I met him numerous times when he was Director General of the Indian Council of Agricultural Research (ICAR) and Secretary, Department of Agriculture Research and Education (DARE) from 1992-2001. As a visionary leader, he transformed agriculture and initiated numerous innovative programs, especially those which helped small landholders of India, and South and South-East Asia.

While being Secretary of DARE and DG of ICAR, Raj also turned his attention to strengthening international agriculture, especially in Central and Southeast Asia regions. He promoted agriculture as Executive Secretary of Asia Pacific Association of Agricultural Research Institutions (APAARI) from 1992-2014, and played an important role especially in outreach. I was a participant in one of the international symposia entitled “Mitigation Potential and Opportunities for Global Climate Change,” 21-22 October 2008 in Tsukuba, Japan. The symposium addressed the issues of global warming, its impacts on agriculture, and how agriculture can be an important part of the solution to mitigate and adapt to changing climate.

Another important international position held by Raj was that of the Head, CGIAR Program for Central Asia and Caucasus, Tashkent, Uzbekistan (2001-2007) and as Assistant Director General of ICARDA (Intl. Coop.) for 2007. I visited Raj in Tashkent in 2001 and learned about the opportunities and challenges of arid dryland farming in Central Asia. A senior scientist of the program, Dr Mekhlis Suleimneov, showed us some excellent and pioneering field experiments on conservation agriculture and elimination of summer fallowing implemented under Raj’s leadership. Raj was also Regional Plant Production and Protection (RAPA) officer, of FAO in Bangkok, Thailand. From 1990-1993 Raj Paroda was also member of the Board of Trustees of IRRI, Philippines.

Throughout his domestic and international career, Raj held several key research and administrative positions. He has been Chair of the Trust for Advancement of Agriculture Sciences (TAAS), and Chair of Haryana Farmers' Commission. Belonging to a farm family in Haryana myself, I greatly admire the support and incentives that Raj provided to the farm communities of the predominantly agricultural state. Raj has received numerous prestigious awards, both nationally and internationally. In addition to the Padam Bhushan (1998), Raj also received FAO's World Food Day Award (1995) and Borlaug Award (2006). Raj was awarded *Honoris Causa* degrees from eight State Agricultural Universities (SAUs) of India. It was a great pleasure for me to host Raj and Mrs. Paroda when he received an Honorary Degree from The Ohio State University in 2000. His presentation to the faculty and staff of the College of Food, Agriculture, and Environmental Sciences was very well received.

Raj was also an invited a keynote speaker at an international conference that I organized at OSU entitled "Climate Change and Terrestrial Carbon Sequestration in Central Asia" from 1-5 November 2005. The keynote presentation "Addressing the Challenge for Sustainable Agriculture in Central Asia" by Raj was very well received and was included in the book (chapter 8, pages 109-125) published by Taylor and Francis. Raj was also made fellow of numerous professional academies including Indian, Russian, Third World, Armenian, Georgian, and Tajikistan Academy of Sciences. These are impressive achievements.

The Ohio State University has a long list history of cooperation with SAUs and research institutions in India since 1955. On 9th May 1962, the Rajasthan Legislative Assembly inaugurated Rajasthan Agricultural University and established College of Agriculture at Udaipur, the S.K.N College of Agriculture at Jobner, and the College of Veterinary Science at Bikaner. Raj Paroda received his B.Sc (Agric.) from University of Rajasthan at Udaipur in 1962 when Dr Lyndon D. Baver, Prof. of Soil Physics at The Ohio State University was Chief of Party of the USAID funded program. Between 1955 and 1964, OSU cooperated with the states of Rajasthan and Punjab in establishing agricultural universities on the pattern of the U.S. Land Grant Universities. In 1999, when Dr Raj Paroda was D.G. of ICAR and Secretary of DARE, he hosted a delegation from The Ohio State University (led by President Brit Kirwan and Chair of the Board of Trustees Mr Ted Celeste) to visit ICAR, PAU and HAU. The visit reinvigorated the cooperative program between SAUs/ICAR and OSU. Since the historic visit, the Carbon Management and Sequestration Center of The Ohio State University has hosted 66 visiting scholars from ICAR, SAUs and other institutions from throughout India. Raj played a major role in strengthening this cooperation.

As of 2017, Raj remains to be professionally as active as ever in addressing issues of global significance, and regarding the important role that agricultural institutions in Asia and elsewhere can play in mitigating and adapting to climate change, advancing food and nutritional security, improving farm income of resource –poor small land holders, and addressing issues of well being of rural communities. He is a visionary leader, an inspiring teacher, an innovative researcher and a courteous and helpful colleague. Through hard work and dedication, Raj has made a long-lasting impact on agriculture, agriculturalists of this and the future era, and rural communities of Asia in general, and of India in particular.

I wish Raj and his family all the very best, and long and healthy life and continued support to agriculture, and to advance the rural communities of Asia and from elsewhere in the world.

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Sweet and Sour Memories of My Association with Dr R.S. Paroda

My younger brother was the student of Dr R S Paroda while pursuing MSc. Ag. degree at HAU Hisar. At that time, I was serving as Scientist S-1 at the Indian Institute of Sugarcane Research, Lucknow. During second trimester, when thesis topics are allotted to students, my brother got scared of Dr Paroda, and when I visited home, he pleaded to me that I should meet Dr Paroda and request him (Dr Paroda) to relieve him (my brother) from his (Paroda's) advisor ship. When, I questioned him, "Why?" He replied "Because, Dr.Paroda is a hard task master and I am an easy going boy, therefore it will be difficult for me to pull along with him." It was Sunday next day, therefore in the morning hours I went to Dr Paroda's house in Teachers Home in HAU. Dr Paroda was still wearing night gown, even then he permitted me to come in. I introduced myself to him and explained the purpose of my troubling him in early hours of Sunday. He smiled and asked me to sit down pushing the chair towards me. I hesitantly sat down on the chair. He immediately called to bring a cup of tea for me. While sipping the tea he said, "But change of advisor ship will not be in the interest of your brother." "I know Sir, but he is insisting too hard for this." I requested him again. He placed the cup of tea on the table and stood up. I too followed. He thought for a moment and replied, 'Don't worry, go back happily, but tell your brother to work hard, I shall be keeping a watch on him.' I returned home happily impressed by the generosity of a great Professor. It was my first interaction with Dr Paroda.

Second time, when I met Dr Paroda, it was the Platinum Jubilee celebration of Sugarcane Breeding Institute, Coimbatore. Dr Paroda was the Director of NBPGR, and was the special guest in the function. After his special lecture, during tea time, pushing others aside, I reached near him and bowed to touch his feet. He immediately moved back and pulled me up holding my shoulders for hugging me lovingly. Soon thereafter, I quickly handed over a reprint of my latest publication having a novel idea (in my opinion?) in it, about sugar industry and sugarcane. Dr Paroda glanced at the front page of the paper and said, "If it is so? We shall make sugar capsules in petri dishes?" I immediately pulled my paper back from his hands and stepped away from him calmly feeling dwarfened in front of a visionary Director.

When he was the Deputy Director General (crop sciences) in ICAR, once during his visit to IISR, Lucknow, I was explaining him the concept of the newly developed, Rig-Pit planting technique on farm fields. He was quite impressed by my narration. But he suddenly asked me to go to the other side of the field where we had an experiment on intercropping of short duration pigeon pea in sugarcane. That year due to high rainfall, there was water logging in some plots and Pigeon pea was dying in those plots. Looking at the dead plants he questioned, "What is it?" I replied softly, "Sir, my intention was not to bring you here to this plot" He immediately counter questioned, "Why?" Then, after a cute smile he said, "Let me see your failures too" it was the true spirit of a "Mentor", I realized later.

When Dr Paroda was Director General of Indian Council of Agricultural Research, I was the Director of Directorate of cropping systems Research at Modipuram. One day I came to Krishi Bhawan for some other purpose. In the corridor of Krishi Bhawan, I saw Dr Paroda walking swiftly towards a committee room with a diary in his hand. His eyes caught me, and he called me. When I reached to him, he immediately asked me about the progress of work on rice-wheat cropping system. I promptly replied, 'Sir, I do not know' He continued questioning, "You also did not attend last meeting on rice-wheat cropping system, why?" I omitted my pain, "Sir, I did not have any information about the meeting." I continued explaining, standing with him in the corridor, "Sir, I do not know but somehow, these rice-wheat fellows consider me an alien in rice- wheat cropping system, they never invite me to their meetings." Dr Paroda captured entire situation, but being DG, he defended them and questioned me instead, "You might not be working on rice-wheat system that is why!" I politely cleared, "Sir, the work on rice-wheat system, which we are doing at Modipuram, perhaps nobody else is doing such work in the country?" "Show me!" he uttered these words and disappeared.

Next day, after coming back from Delhi, I collected all the research papers on rice-wheat cropping system published from Directorate of Cropping Systems Research, Modipuram, and dispatched to Dr Paroda. After reading those papers, Dr Paroda wrote on the covering letter itself that from then onwards Dr R L Yadav would act as National coordinator of rice-wheat cropping System. Such was his prompt action.

Soon after joining as Director of Cropping Systems Research, I was sponsored to attend a workshop on GIS at Asian Institute of Technology, Bangkok by ICRISAT. The expenditure was to be borne by the sponsored, but permission was to be granted by Honorable Minister of Agriculture. I submitted my papers to DARE for getting permission. The days for going to Bangkok were approaching, but I did not get the permission. I went to ICAR to enquire about the case. In the lunch time, I went to IARI where I met a woman scientist, who was with me during our ARS training at Hyderabad. She taunted, "If you are unable to manage your foreign trip being a Director, it would be better, you leave the directorship, Dr Yadav, and go back to work as a scientist." I immediately returned to ICAR from there and met Dr Paroda, who then instructed Director DARE to get the permission that day itself. It is how he was helping his directors in such petty matters.

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Respected Dr Raj Paroda is a living legend and an endangered species of this planet with whom I first came in contact at National Bureau of Plant Genetic Resources (NBPGR), New Delhi during 1984, where he landed as the Director of the Institute and I had joined as a Scientist. The very first impression he gave to all of us was that of an able administrator with a blend of great scientific background, often a rare combination. NBPGR was then at its infancy and a relatively unknown Institute of ICAR. Dr Paroda took the challenge and started making developments and reforms from scratch. Within no time we found him slogging hard to bring NBPGR on the national map by highlighting the importance of plant genetic resources, organizing national and international events and scoping and securing the prestigious Indo-USAID project wherein the first organized capacity building programme was taken up on various aspects of management of plant genetic resources apart from a radical transformation that was brought in by building a *state of the art* infrastructure and laboratory facilities. His passion for developments in science and policy matters facilitating work and funding for younger scientists was then realised at national level. From there, I saw him flying high in prestigious positions in ICAR, FAO, APAARI and so on, and honours and awards were bestowed upon him regularly which included the glorious Padma Bhushan. I was always silently observing him and his unique style of dedicated working for the nation which had no parallels. Needless to say that he is in the list of few pioneers in uplifting the face of agricultural sciences in India and in bringing Indian agricultural research at global fora.

The magnificent National Agricultural Science Complex in Pusa campus which is the most beautiful gift to the scientific community of the nation speaks of the depth of vision of Dr Paroda for creating a platform with a very pleasing ambience to hold scientific meetings and other events even for those who are not in agricultural sciences. Besides, very few people may be aware today on how much he also worked hard to ensure the building of the Pusa Agricultural Scientists Co-operative Group Housing Society at Rohini, Delhi which provided apartments to 67 families of ICAR Scientists. Land was allotted by Delhi Development Authority for building the flats of the Society in early seventies, and for one reason or the other, it was not materialising for about twenty years. God said *let Paroda be* and there was light and

smile on the face of scientists who were struggling in Delhi for getting their own place to live within the then modest salaries. These are only the few examples that I am highlighting, as it is not easy to highlight all the achievements and contributions of Dr Paroda in few words, which if done will would run into volumes.

Apart from being a pioneer in the field of science and development, there are personal traits of Dr Paroda which are observed and remembered by all those who come in contact with him for any purpose. He is very helpful to one and all and gives a very personal touch in the relationship. His very rational approach of dealing with people with humane qualities makes a dent in everyone's mind and makes him an icon and an idol to emulate.

Personally I can say with conviction that all my interactions with him gave very positive vibes and have been truly motivating in my career path. I salute this giant but humble personality who has engineered the ever green revolution with humility and made India a proud nation in terms of research, innovations and development in agricultural sciences. Despite his age, he is still relentlessly involved in the growth and development of agricultural sciences and policies to meet the challenges of sustainable development goals. I pray to Almighty for his very healthy and long life!

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On the occasion of his 75th birthday, this tribute to the life and work of Dr Raj Paroda is indeed timely and fitting. His vast achievements in the field of agricultural science and research administration have brought him national and international acclaim and accolades too numerous to be listed here, but very well known.

No doubt his peers, colleagues and other eminent contributors to this Volume will laud his extraordinary and lasting contribution to agricultural science in India. As Director General, Indian Council of Agricultural Research (ICAR) and Secretary to the Government of India, Department of Agriculture Research and Education (DARE), his impact on farmers' fields, his influence on students of agriculture science and his imprint on public policy have been truly impressive.

The breadth and depth of Dr Paroda's work has generated significant multiplier effects.

He has personified the unique ability to break out of conventional silos in which government functionaries tend to get stratified and work successfully with other departments and Institutions, and in partnership with NGOs and the private sector. This is not an easy feat to accomplish working within the labyrinths of the public-sector bureaucracy.

Even today, as Chairman of the Trust for Advancement of Agriculture Science (TAAS), a leading think-tank, assiduously built and nurtured by his boundless energy and tireless action, he continues to provide an influential forum for the exchange of cutting-edge ideas and innovations towards overcoming the challenges of hunger and poverty.

My association with Dr Paroda started more than two decades ago when I was Joint Secretary to the Government of India and Extension Commissioner in the Department of Agriculture and Cooperation (DAC). When phrases and management terminology such as "synergies", "horizontal convergence", "partnerships" were not as common as today, we as agricultural administrators got down to "getting the job done" through a regular 2- day bi-annual meeting of the researchers of the ICAR and the extension professionals of the DAC. The *DAC-ICAR Interface*, as it was

known was a dynamic platform which strengthened the vital research –extension linkage for translating science into policy and practice. Dr Paroda recognized the critical importance of this mechanism. His guidance and stewardship, nurtured and bolstered it making the DAC-ICAR Interface at once an effective instrument of dissemination of new technology as well as feedback from the field.

Together we negotiated the National Agriculture Technology Project (NATP) with the World Bank. We were in Washington for the Project negotiation in January 1998 when we heard the good news of Dr Paroda being conferred the Padma Bhushan. There was quite a celebration at the World Bank office with all team members joining in felicitating Dr Paroda with champagne and cake. The NATP was successfully negotiated and went on to become one of the very successful projects of the World Bank in the field of agriculture research and extension. Its uniqueness was defined by the very close inter-twining of research and extension embedded in the architecture of the institutional mechanisms designed to implement the project. The district-level Agriculture Technology Management Agency (ATMA) at the district level, and the State Agriculture Management & Extension Training Institute (SAMETI) evolved from the pilots that were tested under the NATP. The acronym evinced considerable punning and good-natured banter. Dr Paroda would often talk of divine intervention in the form of ATMA and PARM-ATMA. Suffice it to say that the 36 successful ATMA pilots were then upscaled and mainstreamed to cover all the 700+ districts in the country.

Dr Paroda has been a great visionary as also evidenced by his prowess as the architect of the prestigious, state-of-the-art infrastructure he brought to the ICAR. The National Agriculture Science Complex (NASC) which also houses the National Agricultural Museum has Dr Paroda's stamp all over it. Indeed, the NASC is one of the world's most impressive agricultural building complex. I often tease Dr Paroda as the Shahjahan of ICAR, remembered for his magnificent building legacy.

I had the opportunity to participate with my husband, Vijai Sharma, in the celebrations of Dr Paroda's 70th birthday. The event, organized by his children, show-cased to all his well-wishers present there, the memorable milestones in his remarkable life- journey. Apart from his professional triumphs, he also came through as a loving and caring friend and family-man.

I felicitate him on his 75th birthday. Wish him many happy returns together with good health, productive engagements and contentment of spirit.

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An insurmountable opportunity is how I might describe the invitation to write about my dear friend and colleague, Dr Raj Paroda, on the occasion of his 75th birthday. His achievements are many and varied and difficult to address in 1000 words or less, as specified in the invitation. This article will not do justice to his many achievements, but rather reflect my impressions gathered over more than 30 years of collaboration.

I first came to India in 1971, en route to take up my post as a rice breeder at the International Rice Research Institute, but I did not meet Dr Paroda until many years later, perhaps sometime in the 1980s, when we were both well-established professionally. We have a fair amount in common as we are both plant breeders and we both eventually became research administrators.

One of the first things that impressed me about Dr Paroda was his Jat heritage and the spirit of freedom, equality, and wisdom thus implied. He always seemed so perfectly prepared to unite the many divergent views of his colleagues and sustain them on productive paths of progress. It seemed to me that he was always treated with great respect and that he always reciprocated, to the great benefit of all concerned. Seldom if ever have I met a person so perfectly suited to his professional responsibilities. As we would say in the States, he was a natural.

Perhaps every foreigner who has worked in India has experienced the bureaucratic challenges of the public sector. My own experience over the years eventually caused me to establish a partnership with Sathguru Management Consultants, a private consulting firm based in Hyderabad. We formed the Cornell Sathguru Foundation for Development and worked effectively with Dr Paroda, the Director General of ICAR at the time, to establish a productive working relationship that endures to this day. Indeed, we have an MOU with ICAR that never expires. In the early stages of this collaboration, K. Vijayaraghavan, President of Sathguru, and I came to appreciate Dr Paroda's wisdom. When we would face a bureaucratic hurdle, such as the time required to approve ICAR participants for training, Dr Paroda would call in his colleagues responsible for the approvals and say something like, "Cornell and Sathguru are running this nice program on agribusiness management. I would like to participate and I think we should all go." Heads would nod in the characteristic Indian manner

and the needful would be done expeditiously, after which Dr Paroda would usually develop a time constraint and not be able to attend.

Dr Paroda and I also engaged internationally, especially in connection with the CGIAR institutes. I particularly recall leading a review of ICRISAT during which the Director General resigned and the governing board was admonished for not meeting fully its responsibilities. Dr Paroda was an *Ex Officio* member of the board in his capacity as Director General of ICAR. I had expected that he might push back, as did several members of the board. Instead, he took me aside and expressed his appreciation. I remember his exact words, “Ronnie,” he said, “that was a wake-up call.” Following this review, he was elected chairman of the board and his leadership was thereafter instrumental in causing the board to comply with the review recommendations.

While I served as chair of the research program committee for the ICARDA board, Dr Paroda was requested to lead ICARDA’s regional program for the eight CAC countries and the CGIAR eco-regional program for CAC, involving around eight centres, as its Head. Dr Paroda attracted resources and built the program there into one of the strongest in ICARDA’s portfolio. A key factor in the success was Dr Paroda’s masterful management of the many significant players involved. Dr Paroda, in my view, was instinctively aware of what we now call the Cynefin Framework of management, first formalized by David Snowden, and publicized by the Harvard Business School. It categorizes management challenges as simple, complicated, complex and chaotic. Its proponents warn that, while most bureaucracies manage things in the simple category by identifying best practices, this can lead to a chaotic situation when a paradigm shift occurs in terms of cause and effect. Some management challenges lie in the complicated category. That is, they are basically simple but require specific expertise. However, the most effective management occurs in the complex category where cause and effect are only predictable in hindsight. Dr Paroda was an instinctive manager in this mode, constantly probing for the right way forward and then eventually doing the right thing.

I was mentored by Dr Norman Borlaug and I remained close to him during the later years of his life. He often spoke favorably of Dr Paroda and his impressive ability to get things done in India. It is very appropriate that Dr Paroda was awarded the famous Borlaug Award, for outstanding Indian scientists for research and contributions in the field of agriculture and environment. I cannot think of anyone more deserving of this award than Dr Raj Paroda.

In closing, I would say that Dr Paroda was a true member of the advanced guard (*avant-garde* in French). This is often a term used in art to describe something innovative, a foretaste of what is to come to the future and new design forms. I would say that Dr Paroda was truly *avant-garde* for India. Every time I visit the National Agricultural Science Center in New Delhi, I think of Dr Paroda and his masterful management in building that beautiful building and in contributing to the public good.

The American writer, Mark Twain, famously said, “Always do the right thing, a few people will appreciate it and the rest will be astonished.” Dr Paroda has astonished us all many times over many years of productive work. He has much to celebrate as he completes his 75th year, but I anticipate many productive years yet to come. Being a younger man myself (now in my 74th year), I hope to be a frequent collaborator.

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Dr R.S. Paroda – A visionary beyond the visible

Dr R.S. Paroda, the very name spells royalty (of mind and heart), leadership and vision. My first interaction with him was in 1986 when I joined NBPGR as a scientist in National Facility for Plant Tissue Culture Repository (NFPTCR) (now TCCU) and he was the Director of NBPGR. I was nervous as I had heard that he was very strict and a hard taskmaster. To my surprise, he greeted me with a very warm smile and said, “Welcome to NBPGR family of which you are an important member”. That expression of being considered as a family member made me feel as if I have known him for years. Since then it has been very comforting interacting with him during the 30 years of my career at ICAR-NBPGR.

I distinctly remember within first few weeks of joining NBPGR, he asked me to examine a Ph.D. thesis on rice and provide the input. Having come out fresh from Delhi University Botany Department with a Ph.D. in salt tolerance of chickpea through tissue culture, I was not very confident of what his reaction would be towards my reviewing of the thesis. Not that my reviewing was flawless, believe me, his reaction was very positive and he was highly appreciative of my efforts. That is Dr Paroda’s uniqueness of enthusing young minds and infusing confidence for future endeavors.

Shortly after joining NBPGR, an ICAR-FAO National Consultation Workshop was organized by NBPGR under the aegis of ICAR. I was asked by Dr Paroda to do the stage management including anchoring. Having done scientific anchoring in a few conferences for Delhi University Botany Department, I was little apprehensive about the formal scenario in a government organization. Not only did Dr Paroda help me prepare a minute-to-minute write up regarding conduct of the whole programme but also edited it very religiously with the minutest details worked out. Such a perfectionist he is! I successfully conducted that programme which instilled a great sense of confidence in me. The minute-to-minute write up (referred as an ICAR stage management Bible), till date, has sailed me successfully through innumerable scientific anchorings in the ICAR system. Thanks to the great *Management Guru* Dr R.S. Paroda.

Another notable quality of him is his ability to involve young minds in important institutional activities and shape their minds in such a way that they are an asset to the institute. As young scientists (which he kept addressing us till a few years back), we were made to participate as members of various committees (under the tutelage of seniors) and thus got trained for not only NBPGR but also for other ICAR-related conferences and symposia.

A great champion for the cause of women in agriculture, he immensely encouraged women scientists to come forward and shoulder the responsibilities. While working as committee members for symposia/conferences, it often used to get late in the evening. I do not recall any instance when we had to ask for a vehicle for dropping us home. It was always there for us. Such was his concern for the safety of his staff, particularly the women staff.

His qualities extraordinary include his amazing memory to remember his staff/ acquaintances by their first name and whenever and wherever he met them, he would enquire about the wellbeing of not only the person in question but his/her family, too. A very fine and touching gesture which made his subordinates feel very close to him.

Swachhta Abhiyaan being in vogue these days, Dr Paroda has been championing the cause since past over three decades. As Director NBPGR, during 1986-87, he would often pay surprise visits to the laboratories and sitting rooms of scientists, look around the walls, equipment and the glassware, and touch upon the surfaces of furniture to look for dust-free surfaces. Everybody used to be on their toes to maintain cleanliness and dust-free surroundings. That probably drilled in everyone great sensitivity towards *swachhta all around* the workplace, long before the current Swachhta Abhiyaan awareness.

During Dr Paroda's tenure as Director, NBPGR, there used to be a stream of National and International dignitaries for show casing the activities of NBPGR. He encouraged and made sure that the young scientists in every Division be the face of NBPGR and interact with the dignitaries by way of explaining the ongoing activities. This was a great initiative by DR Paroda as almost all of us had become very confident and well versed with the PGR scenario at the global level, in general, and NBPGR, in particular.

I do not describe him as a person but as an 'institution by himself'. One has so much to learn from him. A leader of classes, he exuberates royalty in every sense of the word. Taking ICAR-NBPGR to such great heights that today amongst ICAR institutes, NBPGR has a reckoning of its own. His foresight and vision put ICAR-NBPGR on global map show casing the power of Indian PGR wealth. A solution provider for every situation, Dr Paroda has been instrumental in taking Indian agriculture to greater heights by virtue of being Director General of ICAR. Not only a great planner, an able administrator and a research manager, Dr Paroda is a human being par excellence. There have been numerous instances when I felt Oh! Dr Paroda is beyond the realms of an ordinary human being, a soul extraordinary. I recall one incidence when Dr Paroda was DG, ICAR and we had gone to ICAR regarding clearance of our file for a foreign deputation. He was in a meeting and as he came out, he happened to see us. Without batting an eyelid, his immediate reaction was "*Mere scientists yahaan kyaa kar rahein hain?*" Having met him after a long time, we were highly moved by

his sense of owning his former colleagues. Though we did not ask him, somehow he made sure that the file was cleared and the deputation, undertaken. Such is the persona of a great human being like him!

ICAR-NBPGR new building campus with beautiful landscaping, housing the 2nd largest Gene bank of the world with state-of-art laboratories, is the brainchild of his creation. We, the PGR Fraternity, owe our existence as Gene bank managers to none other than Dr R.S. Paroda. Kudos to the foresight of such a visionary!

I wish, biotechnology progresses at such a pace that we are able to create a clone of this larger-than-life personality, in near future.

Today, Sir, when you are celebrating your 75th birthday, I pray to almighty to keep you blissful in the future journey of life and we remain blessed to enjoy your patronage in the years to come.

S D G Jayawardena

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Dr Rajendra Singh Paroda, born 1942 in Ajmer, Rajasthan, is an eminent and highly respected agricultural scientist who has contributed significantly to uplift the Indian agriculture and has also contributed tremendously to strengthen and facilitate agriculture research in the Asia Pacific Region as well as globally.

I consider it a great honour to pen a few words recognizing the great personality Dr Rajendra Singh Paroda, a scientific colleague and a distinguished international scientist, on the occasion of Dr Paroda reaching 75 years of age. I first met him when I visited National Bureau for Plant Genetics Resources, (NBPGR) New Delhi in mid 1980s to consult Dr Paroda for establishing the National Plant Genetics Resources Center, (PGRC) in Sri Lanka. Our relationship grew through communication and many meetings where I met him, particularly during his involvement in the formation of Global Forum for Agricultural Research (GFAR) with the blessing of CGIAR.

Having established PGRC in Sri Lanka, Sri Lankan Government sought his advice and invited him as a consultant to advice on running of the PGRC of Sri Lanka. This relationship grew further with NBPGR staff joining with the Sri Lankan staff to jointly launch germplasm exploration missions in Sri Lanka through which our scientists were trained in proper genetic resources exploration and conservation.



Dr Rajendra Singh Paroda, signing the Memorandum of Agreement with the Indian Council of Agricultural Research and Sri Lanka Council for Agricultural Research Policy on 2nd July, 1998, New Delhi in the presence of The High Commissioner of Sri Lanka in India and Dr Gery Jayawardena, Mr Siripala Jayaweera, Secretary Ministry of Agriculture

Once when he visited Sri Lanka, he said “Gerry, while we are in these positions, let us do something to bring our two countries closer to help the agricultural sector through technology development”. As Dr Paroda served as the former Director General of the Indian Council of Agricultural Research (ICAR) and Secretary, Department of Agricultural Research and Education (DARE), Government of India,

he encouraged me to prepare a Memorandum of Agreement (MOA) between SLCARP and the ICAR. This relationship that we established, has been functional till date and continues to grow covering many new areas. Through the MOA between SLCARP and ICAR, over hundred scholars were trained and are still being trained. This program has contributed significantly in training the researchers of the National Agriculture Research



Dr RS Paroda, Executive Secretary, APAARI delivering the key note address at the SLCARP International Agricultural Research Symposium 2014



Dr R.S Paroda, Executive Secretary, lighting the traditional oil lamp at the Agricultural Research Symposium 2014 with Hon Minister Basil Rajapakse, Cabinet Minister for Economic Development 2010 - 2015.

System (NARS) of Sri Lanka and most of the trained researchers are now holding key positions in the NARS.

In recognition of Dr Paroda's contribution, he was invited as the Chief Guest to the first International Agriculture Research Symposium of the Sri Lanka Council for Agricultural Research Policy in 2014 and as a Key note speaker to the Annual symposium of the Department of Agriculture in 2014. He is a close friend of SLCARP, Department of Agriculture and many research institutes in Sri Lanka. Further, SLCARP and the agriculture researchers of Sri Lanka continued to have strong relations with Dr Paroda throughout

the period he served as Executive Secretary of the Asia Pacific Association of Agricultural Research Institutions (APAARI). As SLCARP has been a member of APAARI since 1998, several of our researchers have attended training workshops and expert consultations at APAARI.

I remember his recent contribution in organizing the 1st International Agrobiodiversity Congress in November 2016, where the congress was graced by Honorable Narendra Modi, Prime Minister of India, where the focus was importance of Agrobiodiversity to solve future threats due to climate change. In felicitating Dr Paroda on his 75th Birthday, it is my duty as an agriculturist and as a friend to truly appreciate and recognize his leadership, wisdom, high ethics and morality and the service rendered to the agriculture in India. His leadership has led the Indian agriculture to gain heights and to make tremendous achievements which has finally helped the less privileged and the farmers of India, not only has he contributed to the Indian agriculture but has generously helped agriculture in Sri Lanka to grow.

Dr Paroda has exhibited exceptional wisdom, remarkable vision, and exemplary leadership. I wish him peace, good health, happiness and continuous support to the agriculture sector of India and Sri Lanka. Congratulations and happy birthday!

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Reflections on my interaction with Dr R.S. Paroda, Former Director General, ICAR India

It is with fond memories and regards for a distinguished Agricultural Scientist and Administrator and a long-term colleague in India, Dr Paroda I write these few words about my reflections about him, Most of my reflections are based on my tenure with IRRI where I served for 27 years as OJ scientist and Department head.

As a person I can relate to Dr Paroda very well as I believe we have very similar values and personalities. I always round him a straight shooter, honest and spoke his mind irrespective of any consequences which might have negative impacts on him. He was a fearless leader. He will always deal with you in a honest and transparent way with no other agenda in mind. His decisions were always forthright without any ambiguity. He will never tell you always what you want to hear. He will deal with you and tell you exactly what he believed should be said without any frill. As a result he was not always loved but always was very well respected.

We had mutual respect for each other and both always had a deep understanding in each of the issues we dealt with. I had several interactions with him during his tenure as DG, ICAR and a IRRI BOARD of trustee. Whenever I visited New Delhi for IRRI related work I had always visited him. A couple of times he took me home and we had a family dinner at his official quarters in New Delhi. His wife was extremely hospitable and kind when I visited him at his residence. They are a great couple.

I believe he could have been a DG of RRI or of any other CG centers if he was a more political and compromising. He never changed nor I ever wanted him to change. Besides ICAR DG he was equally successful as a Regional Representative for ICARDA for the Middle East.

Despite his monumental accomplishments I always found him very polite and respectful human being. I salute him and join the celebration on his 75th BIRTHDAY and wish him a long, healthy and happy years. With my highest personal regards for a good colleague and my good friend Dr R.S. Paroda.

S L Choudhary

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It is a great pleasure honor to write about Dr R S Paroda, a great agricultural scientist of International repute. I had a brief interaction way back from the year 1962-1965, when he was a final year graduate student in DAV College, Ajmer, Rajasthan and Post-graduate student at Rajasthan College of Agriculture, Udaipur, Rajasthan, and I was the student of Pre-University and Under-graduate student respectively, at the same college. During this brief interaction, I was highly impressed by his simplicity and eagerness to help fellow colleagues and elders.

I have found him a scientist of great caliber, which is recognized by one and all in showering on him various Awards and Fellowships. He is a renowned scientist, ready to help the budding scientists and his colleagues in their endeavor to promote scientific activities. I had personally experienced it. Being the Secretary of Indian Society of Mycology and Plant Pathology (ISMPP), I had organized and celebrated the Silver Jubilee of ISMPP by organizing the first Global Conference on 'Plant Diseases and their Management' in the year 1995 at Rajasthan College of Agriculture, Udaipur. Dr Y L Nene, the renowned scientist was the President of the ISMPP that time and the Organizing Chairman of this mega event. We had applied to ICAR well in advance for financial assistance without success. However, the Conference was quite successful having participation of 352 participants from 27 countries. When I presented the copy of the proceedings to DR R S Paroda, DG, ICAR, he was so impressed with the success of the Conference that first he sanctioned Rs 50,000/- for the conference and later on informed me personally about the same. This way he gave a great surprise to me as well the members of ISMPP.

Secondly, he visited Udaipur in January 1999. I got an opportunity to meet him and submitted a proposal to organize a Summer School on 'Ancient and Medieval History of Indian Agriculture and its Relevance to Sustainable Agriculture in the 21st Century' at Rajasthan College of Agriculture, Udaipur. It was a great surprise to me when I received telephone from the Dean of the College to inform me about the sanction of the proposal. It shows his humility and eagerness to promote scientific activities and belief in helping without pomp and show.

Dr. R S Paroda is on the International Advisory board of Asian Agri History Journal of Asian Agri-history Foundation (AAHF) founded by another Internationally

leading scientist Dr Y L Nene and through this he is helping the foundation to disseminate information on the history and heritage of agriculture in South and South-east Asian region. I have also been associated with this foundation since its inception and presently being the Chairman of this foundation, I have been in close contact with Dr Paroda. Here again, his interest in presenting the importance and sustainability of ancient Indian agriculture has come to the forefront. Using his influence, he has directly and indirectly helped the foundation in organizing its activities. His interest in dignifying the ancient Indian agriculture was so great that recently a National Symposium on 'The Role of Vrikshayurveda and traditional Practices in Organic Agriculture' in collaboration with MPUAT, Udaipur was held from 6-8 March 2017 at Udaipur. Even though he had visited Udaipur a couple of days ago for an event, he returned back few days later to attend this mega event to participate in the Plenary Session and framing the recommendations. Hence, he is a man of great capability, love for the advancement of scientific activities, and love for the country and its past agriculture heritage. I really feel honored to have been associated with such a great scientist and humanitarian.

I wish Dr Paroda best of health and happiness on his 75th birth anniversary and many more years of active life and guidance.



Dr R.S. Paroda - A Visionary and Institution Builder

First of all, I would like to convey my heartfelt felicitation to Dr R.S. Paroda on completing 75 years of journey, an important milestone in life. My close association with Dr Paroda started when in October 1964 he joined IARI for Ph.D. I was already at IARI as I did my MSc from IARI. We both did BSc agriculture from University of Rajasthan in 1962. He joined Rajasthan College of Agriculture, Udaipur for MSc programme. Getting admission to IARI during those days was dream come true. His admission to IARI reflected his academic excellence which has been maintained to this day.

At IARI he worked with Prof. A.B. Joshi an outstanding teacher, administrator and one of the most outstanding Post-Graduate Dean. I must say that Dr Paroda imbibed many of the sterling qualities of his 'guru' in true sense. Dr Joshi fondly called him Raj. IARI allowed nurturing his talent and provided wonderful opportunity of learning. We were in the same hostel and shared the mess. Hostel life during those days was most enjoyable despite lack of many facilities. In the company of all intelligent students from all parts of India, it required determination and intellect to excel. Dr Paroda was able to shine and received Gold Medal for standing first in Genetics. That time we were the largest group from Rajasthan and in most disciplines left imprint.

After doing Ph.D, I left for Canada and Dr Paroda for UK. On return from Canada I joined IARI in 1969 where as Dr Paroda joined at Hisar. We kept on meeting almost every year because IARI happened to be our alma mater and we had many common friends. Our contacts were limited those days but have pleasant memories of discussing about SAUs and ICAR. Later he joined as DDG (Crops) and this provided more opportunity for not only discussions but also on issues of how to bring transformation in the environment for research since this was dear to him. Later I became Dean and Joint Director (Education), IARI. He became Director General, ICAR and Secretary Department of Agricultural Research and Education in 1995. Within a year of my joining as Dean, I was selected for the post of Deputy Director General (Education), ICAR and this provided excellent opportunity of working with him in the area which was dear to both of us. I accepted the new

assignment as a challenge for the transformation of higher agricultural education. In this task, I must say that I received unstinted and full support from Dr Paroda. But for his constant support we could not have accomplished the major improvement in quality of higher agricultural education.

An Outstanding Administrator

Of the numerous qualities Dr Paroda possesses, I have picked up first as an outstanding administrator. Very prompt in decision making, clarity of vision and unmatched commitment to the institution and its goals, ability to take right decisions, high degree of guiding abilities, getting best out of colleagues and respect to all makes him a role model and an administrator admired by all. He was able to take tough decisions at times despite all odds and stood firm for the good of the organization. During his stewardship, I must say that ICAR made tremendous progress in every sphere. All those who worked with him admire him for his sincere and dedicated efforts to promote excellence in research, education and extension education. Since many persons will be writing on different aspects, I am limiting here for the promotion of Agricultural education.

As an Institutional Builder

When I joined Education Division in Nov 1995, it was a non-descript division with very little support. There were 28 agricultural universities then with already a question mark on the quality of education. Fortunately realizing the importance of quality assurance in agricultural education, the World Bank had supported "Agricultural Human Resource Development Project" which provided platform to launch reforms in agricultural education. However the major part of budget provision was only for four agricultural universities. Therefore my first priority was to get additional support for education Division. In this I got unprecedented support from Dr Paroda because of his realization that without strengthening education, improvement in research would be a tall order. My budget was increased three folds including external assistance that year. This heralded a new era for education. The credit goes to Dr Paroda. I would narrate an incidence. On March 29, I was preparing to go for playing tennis and phone came from Dr Paroda and he said about budget "Mehtaji ab to aap khush hain?" I replied that I was somewhat happy. Then he said how much more he should give me to make me happy and I said that if I got Rs 50 lakh, I would be happy. He said "Given." That was the concern for education.

The support to SAUs by state governments was decreasing for running the university because of increased expenditure on establishment because of pay revision. As a result, most universities did not have support even for repair and maintenance of building and many buildings were becoming monuments for posterity. It was at this point that Dr Paroda came up with new concept of Catch Up Grant. Almost Rs 400 crore was provided and this heralded rejuvenation work in all SAUs including Deemed Universities. Establishment of the Accreditation Board for quality assurance, all India entrance examination to admit 15% seats

at UG level and 25% seats at PG level to reduce in-breeding, National Talent Scholarship at undergraduate level, sabbatical leave, provision of training of faculty in the best of the institutions, modern class rooms and digitized library were some of the initiatives which led to total transformation in quality assurance for education. Another initiative was providing state of the art infrastructure for curriculum delivery.

Visionary

Dr Paroda provided unmatched leadership for the growth of the ICAR and SAUs. He steadfastly worked on long term goals for bringing institutional excellence. All institutions were helped to develop Vision 2020 documents. Strategic planning was another Hallmark. If one has to admire his vision one has to look at the development of National Agricultural Science Centre. Today every one admires the planning and vision in creating this center but few people know the difficulties he faced. But he implemented resolutely and with fineness associated with his work. It is a testimony of his many sided personality.

He would always say to his colleagues that we should leave a legacy of building institutions and an environment which permits flowering of the talent of scientists. National Agricultural Technology Project supported by World Bank was another feather in his cap. It supported many new innovations. First time partnership with public and private sector R&D organisations was started. Under NATP, many new programmes were started which promoted team work and development of technologies taking advantage of new developments in science and technology. ATMA, IVLP added new dimension to technology transfer.

Organizational skills

Dr Paroda has unmatched organizational abilities. Highly successful organization of Indian Science Congress at IARI was admired by one and all. In ICAR, major reforms were introduced for improving the efficiency, computerization, governance improvement, introducing many new awards for promoting excellence in research, education and extension, bringing transparency and bringing team work. Getting best out of his subordinates and colleagues was another virtue. With all this he combines pleasant personal qualities which endears him to everyone.

In the end, I would say that some part of credit for Dr Paroda's achievement goes to Dr Shashi, the better half who supported him in every way. On this auspicious occasion Mrs Mehta joins me in wishing Dr Paroda many more years of life for bringing cheer to the farmers of India.

S S Acharya

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Congratulations to *Padma Bhushan* Dr R.S. Paroda on his 75th birth anniversary. He is plant breeder and geneticist par excellence. Apart from his well-known role as plant breeder and geneticist, he has immensely contributed to the national and international agricultural research and development system as research manager and/or administrator. This is amply reflected in coveted positions he adorned at the national and global levels. Dr Paroda is a great visionary and institutional builder. His contributions in establishment of NBPGR (National Bureau of Plant Genetic Resources) and National Research Centre (NRC) on Seed Spices are well known. He played a major role in visualizing, conceptualizing and establishing the National Agricultural Science Centre (NASC) Complex at New Delhi. He has deep understanding of grass root realities of Indian agriculture, farming and farm families. He recognized and continues to appreciate the role of social scientists in the National Agricultural Research System (NARS). He supported and took several initiatives to strengthen agricultural economics and policy research component within NARS, most significant of which was establishment of National Centre for Agricultural Economics and Policy Research (NCAP) that has now been upgraded to the level of an Institute (NIAP). Dr Paroda is an excellent speaker, communicator and one of those few hard-core scientists who can explain the complexities of agricultural sciences and farming systems in a very erudite way. Recognition of his contributions to agricultural research and development system is well reflected *inter alia* in as many as 14 agricultural universities conferring on him the degree of D.Sc.(h.c.), besides several prestigious national and international awards.

I have known Dr Paroda ever since he joined Master's degree course at Rajasthan College of Agriculture (RCA), Udaipur in early 1960s (3 years after I left the college on completion of my B.Sc. degree). Later, we both earned our respective Ph.D. degrees from IARI (though at different times and in different subjects). In that sense, we happen to be co-alumni of at least two institutes (RCA and IARI). However, my active association and interaction with Dr Paroda commenced when I shifted to *Krishi Bhawan*, New Delhi as a member and later as chairman of the Commission for Agricultural Costs and Prices (CACP). We had many rounds of professional discussions on agricultural policies when he was DDG (Crop Science) and later Secretary DARE-cum-DG ICAR. I also had focused and fruitful one-to-one discussions with Dr Paroda on agricultural marketing

issues in Asia and the Pacific at APAARI office in Bangkok (Thailand) when I was working in FAO-RAP as Consultant on Agricultural Marketing and Policy. I also recall Dr Paroda's appreciation of agricultural economics and policy research within NARS when he was DG, ICAR. A team of ACIAR (Australian Centre for International Agricultural Research) was in India to identify priority areas of Indian agricultural research that are of interest to Australia also. The ICAR-ACIAR joint team, led by Dr Paroda, invited base papers and research proposals from around 50 professors/scientists from all the fields of agricultural sciences. After three days presentations, discussions and brainstorming, the team selected a few proposals, including the one submitted by me. These researches were fully financed by ACIAR. At that time, I was working as Director of Institute of Development Studies, Jaipur, which was an ICSSR (Indian Council of Social Science Research) institute. The research team led by me consisted of four Australian professors and three professors from NCAP (ICAR Institute). Dr Paroda gave his consent for an ICAR-ACIAR joint project to be led by the Director of an ICSSR institute. The project was successfully completed and the output in the form a book titled 'Indian Agricultural Policy at the Crossroads' was released by Dr Paroda in 2001. Earlier, Dr Paroda chaired the international dissemination workshop of the project held at ICSSR headquarters. This gesture of Dr Paroda continues to remain a matter of great pride for ICSSR council and its institutions for many years.

It was during Dr Paroda's tenure as President of National Academy of Agricultural Sciences (NAAS) that I was elected as Fellow of NAAS. I also recall at least two occasions overseas during 2004-06 when we interacted on international agricultural research system. At that time, he was working in the CG system and I had been Penal Member of the Science Council of CGIAR. I also had the opportunity of working with Dr Paroda in recent years. Between 2011 and 2014, I worked as a member of Search and Selection Committee for National Professors of ICAR, with Dr Paroda as the chairman. The other was the Working Group (WG) on Agriculture set up by the Government of Rajasthan. The WG for Rajasthan was chaired by Dr Paroda (in his capacity as a Member of the Rajasthan State Planning Board) and he insisted me to join as a Member. Dr Paroda was able to lay out State Agricultural Policy Framework, a document that was adopted by the state government. As chairman of the WG, Dr Paroda made remarkable improvements in agricultural development programmes of Rajasthan by sharing his grass root knowledge of Rajasthan agriculture as well as his experiences of working as chairman of Farmers Commission of Haryana.

These apart, I was immensely benefitted by listening to Dr Paroda's inaugural addresses and keynote speeches during several national and international conferences or seminars. It has always been a pleasure to talk to Dr Paroda and spend some time with him whenever I got a chance. Personally, I feel that Dr Paroda has been a well-wisher and guide for me. His thoughts, views and counseling have been very valuable to me, which I do and will continue to cherish for long.

On his attaining the age of 75 years, I convey my greetings and wish him the best of health, all the happiness, cheers, peace and many more decades of intellectually rewarding life, so that we continue getting benefitted from his vast knowledge, wisdom and advice on agricultural research and development. May the almighty God bless him to continue to be the leading light in the cause that he has been so assiduously espousing till now.

S Ayyappan

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Dr R S Paroda - Ahead of Times

At the outset, I would like to thank the organisers of the platinum jubilee commemoration of the one who has always been ahead of times and at the same time, at the right time, when an Organisation of the size and spread like ICAR needed, for asking me to write a note for the occasion. Otherwise, all the thoughts and feelings that I had in my mind regarding the 'Scientist who made a difference in the lives of hundreds of scientists in this country' would have remained with me. They would be anecdotes from the heart, than science *per se*, as my field of study has been a different one than that of the Leader, whom we are celebrating today.

It was the early nineties when we heard of the Reformist Science Manager in the National Agricultural Research System several times over. Dr Paroda Sahab had sent a new wave of hope, confidence and strength that spread across and swept the Council. It was much later that I could meet him, but the system was experiencing a change, that he would passionately espouse in his communications through 'Change is a Must, but Change is difficult'. For a few hundred of us, Scientist S-2s, getting selected as S3s through direct selection, but placed again as Senior Scientists, in the same position that we were, in the wake of adoption of UGC pay scales, was a strange situation. Several post cards used to travel between these people, as there were no mobiles then, and one person who realised the gravity of the situation in terms of human resource management and took action was the Director General. After issuing letters that they are designated as Principal Scientists, and seeing that several scientists were still going to New Delhi without action on the ground, I remember a communication from Krishi Bhawan, that said, 'If immediate action is not taken, the expenditure towards travel of scientists would be recovered from the concerned' and next day, there was prompt action in the institutes.

It was NARP-II and a few hundred scientists were to go overseas for advanced training, approved in the document, but again hurdles at several places. One fine day, the Captain takes a meeting, gets an order issued and makes a difference not just to the system, but to the lives of umpteen scientists who, remained grateful to this action, and contributed with renewed vigour to the system.

Though had seen him from a distance at a few meetings, I still had not met Dr Paroda Sahab, and it was in his office corridor one afternoon that I could see him, setting an instant affectionate bondage, with his enquiries about the Institute as well as the staff members. His two visits to the Central Institute of Freshwater Aquaculture, Bhubaneswar, in quick succession, showed his emphasis on good science, at the same time empathy for staff for their welfare, be it a scientist or a sweeper. Once while going to Guwahati for a Regional Committee meeting in the month of January, our flight landed at Bagdogra for a stopover, but never took off for two days. Almost the entire senior management of ICAR, along with a few of us, Directors of Institutes, then travelled by a bus overnight, no, 16 hours, to Calcutta, yes, it was still Calcutta. We then saw several dimensions of Dr Paroda Sahab, talking to each of us about our institutes and families, virtually fighting with the airline staff for holding us there without taking care. On another occasion, I cannot forget an evening with him, on the beach of Port Blair, when I was only his young colleague, discussing the NARS, its nuances, the way we need to shape science with an understanding of scientists, above all, his warmth, that have remained as treasures with me till day.

It was a delayed flight in Mumbai and the wait in the lounge and discussions on the needs. I remember giving the DG a slip seeking Rs one crore for a farm road, that was the constraint for colleagues to reach the fish ponds in the remote part of the farm. In fifteen days, we got the sanction with the same wordings that we had asked for. The super cyclone in Orissa in October, 1999, shattered us and here was the fatherly leader, who would not only call us over the difficult telephones, but also made sure to visit us to make sure all is well. Known as an Institution builder, I saw Dr Paroda Sahab's passion during the new campus development of the Central Institute of Fisheries Education, but for which the land already in our possession for sixteen years, would have remained fallow. Passion and action was the combination that we would cherish all the time.

Much later in several interactions, in Moscow, Montpellier or Punta del Este in Uruguay for international meets, when he was wearing different caps, we received the same attention ranging from presentations to food, and affection plenty at his place in Ajmer. His concern, guidance and counselling all through have enabled people to realise their potentials, also showing mentoring is as important as men, material and money for growth of science in the cause of the Indian farming community.

Quoting Ralph Nader, 'the function of leadership is to produce more leaders, not more followers', I am privileged to belong to the NARS at a time when we had Dr Paroda Sahab as the leader who proved the above statement. When the heart is full, words are few. He has given so much to everyone and the prayer is to add more years to him for the sake of others. On the occasion of his 75th birthday, my thanks, gratitude and salutations to him, for his contributions to Indian agriculture through institutional growth as well as individual excellence.

Sain Dass

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Dr R S Paroda – A Multifaceted Exemplary Personality

Dr Paroda is a multifaceted internationally known agricultural scientist of India and I am proud to be his student. He is an excellent field research team leader, administrator, organizer and research manager. He is a creative man taking proactive measures before a problem is actually faced. He leads by example and becomes a trendsetter paving the way for others to follow his footsteps like his students, researchers and administrators, *etc.* His contributions and recognitions are several at national and international level. I am afraid, I may miss many of them but he is a great visionary. I am writing about only those instances which I experienced as his student, junior research colleague during his stay at Choudhary Charan Singh Haryana Agricultural University (CCSHAU), Hisar.

He joined at Haryana Agricultural University (HAU), Hisar in 1971 in the department of plant breeding as a forage breeder, at that time the forage section was not so important as compared to other crop section of the department. He was instrumental in upgrading the forage section of the department by establishing several advance research facilities to carryout high standard research. He was instrumental in creating a separate department of forage crops at HAU. I was doing M.Sc. in the forage section and did not face any problem in doing my research under his mentorship. In the 1980s, he joined back HAU as Head of the department of plant breeding from CAZRI, Jodhpur; then he took some new initiatives in the university like organizing the New Year Function, established plant breeding crop cafeteria and crop science museum that was unique in the university and is remembered till date. On new years' function, the research activities of the plant breeding department are presented which all the university authorities, teachers and students can witness. The plant breeding field crop cafeteria, a typical model in the university, showcased and demonstrated various technologies of all the crops under one roof for the farmers and dignitaries from India and outside India to make the field visit more convenient, effective and time-saving. He also established crop science museum with all the information on various research activities related to the department. The information in crop science museum was displayed to the visitors, farmers and dignitaries as and when they visit the university.

In India, the hybrid project on nine selected crops was the brainchild of Dr R S Paroda, to strengthen the hybrid research in the country. The main aim of the project was to enhance the productivity through the adoption of hybrid technology in these selected crops. I as a plant breeder, and many other researchers and their respective institutions/ organizations involved in hybrid technology project benefitted from this. The impact of this project brought significant outcome in strengthening the infrastructure, capacity building, generating employment, technology development and its dissemination. Later seeing the importance of the project, it was continued under a new initiative i.e. the NATP mega project that too due to his efforts. As a result, the maize crop in which I worked, witnessed double the production with a significant increase in area under maize crop with the adoption of hybrids by the farmers. This was a simple glaring example of foresight of Dr RS Paroda, which I experienced.



He organized numerous national and international conferences as an excellent organizer. After coming from the international assignment, he organized a National Seminar on quality protein

maize (QPM) in 2008 as Chairman, TAAS, in collaboration with Directorate of Maize Research, New Delhi and invited maize workers across the country as well as eminent personalities across the field like Dr MS Swaminathan, Dr VL Chopra, Dr Mangala Rai and SAU (Vice-chancellors and Director Research). During that time, my colleagues and I gained a lot from



his vast experience in organizing the conference. During the conference, he emphasized the importance of single cross hybrid maize and QPM in the country. Both are essential for enhancing the productivity to ensure the farmer's profitability and nutritional security.

He believes by seeing the research and extension activities in the field. For the purpose, several times he visited along with me and other maize scientists to verify the research achievements and their outcomes at maize research fields in Directorate of Maize Research, New Delhi, Haryana Agricultural University, Karnal and farmers field at villages namely Atterna for baby corn and Manoli for sweet corn. During



the visit he interacted with scientists and farmers and as usual he appreciated the efforts of scientists and farmers for their useful work. In the sweet corn and baby corn field, he was very happy to see the smiles on the farmers' faces.

He supported the maize research, especially, single cross hybrid and QPM research of the country at every platform. To encash the research achievements and increased growth rate of maize in all sphere, he suggested me to write a letter to the Secretary (Agriculture) that maize is a strong case for consideration/ inclusion in the national food security mission (NFSM). At the same time, he himself also wrote a letter regarding this. Due to his intervention and convincing ability to policy makers, maize was included in NFSM. Further, the special QPM project was also launched by the government of India in 2009 under NFSM covering nine states with large tribal and hill population to ensure their food and nutritional security.



Thus, Dr Paroda is a multifaceted personality with exemplary creativity and initiatives. I feel proud that I got the opportunity to work with this great visionary personality and salute him. In the end, I pray to almighty for his long life and wish that he continues to guide the world agricultural research community, farmers in many many years to come.

Sant S Virmani

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Dr Rajendra S. Paroda: An Agricultural Scientist and Administrator of Vision, Accomplishments and Eminence

I have known Dr Raj Paroda very closely for more than 35 years and have interacted with him as a scientist, administrator, policy maker and a family friend. In all these capacities, I have found him a man of distinction, vision, resourcefulness and accomplishments at national and international levels and above all, a good friend. As Deputy Director General and Director General of Indian Council of Agricultural Research (ICAR), he was instrumental in establishing and supporting the Hybrid Rice Research Program in India in collaboration with IRRI where I had the responsibility to develop and disseminate this technology in countries outside China. As member of Board of Trustees of IRRI, he provided useful research guidelines to the institute from a national perspective and selected appropriate rice technologies from IRRI for introduction and collaborative evaluation in India. He has achieved success at various positions despite prevailing odds. His numerous awards and distinctions, earned nationally and internationally speak of him adequately and eloquently. India owes him a lot for his multifarious contributions in NBPGR, ICAR, NAAS and TAAS before retirement and after retirement. His recognition as a Padma Bhushan awardee by the President of India is a good testimony of his diversified contributions to Indian agriculture.

My family and his family are close friends and we have exchanged several personal visits to respective homes in and outside India. We have always enjoyed our times



spent together and our families have shared mutual respect and admiration for each other. My family and I wish Dr Paroda a very Happy 75th Birthday and we pray to The Almighty for his a long, healthy and happy life so that his family as well as Indian agriculture continues to benefit from his diversified skills, talents and vast experience.

Shahla Salah Khan

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It has been said that as a general rule of thumb, there must be a ONE who made the life not only a positive impactful with success but unbeatable to make the everlasting footprints.

SIR RAJ PARODA, a name who doesn't need any kind of word to praise his everlasting legacy, the way he touched my life, because usually I heard that this world is male dominant so a female may not get enough as far the male can get. But Sir Raj Paroda had changed my deepest thought by giving his profound words of action and motivation. He is a great inspiration of all the young people. The day I heard that we have an opportunity to express our feelings about Sir Raj Paroda, was the day I started thinking and kept thinking what to say, because there are lots of things in my life as I have learned, observed and experienced with Sir Raj Paroda, and it's difficult to explain the same in words, may be my words may not express the feelings of respect I have for him.

There are absolutely no words to express the feelings that I have for my mentor, a man who is no less than a father because he exemplifies the qualities and traits that make him just that. I met him for the first time at the youth empowerment summit/conference organized by PARC and APPARI with the collaboration of many other organizations for youth empowerment in agriculture development for sustainability. That was an evening in Islamabad, the capital of Pakistan, I knew that there was an instant click. First time ever I was recognized to be a young leader from an international platform in agriculture and awarded by organizers, but half of this was done by Sir Raj Paroda, who encouraged me to present my idea on the floor. He gave me the real strength by saying that "Shahla, believe that you are the best to outperform your own ability". From then, until now, being country representative of YPARD in Pakistan, my journey begun because of his kind support, I am privileged and honored to have known him. I always found him to be the most down to earth and kindhearted person I have ever seen in my life. He has done so many things in his life, but never say that he is an expert, always so humble and modest. I may not be the only one who received his kind support and encouragement, I am sure there are millions of people around the world who proudly say that Sir Raj Paroda is his/her mentor, and that they are doing their best

because he believed in them. He taught us many things from multiple ways, sometimes being a teacher he gave us to understand the discipline of life, being a mentor delivered us a pathway to find a direction towards the success with consistency, while being a scientist he proved that science is life to implement it and make intervention in agriculture. He promoted many young people in agriculture sustainability and gave them purpose to accomplish it in their region, to work for the rural livelihoods for the betterment and overcome the food insecurity by reduced cost of cultivation and use of best crop practices. He supported many rural development plans and communities to consider the importance of nutritional food production and its consumption. He always talks about strengthening the farmers' community and enhancement of their skills to make them technically sound through the capacity building programmes.

His endorsement for the application of technology to improve agriculture growth is highly considerable, and for this not only I would like to pay my heartiest thanks but the entire agriculture community is so grateful to Sir Raj Paroda.

In many ways Sir Raj Paroda supported me like a gentle personality, he gave me the moral support and freedom at the time when it had been decided to attend Asia Maize Conference in Thailand. Sir Raj Paroda's knack for solving seemingly intractable practical difficulties, and his ability to put complex ideas into simple terms, really encouraged me a lot. In every step of my professional and personal life, I took him as an inspiration to move on. He is always there whenever I need him the most, through digital communication he continues to send me his best wishes along with his encouraging sentences which is always helping me to move forward with the same vision and spirit and sometimes pushing me hard to accomplish the set goals of life. As a person and a great leader, he continues to enhance my skills and never tires of listening to me when I share my ventures and plans in life. He is one of the best listeners that I have ever known. I wish to learn many things under his dynamic supervision. I love his unique sense of humor, his ability to analyze quickly and offer words of wisdom, but most of all, I appreciate his closeness to the soil and his love for farming.

Our relationship is one that stretched across the seas, from two borders but with one vision. I always look forward to receiving his gentle encouragement and suggestions. I found that Sir Raj Paroda has an insatiable appetite to learn and spread knowledge while strengthening young people, is his priority, which distinguishes him from many others. This soft, gentle and peace-loving man is unique from many dimensions. His dedication and commitment to the causes of farmers' development and intervention in agriculture for sustainability will be always appreciated. He is extremely modest despite his many achievements and he has never sought anything in return for his tireless efforts for this community.

Sir Raj Paroda, I wish I could be like you, you are my great inspiration, I can't express much about you, because you are the deepest ocean of knowledge. You will be always in my prayers and good thoughts. GOD Bless...live long!

Shanika Jayasekera

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Dr Rajendra Singh Paroda, born 1942 in Ajmer, Rajasthan, is a highly respected, prominent personality in the Indian agriculture system as well as in the Asia Pacific region. Dr Paroda's name is well known, well recognized and highly respected for his contribution to the agriculture sector as the Indian Agricultural scientist. He is much praised as a policy maker and a true friend of the farmer who has contributed significantly to uplift the Indian Agriculture and to strengthen and catalyse the agriculture research and development in the Asia Pacific Region and globally.

I consider it a great honour and a privilege to pen a few words in recognizing the wonderful personality of Dr Rajendra Singh Paroda, a distinguished International scientist, on the occasion of Dr Paroda's 75th birthday.

Although we in Sri Lanka, especially at SLCARP, remember Dr Paroda's achievements for the Indian agriculture sector, in the establishment of the National Plant Genetics Resources Center, (PGRC) in Sri Lanka, involvement in the formation of Global Forum for Agricultural Research (GFAR), and with APAARI, I actually had the honour of meeting this great personality in year 2013 at APAARI in Thailand. It was indeed an honour to meet this great personality about who I had heard and read so much. Further, being a former student of the Indian Agriculture Research Institute, I was really happy to meet Dr Paroda in person.

I note that Dr Paroda's intentions of also seeing the agriculture sector grow in Sri Lanka was reflected in the establishment of the PGRC. Thereafter, when Dr Paroda served as the Director General of the Indian Council of Agricultural Research (ICAR) and Secretary, Department of Agricultural Research and Education (DARE), Government of India, he encouraged Dr SDG Jayawardena, the then Director General of the Department of Agriculture to prepare a Memorandum of Agreement (MOA) between SLCARP and the ICAR. This MOA which was established is functional to date.

Through the MOA between SLCARP and ICAR, over hundred scholars were trained and are still being trained and is one of the biggest scholarship programs of the National Agriculture Research System. This program has contributed significantly to

train the researchers of the National Agriculture Research System (NARS) of Sri Lanka and most of the trained researchers are now holding key positions in the NARS of Sri Lanka

In recognizing Dr Paroda's contribution he was invited as the Chief Guest to the first International Agriculture Research Symposium of the Sri Lanka Council for Agricultural Research Policy in year 2014 and as Key note speaker to the Annual Symposium of the Department of Agriculture in the year 2014. He is a close friend of SLCARP, Department of Agriculture and many research institutes in Sri Lanka.

Further, SLCARP and the agriculture researchers of Sri Lanka continued our strong relations with Dr Paroda throughout the period he was serving as Executive Secretary of the Asia Pacific Association of Agricultural Research Institutions (APAARI). SLCARP is a member of APAARI since 1998.

I have had the honour of coordinating the ICAR-SLCARP program with the ICAR and the APAARI program, in which Dr Paroda played a key role. Through these programs, I have seen the perfection with which Dr Paroda plans and implements programs.

I have also met Dr Mrs Paroda, a fine and a gentle lady, with much wisdom whom I respect very much and I know that she has contributed to the successful personality of Dr Paroda.

In felicitating Dr Paroda on his 75th Birthday, it is my duty as a former student of IARI, a scientist and a younger officer to truly appreciate and recognize the human nature, wisdom, high ethics and morality, the service rendered to the agriculture in India, Sri Lanka and the Asia Pacific. Dr Paroda's vision for the Indian agriculture has achieved many milestones and made tremendous achievements which has finally helped the farmers of India.

Further, I remember with much appreciation the advice and guidance Dr Paroda gave me on research and also the guidance he provides to the younger officers like us whenever we interact with him. I have noticed that Dr Paroda stands out very prominently amongst very prominent personalities in agriculture research conferences with his wisdom.

Dr Paroda has exhibited exemplary leadership, wisdom and qualities. Indeed, India is very privileged to have a great personality like Dr Paroda. I wish him very good health, happiness, contentment and humbly hope that he will continue to support the agriculture sector of India, Sri Lanka and the world.

Dear Sir, congratulations and Happy Birthday!

Simon Hearn

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It is my great pleasure to commend and congratulate Dr Raj Paroda on the occasion of his 75th birthday on 28 August 2017, and to wish him every success in the future.

Dr Paroda's many distinguished scientific, research and leadership achievements and awards are well documented and acknowledged not only in his home country, but also across the Asia-Pacific Region and in the wider global agricultural community. This extensive recognition bears witness to his extraordinary contributions to both agricultural science and policy development, including his important work to improve the alleviation of poverty and hunger over the years. I know well that he remains committed to these goals for the future in his ongoing professional roles.

As a former Principal Adviser to the Australian Centre for International Agricultural Research (ACIAR), I was privileged to work closely with Dr Paroda over a period of eight years in his capacity as Executive Secretary of the Asia Pacific Association of Agricultural Research Institutions (APAARI). This included my time as Chairman of APAARI for two years in 2013-14, and as Chairman of The Asia Pacific Agricultural Research Information System (APARIS) Steering Committee from 2008-14. His professionalism, diligent leadership and friendship made this association with Dr Paroda both productive and enjoyable.

It is well known that Dr Paroda was Executive Secretary of APAARI for over twenty years. His length of service while impressive, is superseded by his achievements in consolidating APAARI as a leading regional agricultural research for development forum. Under his leadership and co-ordination both public and private sector research and representative institutions joined together to meet common goals and aspirations. This was a tremendous achievement given the very diverse nature of the large region and its multifarious agricultural institutions. It is also noteworthy that this was achieved by APAARI on a very modest budget each year. Dr Paroda's aptitude and experience in agricultural research, education and extension was instrumental in enabling this to happen.

Under his guidance APAARI focussed on policy advocacy; research partnerships; regional networking; and human capacity building. He also placed a strong emphasis

on communications and consultations to underpin these activities encapsulating both public and farmer organisations.

While the regional focus of APAARI was central to its activities, the organisation participated actively in wider inter-regional and global agricultural research activities and initiatives during Dr Paroda's tenure as Executive Secretary. These manifold international networks which are also well documented, enabled APAARI to present the Asia-Pacific perspectives on the range of global agricultural challenges and opportunities facing the world at present. Dr Paroda's guidance and active personal involvement in global forums over the years has directly facilitated APAARI's contributions to both scientific research and policy formulation in a timely and constructive manner.

At a personal level I have always valued my time working with Dr Paroda in APAARI, and particularly during my two years as Chairman. His commitment was exemplary, and APAARI owes its previous and ongoing successes to the foundations and platforms established during his term of office.

I once again congratulate him on his enormous achievements and dedication to the agricultural and food industries of the region and beyond.

I wish him every success in his current and future endeavours.

Suhas Wani

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I am very much pleased to recollect my interactions with Dr R.S. Paroda as a Scientist as well as Science Administrator. It was always pleasure to meet Dr Paroda and discuss with him. We used to have good interactions particularly, when he used to visit ICRISAT as Governing Board Member and Vice Chair of the ICRISAT Governing Board. He is always willing to liaise with scientists the new developments in the science and interact with us and also take out time from his busy schedule to visit the experiments in the fields or in the laboratories. We always felt very comfortable to discuss with Dr Paroda as he is very friendly with all the scientists and also provides guidance and support as needed from time to time.

I interacted with Dr Paroda in the personal capacity as well as official capacity and it was very nice to learn that Dr Paroda always remembered the names of people and also enquired about the common acquaintances. His visionary leadership, has helped the country continuously and strengthened the path of self-sufficiency for food production through the modernization of the agricultural science to benefit the farmers.

His support for development research was unparalleled which ensured that science benefitted the farmers. He would have ask pointed queries for scaling-up and also



give the suggestions wherever the weak links were noticed by him in the discussions. Modernization of agricultural science using digital agriculture in India was largely led by Dr Paroda and at the same time, the development research also was quickly planned so that strategic research and development research could benefit the country.

Although Dr Paroda is a Plant Breeder by training but his grasp

of other subjects made every one of us comfortable to discuss with him and seek his support and guidance.

I am very pleased to have a long association with Dr Paroda and particularly also during the APAARI meetings which he led as Executive Secretary of the Asia Pacific Association of Agricultural Research Institutions (APAARI) for considerable time. It was his initiative when most of the times things were happening in APAARI and during his tenure,

APAARI reached new heights for collaboration amongst the different countries and also for exchange of literature and knowledge. During the interactions, we learnt quite a lot from Dr Paroda, not only in terms of science, but also soft skills for handling the human relations which play critical role in the international cooperation.

Even after retirement, Dr Paroda is continuing to help the farmers to deliver the science-based solutions for improving their livelihoods as well as to achieve the food and nutritional security. He headed the Haryana Farmers' Commission and continues to organize the interactions amongst the scientists by organizing national and international symposia in partnership with Advanced Research Institutions. At international level, he still continues to promote capacity building and knowledge exchange. He concerted his efforts in strengthening APAARI.

Dr Paroda is a visionary leader and continues to strive hard to help the farmers.



Suresh Pal

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I recall with great pleasure working with many professional leaders, who have provided me rich learning experience. My association with Dr R.S. Paroda has been quite rewarding in the sense that growth of my professional knowledge was the best when he was in Indian Council of Agricultural Research. The interaction was quite frequent and intense primarily because of his association with economists and his all out support to strengthen policy research, which culminated in establishment of National Institute (then Centre) of Agricultural Economics and Policy Research (NIAP). The Institute has produced many economists with significant contribution to policy research.

My first and perhaps the best interaction with him was in Bangkok in 1994 when he was on deputation to Food and Agriculture Organization and I was a visiting scientist at Asia office of CIMMYT to work on maize seed industry. There were few interaction meetings on different occasions and our research topic was a binding force as Indian seed industry was entering into a new phase. The discussion continued over lunch at his place and this was the best meeting because of three reasons: (a) seed industry and economic research was a natural bond for discussion, (b) Indian food was soup for the soul as I could not adjust with sea food of Bangkok, and (c) meeting with Dr Shashi Paroda was equally inspiring as a person. These discussions laid the foundation of my research on Indian seed industry—an area which provided me international visibility and the work is most cited even now.

This was followed by another development in research planning. ICAR was negotiating with the World Bank for funding and National Agricultural Technology Project was under preparation. The World Bank was insisting on research prioritization using economic criteria and therefore NIAP was a natural choice for this work. There were few scientists at NIAP and the task was challenging. We stretched our capacity and worked closely with ICAR team and World Bank. This opportunity laid the path of my work on agricultural research policy, which in fact became a major theme of research work at NIAP and later in the NARS. I'm glad a synthesis of this work was released by Dr Paroda this year on NIAP's annual day.

Dr Paroda has inspired many because of some uncommon leadership qualities, and any one like to imbibe them. First I think is his professional credibility and commitment to his organization and colleagues. All resources and competency at his command were directed to serve the system and people who worked for the system. He showed tremendous confidence in his colleagues and respected their views. This provided many your scientists to even speak up in senior-level professional and official deliberations. This is extremely important



Dr R.S. Paroda, Dr Harsh K Bhanwala, Dr Ramesh Chand and Dr T. Mohapatra releasing my book on agricultural R&D policy on NIAP annual day 2017.

for growth and responsiveness of any organization. Second important leadership quality we learnt from him to strive for vision for guide the system and motivate people to aspire to realize the vision. The vision is built upon willingness to learn from different sources and think beyond present situation and 'out of box.' This process he institutionalized in the NARS through perspective planning and research evaluation processes. Third, but equally important quality was his ability to work with people of different work style and competency. This eventually encouraged people to work in teams, an important requirement for greater organizational efficiency. He has shown all fairness in assigning work responsibility to different people and rewarding their work with fairness. He was also reasonable in pointing out mistakes or under performance to his colleagues, which is necessary to improve individual's weakness and improve performance. This I guess is the best motivating factor for a scientific organization and getting best even from people with common understanding and professional competency.

The profession of agricultural economics has greatly benefitted from his invaluable guidance and therefore all my senior colleagues and predecessors at NIAP look for any opportunity to work with him and his colleagues. He has been great cementing force in building a bridge between NARS, international organizations and private sector.

I, on behalf of all my colleagues and my own behalf wish him well on his 75th birthday!

Suri Sehgal

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Dear Friends,

On this occasion of Dr Rajendra Singh Paroda's seventy-fifth birthday and his lifetime of service to Indian agricultural development, I am pleased to add my voice to the many others who honor his vast contributions to helping others and in making a positive difference in the world.

I left India in 1959 to study plant science in the US, where I continue to live. On my regular visits to India, I always heard about Dr Paroda's great work streamlining Indian agriculture and the impact on food production, but I had limited personal interactions with him until the mid-1980s. I had the opportunity to interact freely with Dr Paroda for the first time when my wife Edda and I were involved in establishing a seed business in India under the Proagro Group of companies. Dr Paroda's continuous support and encouragement in this endeavor resulted in Proagro Group becoming one of the most successful private sector seed groups in India in agronomic crops, vegetable seeds, and hybrid rice. Proagro's Hybrid Seed International, Inc., was the first private sector company exclusively dedicated to research, seed production, and distribution of hybrid rice seed.

As a lifelong seedsman and agriculturalist, I appreciate Dr Paroda's many contributions to Indian agriculture—a full list of which would be difficult to enumerate. As head of Indian Council of Agricultural Research (ICAR), and Secretary, Department of Agricultural Research and Education, Government of India, he strengthened the National Agricultural Research System (NARS) and made it responsive and effective to the needs of farmers. As an active participant in the International Agricultural Research System, he helped strengthen the international agriculture system. His interest in biodiversity and conservation of genetic resources led him to establish a modern and most up-to-date gene bank in India. Similarly he was instrumental in helping Central Asia and Caucasus in setting up their NARS and gene banks. In 1996 he organized a highly successful second congress of the Crop Science Society of America in New Delhi, which was attended by many national and international scientists. I had the privilege of attending the congress and participating in the inauguration of the gene bank at the Indian Agricultural Research Institute.

My wife Edda and I used the bulk of the proceeds from the 1998 sale of the Proagro Group to Hoechst-Schering AgrEvo of Germany (now Bayer) to found two philanthropic organizations with the goal of making a positive difference in the lives of the rural poor in India: Sehgal Foundation based in Des Moines, Iowa, in the US, and S M Sehgal Foundation based in Gurugram, Haryana, in India. Dr Paroda served for a time on the board of trustees of S M Sehgal Foundation in India where his counsel was always very welcome and greatly appreciated. The foundation's key programs, in water management, agricultural development, and good rural governance, address the most pressing concerns of the rural poor: water security, food security, and social justice, with emphasis on the empowerment of women. Seventeen years after the work started in four villages in the



Mosaic Award at S M Sehgal Foundation, Gurugram, India 2017

Mewat district of Haryana, the work is now being done in more than 550 villages in five states: Haryana, Rajasthan, Bihar, Telangana, and Andhra Pradesh—with local, regional, national, and international partners in government, business, academia, etc. We thank Dr Paroda for the part in played in our growth and development.

In 2016 Dr Paroda organized a highly successful first international agrobiodiversity congress in New Delhi where India's Prime Minister Modi and other many dignitaries from sixty countries around the world participated. The Delhi Declaration made at that event called upon all nations to “accord top priority” to agrobiodiversity conservation and the sustainable use to achieve the targets of the Sustainable Development Goals related to poverty alleviation, food and nutritional security, health, gender equity, and global partnership.

Dr Paroda continues to play an important role in crop science research through his association with Trust for Advancement of Agricultural Sciences (TAAS) and as President of the Indian Society of Plant Genetic Resources (ISPGR) in New Delhi.

I appreciate, respect, and congratulate Dr Rajendra Singh Paroda for his role in furthering the cause of Indian agriculture throughout his life. The entire Sehgal family and the Sehgal Foundation teams in the US and in India are grateful for his support for our work to further rural development in India, for all our collaborations over the years, and for our shared understanding of the importance of agrobiodiversity and the conservation of the genetic resources of our planet.

Dr Paroda has attained the most valued place in life where he can be assured that he has made the world a better place by his work and by the way he has led his life.

Surinder Sud

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Dr Raj Paroda's esteem in the eyes of the agricultural fraternity grew several folds during the brief rough patch in 2000 in his spotless and illustrious professional career. His stature at the domestic as well as international level rose further when he came out unscathed and stronger from this episode.

I am referring to the unfortunate event in November 2000 when he was suddenly relieved of his twin charge of Director-General of the Indian Council of Agricultural Research (ICAR) and Secretary of the Department of Agricultural Research and Education (DARE). This was done with a terse official order saying that he would be on "compulsory wait until further orders". This step of the government (read agriculture ministry) had stunned and, more so, angered everybody connected with the national agricultural research and education system and, in fact, even other scientific and educational bodies. The shockwaves transcended the national boundaries and were felt equally strongly even abroad because he belonged to a galaxy of world renowned farm scientists. At home, his abilities as an able scientist and science administrator were widely appreciated. Abroad, his qualities of guiding international organisations and conducting global events which he frequently chaired were widely acclaimed.

When I went to his home to express my and other media friends' solidarity with him, I found him dismayed but not dejected – which reflected the strength of his character. The reassuring support he was receiving from within the country and abroad was reflected on his face. It soon became clear that the government, while going in for this misadventure, had underestimated the gravity of this move and the backlash it would evoke from various quarters. Barring perhaps the agriculture minister himself, everybody else was sure that this move would misfire and the government would have to retract it. As it ultimately turned out, it was the government, and not Dr Paroda, who got humiliated and suffered a loss of face.

The flimsy ground cited by the government for this mindless action – that it was needed to ensure impartial probe into irregularities in the purchase of computers by the ICAR – cut no ice with anybody. Even many of the agriculture ministry officials privately conceded that a blunder had been committed which would boomerang on the government and would cost it dearly. Unsurprisingly, even the scientists

working in the public-sector research organisations, who normally refrained from reacting publically to any move or act of the government, far less criticising it, came out openly with unequivocal condemnation of the unwarranted action against Dr Paroda. Dr M.S. Swaminathan and Dr M.G.K. Menon, the most respected scientists, were among the first to oppose the government's move and point out that it would be detrimental to agricultural research, education and extension. Nobel laureate Norman E. Borlaug, hailed popularly as father of the green revolution in India and several other developing countries, also faxed a strongly-worded missive to the then Prime Minister, Mr Atal Behari Vajpayee, seeking Dr Paroda's honourable rehabilitation. He pointed out, *inter alia*, that if this was aimed at separating the stewardship of the ICAR from that of the DARE, it would be unwise to do so as it would disturb the existing harmony between agricultural research, education and extension. Among the host of scientific and other associations and forums that passed the resolutions calling upon the government to review and retreat its action was the Association of Agricultural Universities. Its resolution was signed by the vice-chancellors of as many as 31 farm universities and four deemed universities.

Disconcerted by such formidable and furious fallout, the government had to retreat its ill-advised step and reinstate Dr Paroda with full honours. What also haunted the government, which it had not visualised at the time of taking the hasty and injudicious action, was the approaching 88th session of the Indian Science Congress which was to be presided over by Dr Paroda in his capacity as the elected president of this august body and to be attended and addressed, as per the convention, by the Prime Minister as the chief guest. The failure to undo the harm caused to Dr Paroda would have proved embarrassing for the Prime Minister, as also for the ministers in charge of agriculture and science and technology ministries who were also slated to address the global gathering under the chairmanship of an official sacked by their own government.

For Dr Paroda, the whole episode proved a virtual blessing in disguise as it prompted him to do bigger things in life and that too at the global level. He opted for voluntary retirement from the government service and took up international assignments. This displayed the potential that this very humble human being had to serve the mankind.

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Dr R.S. Paroda – A “Serious” Smiley Face!

I have the honour of having official working relationship with Dr R.S. Paroda for over 15 years. Initially, as ES-APAARI he invited some officials from Pakistan Agricultural Research Council (PARC) to attend some meeting(s) in Bangkok. Chairman, PARC nominated my name to represent PARC in these meetings. My first encounter with him in Bangkok was the first word that I write above in the subject line. Meaning “serious” in his attitude, work, discipline, and in time management. Thus, believe you me, I was a bit “scared” to face him during two-three days encounter during these meetings.

However, as time passed by, and I had more chances to meet him in official dinners, musical evenings etc., I realized his “down to earth” and smiley face and character. I came to know about his “zero-tolerance” on any mistake(s) towards official tasks. But, on the other hand, he would also guide you to achieve certain targets in the most amicable and economical ways. His vision in organizing various events, and surely, he must have organized in hundreds from APAARI platform, was very minutely and delicately thoughtful. From seating arrangements, name plates, opting for heading various sessions, make-shift arrangements due to non-availability of any committed senior official, distribution of small gifts to participants, or any other matter, he would have complete authority and control of each and every aspect.

I have the honour of organizing mega back-to-back events in Islamabad, Pakistan in 2013 and I recall the complete support and guidance of his and his staff in dealing with all International delegates. I also recall that I had lots of issues in following up Visa(s) for many International delegates, specially arriving from India, but our continuous telephonic conversation helped us to finally make the Islamabad back to back events a great success.

With the passage of time, Dr R.S. Paroda and I became much more familiar with each other and on one occasion, while attending a Conference in Bangkok, I took my wife and son to Thailand as well. It was this time, when I observed the best of the “human loving character” of Dr R.S. Paroda when he invited my son and wife for

almost all official dinners and ensured that their stay in Bangkok remained enjoyable. Thus, it is not only me who admires Dr R.S. Paroda but it is my family that is also very impressed with him.

Technically, administratively, and on the managerial front Dr R.S. Paroda is a complete person. He remembers his current and past colleagues very well. For example, he would always ask me the well-being of almost all former Chairmen, PARC or any other PARC Officials who may have met him in the past. His memory in remembering their names is very sharp.

Scientifically, he was one of the most talented researchers in his field area. To my belief, he would lead any team in any scientific discipline, be it be plant breeding, plant genetics, agronomy, farm mechanization or agricultural economy.

Once, Dr R.S. Paroda left as ES-APAARI, he still continued his email contacts with me and I am so grateful to him for this. I always cherish his company, and I will always pray for his health and “serious smiley face” flourishes at all times. Ameen.

T C Jain

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It is a great pleasure and excellent opportunity for me to express my gratitude and close relations that I have and will continue to have with Dr R.S. Paroda. Dr Raj Paroda and I have several things in common such as coming from a small village in Rajasthan, completing our graduation from the state before coming to the National and Global forum. We both love Rajasthani food (Dal, Bati, Churma) and often talk in local language when no one else is around. Only a few days back he also mentioned that he started his carrier from Jobner College- my birth place and where I spend most part of my life. I completed writing my “Autobiography” and when I was going to publish it, I requested Dr Paroda to write FOREWARD for this book, to which he immediately agreed and made available in less than two weeks. The book was published in February 2017.

His achievements in the scientific filed, awards and recognitions at the national and International level are known and I would not like to repeat them here as he has received all the National Awards from ICAR and several others in the field of Agriculture. But, I would definitely like to mention the most prestigious National award “PADMA BHUSHAN” by the Government of India. Despite all this, the humility with which he deals with colleagues and friends are unique that made him one of the most popular and acceptable friends not only in the scientific community but also with others. This point was especially confirmed with the presence of dignitaries and friends in a get together party that his son organized on his 70th birthday in a Hotel at CP, New Delhi.

Before, joining ICAR, he established his reputation as the Professor and Head of Plant Breeding and Genetics at HAU, Hisar. I am particularly mentioning it here, as we had differences of opinion and used to discuss these differences openly. I was not comfortable with the arrangements in HAU and PAU, where the Research stations and the Research schemes were all crop based and the Head of these stations and schemes used to be the Plant Breeder with support from other departments. I was of the opinion that since these programs are multidisciplinary, the senior most competent person from any departments should head the research station/scheme. I was looking after the World Bank supported “National Agricultural Research Project” (NARP) from ICAR, under which several new positions were created, especially at the higher level in Agronomy. He used to tease me by naming NARP as “National Agronomy Research

Project”. This topic continued to be our important part of discussion after he joined as DDG, Crops at ICAR. But this had never reflected in our association and respect for each other.

I was closely associated with ICAR even when I shifted to World Bank in 1986 and have no hesitation to comment that he was one of the most successful Director Generals at ICAR. While working with the World Bank at that time I used to listen and enjoy lot of praise from my colleagues in the World Bank with the way of his working, particularly in taking quick and hard decisions. I will like to share here one incident where I had taken some unusual advantage of our friendship. One of our Senior Colleague from Washington wanted to meet Dr Paroda. He tried to get an appointment through Dr Paroda’s PS and failed to get time as Dr Paroda had no time available according to his Diary. On some one’s advise in the bank, he came to me and mentioned that I am here from last two days and not able to get time with DG, ICAR. I called Dr Paroda's office and took the privilege of talking to him even when he was in a meeting. Since he was in a meeting, I asked him, are you free this evening for dinner? he said yes and I fixed a meeting with him at 20:30 hrs at Taj Mansingh Hotel with our bank Colleague and myself. My Senior Colleague from the Bank was astonished to here our conversation, but this was only once that you can take such privilege with your friends at a top position.

Dr Paroda and I with our spouses had a visit to Nepal in September 1998. This was planned in such a way, that I went to visit the World Bank funded Agricultural Projects and Dr Paroda went to establish/strengthen bi-lateral relations in the field of Agriculture with the Government of Nepal. Despite our independent programs we thoroughly enjoyed the company of Dr Paroda and Shashiji. We visited the International Center for Integrated Mountain Development (ICIMOD) at Kathmandu where we met some of our friends like Dr N.S. Jodha (Economist, earlier worked at ICRISAT and from Rajasthan) and Dr Paroda’s relative who were working there. But the most exciting part was the dinner hosted by the Government of Nepal in Dr Paroda’ honour and we were also invited. The delicacies of Nepal served during the dinner along with the traditional system of sitting (on the ground) and service were exciting. Despite separate programs, we spend quite some time especially my wife in visiting the Kathmandu and purchasing Chinese *Kambals* (*which we are still using*). We also had the opportunity to travel together while going as well as returning and besides having good time in flights, also enjoyed the privilege of VIP treatment at the Kathmandu and Delhi airports.

On this auspicious occasion of his 75th birthday, I wish him to continue maintaining his health. This will provide him the opportunity to guide the scientific community in the field of Agriculture and services to the farming community. I would also like to convey my best wishes and regards to His wife Shashiji, who is responsible to a large extent not only for his health but also actively participating in all other activities, particularly in hosting the parties organized at his residence to which we (Me and my wife) had thoroughly enjoyed. We have traditional relations and both the families reside in Gurgaon, but still got into the modern system of meeting friends either in the meetings or in organized parties. I wish we had the traditional system wherein, give a call to ensure that we are at home and get together without any prior arrangement. I think most of us like that system, but hesitant to follow it due to changes in the social system.

T J Pandian

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This election to the fellowship of the Indian National Science Academy in 1986 much prior to his elevation as a Director General of ICAR in 1992 is a clear recognition that Dr Rajendra Singh Paroda is one of our tallest agricultural scientists. My relation with him commenced, when I called on him on my selection as one of the ten ICAR National Professors. On my entry into his chamber, Dr.Paroda stood and put his hands on my shoulder and said, “Dr Pandian, I have carefully looked into your bio-data and wished that you are selected and it has happened. I shall often call you to Delhi and you should extend your services to the common good of ICAR”. And he did call me several times and I extended my service to ICAR to the best of my ability. The following may serve as an example for his concern for fellow scientists. I was given a grant for an extension of wet laboratory facility at Madurai Kamaraj University. While I was in Krishi Bhavan to get wetted the proposed design and cost of ICAR Building, knowing about my presence, he has asked his PA to call me into his chamber, and after brief discussion with the concerned officers, he cleared my file on the spot. Later, he told me that he may not desire any scientist being unduly harassed by the ‘Chitraguptas’ of ICAR. Not only is he an administrator *par excellence* but also a builder of institutions. The two monumental buildings in the Pusa campus stand as the tallest witness for his vision, tenacity and accomplishment. He received a few million dollar grant for the World Bank Project, after the usual incubation period, during which the Government of India changed hands three times and he successfully convinced all the three Prime Ministers. May I prayerfully invoke the blessings of Goddess Meenakshi to shower Her choicest blessings oh him for his continued service for the progress of science and agriculture.

T R Sharma

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Dr R.S. Paroda: A man on Mission for Global Food and Nutritional Security

Dr R.S. Paroda is known as an institutional builder and bringing revolution in the ICAR system and has always been on a specific mission to alleviate hunger and malnutrition from India. Having immense contributions in revamping and modernizing of infrastructure in the National Agricultural Research system (NARS), and starting many new institutes in the NARS, he is still worried how to bring the *Second Green Revolution* in the country. A Plant Breeder by training and an academician par excellence, he has immense contributions in the international agricultural research and development. Besides getting many national and international awards, Dr Paroda has been conferred upon country's highest civilian award, Padma Bhushan by the Govt. of India for his significant contributions to the Indian Agriculture.

The first time I have a chance of listening to Dr R.S. Paroda at HP Agricultural University Palampur way back in 1989-90 as a ICAR-Deputy Director General (Crop Sciences). He delivered a lecture on how India can bring Yellow Revolution (increased edible oil production) in the country. The lecture was so interesting and thought provoking that I still remember it even after more than 27 years. The specific thing which I noticed in

the talk was that he supported his view points with relevant data, facts and figures.

I did not have much personal interaction with Dr Paroda for many years until I moved to the ICAR system in 1999 as a Senior Scientists (Biotechnology) at the ICAR-National Research Centre on Plant Biotechnology, Pusa Campus, New Delhi. Dr



Dr T.R. Sharma receiving ICAR Young Scientists Awards from Union Agriculture Minister Shri Som Nath Ji and Dr RS Paroda, DG ICAR on July 16, 1999

Paroda was Secretary DARE and Director General ICAR during those days. That was the period when he established National Agriculture Science Centre (NASC) at Pusa Campus New Delhi. The NASC consisting of offices of many international organizations, Scientific Societies, an international guest house, NAAS building and Conference facilities are not less than any international standard. In fact, during those days Dr Paroda was also the President of National Academy of Agricultural Sciences. Before moving to ICAR system in the years 1998, I had applied for the NAAS Young Scientist award and also ICAR Young Scientist award. I was lucky enough that I received both these awards in 1999, from Dr Paroda, one in the capacity of President NAAS and other as DG ICAR.

Coming from a university system ICAR was alien to me. It was relatively difficult for me to re-establish my lab at NRCPB New Delhi. However, the research grant which I received as a part of ICAR young scientist award helped me to establish small lab at NRCPB and start my work on mapping and cloning of genes for rice blast resistance, the work which I am still continuing after 18 years of my research career in the ICAR system. The purpose of mentioning these things here is that the Research Grants along with the award, started by Dr Paroda helped many young scientists in the NARS system to establish themselves as budding scientists and are contributing significantly in the agricultural sciences.

Another important incidence which I cannot forget about the decision-making abilities of Dr Paroda is that starting of Rice Genome Sequencing Project in the ICAR system along with University of Delhi South campus with the funding of Rs. 50 lakhs by the Department of Biotechnology, Govt. of India. This particular project not only changed the infrastructural facility of NRCPB but also changed the thinking of many, who never believed that India can venture in such path breaking research and compete with the world scientific community. Being project of national significance, it was reviewed every six months by a high-powered committee Chaired by Dr GS Khush (Distinguished Rice Breeder and World Food Prize laureate) and Dr Paroda (Secretary DARE) and Dr Manju Sharma (Secretary DBT) as its members. Every six months all the investigators (including myself) were making project report presentation in front of such a high-powered committee. Hence, with the strict monitoring of this project, it delivered its targets in 2005 when the rice genome paper appeared in the prestigious journal Nature. Many projects on functional genomics of rice started in the country by making use of genome sequence information of the rice genome. This was all because of the support and decision-making ability of Dr Paroda.

Although I had many formal and informal interactions with Dr Paroda during the past 18 years, but more intense and serious meetings happened after I joined as Executive Director at the National Agri-Food Biotechnology Institute (NABI) (An autonomous Institute of the Department of Biotechnology, Govt. of India), Mohali, Punjab. Being Chairman of Scientific Advisory Committee (SAC) of NABI, he is always concerned with the establishment of the Institute. He made special and many efforts to bring out the Vision 2030 document of NABI. He has personally seen that this document should become a guideline for the



Dr RS Paroda as a Chief Guest at the National Conference on Biotechnology on August 9, 2015



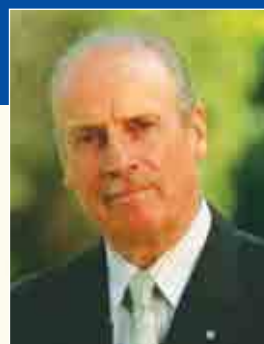
Dr R.S. Paroda Chairing the Scientific Advisory Committee of NABI

future of the institute. We all at NABI are very fortunate that with his life long experience in Global Agriculture Dr Paroda is guiding us to establish this unique institute which has the mandate of working on Agricultural, Food and Nutritional Biotechnology. He is always concerned that we should have high quality, skilled and trained Human resource, and state-of-the-art infrastructure. Also, I we should start flagship programmes at the institute to make it different from the existing institutions in the country.

At this important occasion when we are commemorating the immense contributions of Dr Paroda, my colleagues from NABI and I wish him a long productive, healthy and academically active life. God may bless him all happiness in the years to come.

Timothy G Reeves

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Dr Raj Paroda – Leader Extraordinaire

As Director General of CIMMYT from 1997 to 2002, I had the privilege of working in partnership with Raj Paroda and his esteemed ICAR colleagues. There is no doubt in my mind that Dr Paroda was one of the most outstanding leaders in international agriculture during that time. When Raj spoke, people listened – including very influential people – and he was not only a strong voice for India, but also for all countries of the South, and for smallholder farmers and their communities everywhere. He was very clear with his messages and you knew that when dealing with Dr Paroda he would be firm, but fair in his negotiations. I much preferred him as the respected friend and colleague that he was, rather than as an adversary, as he was not a person to be taken lightly!

I wish to give three examples of the outstanding leadership and contributions of Raj Paroda during our time working together as partners to help the resource-poor of the world.

- **Rice-Wheat Consortium for the Indo-Gangetic Plains**

By definition, this was a joint effort from the distinguished agricultural leaders of Bangladesh, India, Nepal and Pakistan, together with the Director Generals of CIMMYT and IRRI. Their dedication resulted in some tremendous progress being made with rice-wheat systems, due to excellent cooperation and collaboration, both within the region and with global partners. Dr Paroda made an outstanding contribution to the RWC and lead by example, to ensure that representation on this committee would always be at the highest level. He always made himself available to participate and in so doing stimulated others, including myself, to show the same level of commitment. As a result the RWC was able to make high-level, important decisions on collaboration and actions that were immediately implemented for the benefit of smallholder farmers.

- **CIMMYT India Office**

India and CIMMYT had a well-recognised and long-standing partnership, initially established through the heroic endeavours of Dr Norman Borlaug and

Dr M S Swaminathan and their wonderful colleagues. CIMMYT did not however have an established office in India when I took over as DG. Raj Paroda worked extremely hard to convince us that we should rectify this situation. I was very proud to officially open the CIMMYT, India office, jointly with Dr Paroda, in the excellent new NASC complex. Many other CGIAR centres and others subsequently followed suit. It would not have happened without the vision and drive of Raj Paroda.

- **APAARI**

Dr Paroda was also a driving force in the development of APAARI into a meaningful and effective organisation to stimulate regional collaboration and communication. Of course, many others were also great contributors, but the continuing presence and leadership of Dr Paroda was an inspiration to many of us.

One of the common themes of the above examples, is regional and international cooperation and collaboration and it is Dr Paroda's efforts in these crucially important activities that were a true mark of the man and have resulted in a tremendous legacy for his outstanding work.

Raj, it was an honour and a privilege to have worked with you for the benefit of the resource-poor of the world. Thank you!

Tony Fischer

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I became Director of the CIMMYT Wheat Program in mid 1988, and before long I was in India, the oldest and most valued overseas collaborator for CIMMYT Wheat in Mexico. Late August 1989 was my first visit, and saw me at the annual AIWICP gathering in sweltering Nagpur. Dr Paroda was DDG Crops and his address to the hundreds of assembled wheat scientists was memorable; the only living thing in that auditorium rigid with attention was the carefree mouse running around the dais, quite unbeknown to the speaker! Dr Paroda became an early and decisive supporter of the rice-wheat initiative as it got underway in the early 1990s, and helped it become the pioneer and model of a successful ecoregional research project, in this case one spread right across northern South Asia; his appointment of Dr R.K. Gupta as project coordinator was masterful. When in New Delhi, I would always visit him, now DG of ICAR, his office an oasis of order and tranquillity after the street chaos, and Krishi Bhawan corridors festooned with cables and wires and bustling people carrying loads of paper files. No doubt all that has changed, but what was important then was his unwavering support of collaboration between the CIMMYT Wheat Program and Indian wheat researchers, including those at his new Wheat Directorate at Karnal. Personal relations with Drs Jesse Dubin, Peter Hobbs and Gene Saari, the key CIMMYT Wheat regional scientists then, were excellent, and many logjams were cleared by his forceful but well-meaning approach. After 7 years, I left CIMMYT for ACIAR in Canberra, and soon I was back in Asia in another capacity. From time to time there were the usual lively meetings with Dr Paroda. Who of the lucky attendees will forget the International Crop Science Congress in New Delhi in 1996 for which Dr Paroda was Executive Chairman. I am still not sure whether there were elephants at one of the events but there certainly was captivating Indian classical music and dancing at another. I also recall his time as Executive Secretary to APAARI where his usual energy led, amongst other things, to the important series of publications covering various agricultural success stories of the region; I particularly remember the one on the baby corn industry in Thailand, an excellent example of farmers moving up the value chain. Another major encounter was to invite Dr Paroda to make a plenary presentation at the 2004 International Crop Science Congress in Brisbane. The title was “Scaling-up: how to reach a billion resource-poor farmers in developing

countries”. Given his long experience with such issues, his presentation was replete and valuable, even if these days they say “scaling out”, not “scaling up”! The presentation can be seen at www.cropscience.org.au/icsc2004. Finally and appropriately, the indefatigable Dr Paroda gave an important address on India, CIMMYT, BISA and the way forward, at the CIMMYT 50th birthday conference in Mexico in September 2016. Thank you Raj Paroda for your tireless drive and enthusiasm on behalf of agricultural science and India’s farmers, and for holding strong the bonds with CIMMYT.

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Dr R.S. Paroda – A “Friend” Par Excellent

On this most auspicious day of your 75th birthday, it is my great pleasure and distinct privilege to express a select few reminiscences through this testimonial.

If I remember it correctly, I first met you in Jobner, Rajasthan in 1961-62 when you came to visit your sister Raj and brother-in-law Dr V.S. Kulhari. We met again in 1963 at IARI, where you were a Ph.D. student and subsequently again in your village Saradhana, near Ajmer in 1964-65. With this much early contact in our youth, I believe our friendship is based on deep roots and a clear understanding of what we stand for in our professional and personal lives. Over decades, we have continuously interacted in many international meetings which has strengthened our friendship. During this journey, I found you to be a goal oriented person with strong academic and scientific background, a skilled administrator, who is unflinchingly committed to the advancement of agricultural science and food production the world-over and with special sensitivity to the needs of India. If I made a list of your academic awards you have received, it will be a voluminous undertaking. To me the crowning holistic achievement to recognize your tireless work is reflected in the fitting award of *Padma Bhushan* presented to you by the people and the Government of India.

Dr Paroda, your passion for the agricultural sciences and for food security is succinctly spoken in your own words and that also to your esteemed mother. These noble words were respectfully spoken soon after your retirement from tireless service to ICAR. These words were spoken when your mother asked you to come back and look after the family farm. Your answer was, “Mother, there is much more to be done for all family farms of India”.

On this auspicious day, Paroda Jee, I salute you for your true friendship which has been a source of inspiration all through my professional and personal life, just as it has been I am sure to countless scientists, farmers and their future generations. Based on your devotion to excellence and professional discipline and superb role you have played in India and overseas including at FAO/UN, I have often described you to others as a Karma yogi and a complete person.

I also join many of your well-wishers in commemorating this landmark occasion. Wishing you a joyful and excellent health for years to come.

Uma Lele

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A Happy Birthday Tribute to Dr Raj Paroda

It is with great admiration and affection that I write this tribute to Dr Raj Paroda on his 75th birthday. I cannot remember when I first met him, but his boundless energy, intense commitment to the development of Indian agriculture and the great respect in which his international and national colleagues hold him has been evident to me over the years. We share a number of common interests in improving the state of Indian agriculture. Over the years I have had the pleasure of working with him on a number of creative “out of the box” projects of mutual interest. At the Global Forum on Agricultural Research (GFAR), when he served as the chair of APAARI and organized the largest consultation of Asian NARS, I led a team which prepared a global theme paper for the first Global Conference on Agricultural Research for Development (GCARD) in Montpellier, France in 2010 on the basis of such regional consultations, leading to a Road Map. GCARD 1 was attended by nearly a thousand participants.

Later he invited me to serve on the planning committee for the first ever Global Conference on Women in Agriculture, held in New Delhi India. It was hosted by ICAR, sponsored by many donors and attended by 750 participants. It too led to a roadmap on gender in agriculture, but notwithstanding all the energy he put into it, I never sensed that ICAR was wholeheartedly committed to the cause of women in agriculture. Among his dizzying number of activities at the Trust for the Advancement of Agricultural Science (TAAS) which he established and chairs, he invited me to deliver a lecture; and I now I look forward to participating in a conference he has planned on conservation agriculture in October 2017 with ACIAR in New Delhi. We communicate routinely on many matters related to agriculture to advance the cause of India’s agriculture.

Raj has occupied far too many important positions to list here, singular among them, as Secretary for DARE and Director General of ICAR, Chairman of the Farmers’ Commission in Haryana, internationally, as the leader of the CGIAR program in Eastern Europe, and as Chair of the Global Forum on Agricultural Research. He has been recognized with so many awards and titles (Padma Bhushan in 1998 among them) that there would be no space to list them here.

I consider his leadership in the establishment of the National Gene Bank, the largest in the world, to save India's rich biodiversity as a singular achievement, besides the establishment of the National Agricultural Technology Project (NATP) funded by the World Bank of which the National Agricultural Research Information System (ARIS) was an important infrastructural system, and his development of the Pusa Campus. These are few of his many singular achievements for which he will be remembered for a long time to come.

Raj has never allowed setbacks to come in the way of his forging ahead with the pursuit of his activity and expressing his views fearlessly as Dharma, without regard to its outcome or credit to himself, e.g., organizing a national conference in 2001 which Prime Minister Bajpai inaugurated, even with a falsely created cloud over Raj's head, which eventually went away, or his courageous paper on India's GMO policy, after receiving considerable resistance from his fellow committee members.

Keep up the good work Raj. It is an honor and a pleasure to know and work with you. I wish you a long healthy and productive life.

Umesh Srivastava

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Dr RS Paroda joined the position of Director, NBPGR in March 1985. Then I was posted at NBPGR Regional Station, Shimla. I first came in contact with Dr Paroda when he visited Shimla in May 1985 in connection with a wheat symposium. He visited NBPGR Regional Station also and discussed research programmes, research facilities, infra-structure development etc with all of us in detail but before returning back to Grand hotel at Mall Road, he desired to observe the kind of NBPGR residential accommodation where NBPGR scientists and others were residing. I took him to my residence for inspection. Since I was alone, he immediately asked me a question, "Where is your family?" I answered that Mrs Srivastava had taken Post Doc. with Prof. KN Mehrotra in Entomology Division IARI, New Delhi and I was left alone in Shimla hills. I said, "After all why should I play with her illustrious career by asking her to be with me and leave the rare opportunity which she got out of hundreds in the fray?" In those days, the ICAR used to grant on All India basis only five (5) numbers of Post Doc. Fellowship out of all ARS disciplines to highly meritorious candidates. She was little reluctant to leave me alone but I persuaded her a great deal to take up the assignment at New Delhi and promised to visit her in Delhi very frequently. Dr Paroda was listening to me patiently. In the mean time I offered him a cup of coffee and said that I was a forced Bachelor. To this sentence, he burst into laughter. Immediately after reaching back Delhi, he transferred me back to NBPGR Headquarters in June 1985. I met him after reaching Delhi and he said that he had decided while he was in Shimla that he would transfer me back to keep both husband and wife together to live happily. I admire him beyond imagination. Really, he is a good human being with a large heart.

After I joined back at Delhi, Dr Paroda offered me to work in Germplasm Evaluation Division (later in Exploration Division) and exclusively on vegetables (Solanaceous and cucurbitaceous crops). Earlier at Akola and Shimla Regional Stations, I had worked on sesame, small millets and grain legumes, poppy and some ornamental plants. Those years were also very fruitful. I accepted the offer gladly and requested him for undertaking additionally 4-5 Exploration Expeditions every year in remote and inaccessible areas like Bastar as well. This was a spectacular change in my career that I switched from Crop Science discipline to Horticulture discipline. I harvested

rich dividend and rose up to the position of Assistant Director General (Horticulture) in the ICAR system.

As a Director, NBPGR, Dr Paroda happened to be a hard task master and kept everybody on toes to see that NBPGR developed fast to become a vibrant institution in the country. Although he was there only for two and half years, but within that period of time, NBPGR was placed on the world map. His association with me has been very cordial all through and I found him a very sincere, dedicated, hardworking and systematic person par excellence with extreme dynamic leadership quality and down to earth nature

When Dr Paroda was Director, NBPGR, in one of the SRC meeting in 1987, I raised a question to establish one scientific society exclusively on plant genetic resources as in those days research papers on PGR were not finding much coverage in Genetics and Plant Breeding research journals and scientists working on PGR were facing difficulty during ASRB interviews/promotions. The idea was liked by him and he immediately asked me to start the process of establishing such society and take help of late Dr KPS Chandel. Under his guidance and help of Dr Chandel, Rules and Regulations were framed and I worked hard to get 'The Indian Society of Plant Genetic Resources (ISPGR)' registered under Indian Society's Registration Act 1860 in November 1987. Dr RS Paroda became its Founder President. He was the first person to become Life Member of this society. I served the society as Joint Secretary/ General Secretary and also as Vice President of ISPGR and Editor/Editor-in-Chief of IJPGR for several years. Dr Paroda used to enquire from me about the society and journal quite often. Under his able guidance, I along with other senior colleagues was instrumental in organizing two National Dialogues, first on 'Plant Genetic Resources in India-Developing National Policy Options' in 1993 and other on 'Issues in Management of Plant Genetic Resources' in 1998 in the capacity of Co-Organizing Secretary and Organizing Secretary respectively. I always happen to be a sincere and silent worker.

I would like to mention one more incident connected with Dr Paroda. World Vegetable Centre-AVRDC had picked me as a special invitee for presentation on hot set tomatoes in a specific meeting organized on heat stress research. For some reasons I was not given the clearance by the concerned to attend the meeting. Later, Director General AVRDC contacted Dr Paroda (then DG ICAR) to send me for this specific meeting. Immediately Dr Paroda intervened, I was specifically asked to apply, the file was cleared and I participated in the meeting at AVRDC.

Again, it was a matter of great pride that Dr Paroda reposed confidence in me and Dr BP Singh, when he was DG ICAR, for writing a book on PGR entitled 'Plant Genetic Resources in Indian Perspective-Theory and Practices' sponsored by ICAR. Without his guidance, it would have been very difficult to complete this herculean task. Further he went through the book critically and provided 'Foreword' for the same when he was in Tashkent for CGIAR program for Central Asia and Caucasus.

Late Dr R K Arora, Former Coordinator, Bioversity International, South Asia, just prior to his demise attempted to bring out a book entitled 'Diversity in Underutilized Plant Species-

An Asia-Pacific Perspective', but unfortunately could not finish it. Dr Paroda desired that his unfinished work be completed and published as a tribute to him. Dr Paroda desired that I may help to complete the same. After reviewing the script critically, I felt that it needs thorough revision. I discussed this lacunae with Dr Paroda, in 3-4 month's period, with great efforts, 376 species were added to fill the gaps with total 778 species. The book was published by the Bioversity International in November 2014. I feel privileged in completing the book and consider it a tribute from my side also to Dr RK Arora.

Further, it was a great opportunity for me to work with him closely as 'Consultant' in his camp office in Gurugram under Haryana Kisan Ayog (Haryana Farmers' Commission) where he was Chairman but unfortunately it was short-lived.

Padma Bhushan Dr RS Paroda is an internationally renowned eminent agricultural research scientist and an undisputed leader of the agricultural scientific community in the country. He is known internationally for his contribution towards promotion and conservation of biodiversity. He is known for modernization and strengthening the National Agricultural Research system (NARS) in India as well as in Central Asia and Caucasus. His achievements are numerous and difficult to mention. In spite of his vast experience and recognition worldwide, Dr Paroda happens to be an unassuming person, down to earth. Despite a heavy work load due to his wide expertise, he is able to execute and complete large number of assignments in no time. My association with him for a short period in NBPGR and long period afterwards and until now, gave me so much strength that I could develop my personality in terms of high level of strategic judgement, adaptability and resourceful person, develop inter-personal relationship, motivation techniques, negotiation skills, communication ability, persuasive power and skills to develop win/win relationship with network of senior contacts as well as peers and junior workers. I remember him on this account so much. He has been a role model for many scientists including me. I am one of his real admirers.

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Dr Raj Paroda – A Dynamic Boss

I am so pleased to have been asked to write a few lines about my impressions of Dr RS Paroda, with whom I had worked as office secretary, APAARI. Firstly, I would like to thank Dr Paroda for his excellent support that he extended all through my career. He was not only a guide but was a really good boss to me during my tenure of 17 years with APAARI.

I really appreciate Dr Paroda for being so helpful and supportive even when there were lapses on my part sometimes. Working for Dr Paroda was highly enjoyable since he would not let you feel that he was the Boss. He is a hard task master, yet he would encourage us always to perform better towards perfection. I have indeed learned a lot from his counselling.

I feel so fortunate to have had a job with APAARI, which I thoroughly enjoyed. His enthusiasm, dynamic leadership and guidance, while being away from Bangkok, encouraged me to work sincerely even when Dr Paroda was not based in APAARI Bangkok office.

On his 75th birthday, I wish him good health and many more years of productive life to continue working to strengthen regional collaboration for AR4D in the Asia Pacific region. What APAARI is today, it is because of his tireless efforts and vision to serve the farmers of Asia. Long live Dr Paroda!

V L Chopra

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Thank you for giving me a platform for publicly greeting a dear friend of long standing on his 75th birthday. Rajendra Paroda is an acclaimed researcher and science administrator. The literature dossier is fairly bulky already about his many contributions. I am sure more will be contributed to it through the volume that you are compiling. I would rather recall, purely illustrative and by no means comprehensive, his qualities that make him such a valued friend. He is intensely passionate about a cause he chooses to support and makes this passion infectious; working very hard is an essential ingredient of his character; he can be brutally frank and direct in airing his convictions; he has a great sense of humour and enjoys sharing a joke; and very importantly, for standing by a friend, he can accommodate minor relaxations.

I have personally enjoyed the company and hospitality of Raj, his wife Shashi and their three adorable children over decades. And, I take great pleasure in greeting Raj on his 75th birthday and wishing him many more years of healthy, peaceful and purposeful life.

V P Singh

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It is a great honor to share my experiences about Professor R.S. Paroda. His name was very popular in the corridors of the Division of Genetics, Indian Agricultural Research Institute (IARI) from early 70's onwards. For the first time, we met when I went to congratulate him on his joining as the Director, the National Bureau of Plant Genetic Resources (NBPGR) IARI campus, New Delhi in 1985, very neatly dressed, a pleasing personality, with radiant forehead, and aura around combining politeness and authority. On the right-hand side of his table, was a very bright photograph of Swami Vivekanand. The ambience of the room was remarkable. It gave the impression of a highly organized person. It was a brief exchange of pleasantries.

More interaction came after his taking over as the Deputy Director General (Crop Science), Krishi Bhawan, New Delhi in 1987. He would come to see the rice experiments and put very short but relevant questions. The best part has been that whenever I tried to seek an appointment to meet him, he always granted. Once it so happened that when I made a phone call for an appointment, his immediate response was, "Come, I have a meeting in the State Farms Corporation India Office at 11:00 AM. We will be traveling together and we will talk on the way. Is it okay with you?" I reached Krishi Bhawan on time and on the way, he asked about our research work. I explained that we were working on developing high yielding, high quality Basmati rice, direct seeded rice, new plant type, resistance to major pests and diseases of rice and hybrid rice (IARI started work on hybrid rice in 1981). After carefully listening, his remark was, "Don't you think that working on so many aspects, your Basmati breeding program will get diluted? Focus on Basmati rice." It immediately got registered and focus picked up. The rest is well known in the history of quality improvement in rice.

During 1989, in the capacity of a member of Board of Trustees IRRI, he came to IRRI along with Dr E.A. Siddiq, Project Director, Directorate of Rice Research, Rajendranagar, Hyderabad, AP. At that time, I was working as a visiting scientist with Dr G.S. Khush. In the presence of Dr E.A. Siddiq, he asked for a clarification, "V.P., Dr Siddiq is very keen for the release of a Basmati rice line. What is your opinion?" In response, I said, "Sir, he is very clear. It will be in the national interest and it should

be released for commercial cultivation at the earliest. This is the first time the key Basmati quality characteristics have been put in high yielding background. It will prove to be gold for the Basmati growing farmers. Gold has to be put into bank lockers. Therefore, the farmers by following integrated crop management will be able to take advantage of this variety. It will help the Basmati rice industry to grow." His immediate response was, "V.P., released it." After going back to India, he called a special group meeting. Pusa Basmati 1 and Kasturi were released in November 1989.

He shared a very interesting incident. After completing his PhD program, he joined as a Post-Doctorate Fellow at the University College of Wales, Aberystwyth, UK. One day while he was working in the glass house, a colleague, after knowing his academic achievements and style of working commented, "If persons of your caliber and capability will move out of India, how will your country progress? You should go back and work there." Rest we all know what he did. Whether it was the establishment of Indo-Israel project, NBPGR, National Agricultural Science Complex or reshaping of the Indian Council of Agricultural Research Systems for the better.

V Prakash

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Bridging ICAR–CSIR through Paroda–Prakash Interface

First of all, it's a great pleasure to write this brief about Dr Paroda and my interaction with him for over nearly three decades. I wish him all the best on his 75th birthday on August 28, 2017. In a lighter vein, when you look at Dr Paroda, for me he has not changed over 25 years plus at all with his always pleasant smiling face and has defied the aging process of nature! Please keep it up Dr Paroda and kindly share the secret of it at least with some of the friends!!

Normally in such articles or write-ups people would start by telling “I first met Dr ----”, but I instead would like to write this article in remembering specific instances, which has remained with me unerased in my memory capsule and also reflects Dr Paroda as a scientist, as a human being, as a scientific administrator and above all a friend unlimited!! A few instances to recall are scribbled below:

This was during a meeting that was arranged at CFTRI, Mysore during the late 90s early 2000, the subject being IPR by INSA through Dr S. Varadarajan. I, as Director of CFTRI at that time had the honour of having a large number of Director Generals, Secretaries and Senior Scientists around India present and was a pleasure to see Dr Paroda there too as DG, ICAR. We had a problem of bringing all of them by different cars (more than 50 of them) and to ferry them from the Guest house of CFTRI to the Main Building Palace within a short span of 15 minutes as everybody wanted to depart at 8.40 am and be in the meeting hall latest by 8.45 am. As I was receiving most of them at the entrance of the main building, I saw Dr Paroda walking towards the main building of CFTRI from Guest House and rushed towards him leaving some of the VIPs to reach the venue by themselves and those couple of steps of walking along with Dr Paroda to the meeting hall is still in my memory, when he said, *“The King of CSIR lives here in this Palace and none of us, either in ICAR or ICMR or other Scientific Organizations have our offices in a Palace. This is unique and I congratulate you for decorating it”*. This sincerely moved my moods to higher orbits and there he was with his honest expression in the most straight forward fashion even though he was heading ICAR as DG and Secretary, DARE and was so simple in his approach. I was elated but touched by

his comments (On the other hand, I was worried about transport and whether he would be upset about!)

At another occasion when he was the President of APAARI, I was an invitee at Bangkok, Thailand for a two-day meeting, I was taken aback by his gesture in parking me in the first circle of the speakers and his very generous introduction, "This is Dr Prakash, a leading Food Scientist, Technologist, and Nutritionist of the world and his words will be final for us in our deliberations on these subjects. We only wish we had such expertise in all the subjects as then the meeting would not have been for two days, but perhaps less than half a day!" This just shows the way he would play the role as a leader in a global platform with pride and without any air would go out of the way to make the person extremely comfortable and elevate the image of India and the person enabling a permanent networking ambience with other global scientists and organizations. This shows Dr Paroda's commitment to the country's science and personalities and for which he always has had the highest regard, even today and forever.

My frequent interaction with him in the NAAS Annual Meetings had a silver line of message and comradeship every time. He would always start the conversation with, "We must do the following at the earliest and if I can have a small write up before tomorrow evening I would appreciate it" (This happened in the Soyabean Meeting in NAAS Complex couple of years ago). I was able to finish the recommendations the same evening and handed over to him around 5 pm on my way to the airport. Dr Paroda's remarked, "This represents the entire seminar's recommendations and not just one session!" This gesture of his made me feel that he knew whom to ask for what and then integrate it as a policy document or a recommendation or a letter to the Government by incorporating all these ideas and ensuring to mention each contributors' inputs. Demonstrably, he believed and always believes in TEAMWORK as a Captain not taking any credit for victories!! I found in the final minutes of the above meeting many references to my brief report! This was very satisfying indeed and many of the recommendations got implemented over a period of time.

I would, specially like to mention my close interactions with him at NABI at Mohali, as he was the Chairman of the Research Council of NABI and I happened to be the Chair of Food Science and Nutrition Group. His chairing the meeting gave a huge support to the youngsters of the Institute and encouraged them to come out with innovation and he never worried for any small mistakes in the process. His forever smiling face would beam in the meetings to gently mention - "This approach may be revisited as you go forward in this area!" The success was evident in the first 3 years of the Institute, where an excellent teamwork output of Science emerged with only about 4-5 scientists, limited space and facility. The credit goes to of course, the scientific fraternity of the institute and mostly to the leadership of Dr Paroda for a startup Institute, needing nurturing.

The finale that I want to mention is the sturdy buildings of the NAAS complex that one sees today is simply the leadership Dr Paroda has shown not only during the Science congress at

the same venue, but also the *ICAR Green Fort* built for its infrastructure which is now used by almost all the NAAS and ICAR scientists. Every time I walk in the corridors, pathways and the roads around the complex with peacocks, stepping with you slowly, I wonder how he was able to masterly plan and build it and it just shows his capacity as a *Science Administrator* and a *Visionary*. Thanks to Dr Paroda for that monumental effort called National Agriculture Science Centre.

These are only a few anecdotes which show Dr Paroda's personality as a scientist, as a human being and as an achiever and I wish him all the best with plenty of good health and activity and would like to say - "*The best of Dr Paroda is yet to come!*" We all shall be a part of the mega dreams he has to take the scientific pedestal up in his multi dreams for India and its Agriculture with Borderless Science Interface.

Cheers Dr Paroda!!

Dr R.S. Paroda – A Committed Scientist

I am happy to learn that a commemorative volume is being presented to Dr R.S. Paroda on the completion of his 75 years, to recognize his invaluable contribution to the cause of agriculture sciences, and more importantly for his untiring efforts to improve welfare of the toiling masses of rural India. I have known Dr Paroda in his three principal roles and always admired his contribution in varied fields.

I first met him when he was Director General of ICAR and Secretary to Government of India in DARE. I had two or three brief meetings with him, mainly as a member of the selection committee for some senior posts in ICAR. I was impressed by his willingness to listen to the experts and give due weight to their opinion. On all such occasions he encouraged us to give our views on different aspects of agricultural development in our country. This was a happy exception to the usual “we know all” attitude of senior bureaucrats.

I met him more frequently once he retired from his government post and took upon himself along with some of his committed scientists the task of establishment and development of National Academy of Agricultural Sciences. There were several occasions when I participated with him in the seminars and workshops organized by NAAS. On every occasion, his comments were constructive and insightful. He was never boastful or abrasive. It was clear that he had all the qualifications of a successful institution builder.

I had much closer appreciation of his academic and human qualities in his role as the Chairman of the Agriculture Group of the State Planning Board of Rajasthan, at the time when I was Deputy Chairman of the Board. The way he took this responsibility was, to use an oft-used phrase, ‘much beyond the call of duty’. He never took it as a sinecure job, but as a responsibility to give directions to agriculture in that state. He established his authority in a group, consisting of senior scientists and administrators, not by the national and international positions he held but by his deep knowledge as well as deep commitment. He regularly held the meetings of the group, came fully prepared and expected all the participants to take their responsibility seriously.

As a chairman of the Agricultural Group he made two major contributions to the state's agriculture. First was to goad the state bureaucracy to develop an agricultural development program to be funded by the World Bank. The general practice at time was that the Central Government would develop the projects for funding by the international agencies with the help of the same agencies and farm out the projects to different states. The concerned states would make some cosmetic changes. Dr Paroda reversed that practice. He saw to it that a project is framed that keeps at the center the objective of comprehensive growth of state's agriculture. He not only gave technical guidance, but also whipped up the enthusiasm of indifferent state machinery.

An equally important contribution of Dr Paroda during that period was the development of an Agricultural Policy for the state. Under his leadership, a comprehensive policy was framed and presented to the state government. As in his other activities, he kept the main stakeholder in the policy, the farmer, in the forefront. The policy was highly praised by all concerned and served as a model for similar efforts in different states.

To my mind his main distinguishing feature, apart from his formidable technical expertise, is his involvement in the task he takes in his hand. He has proved this both at the national and international level.

Like all his friends and admirers I wish him a long and active life to lead agriculture in our country and in world at large and to give benefit of his leadership to the farmers of this country.

V V Sadamate

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I served Extension Directorate & Extension Division of the Ministry of Agriculture for two and half decades in various capacities such as Director Extension Management and Additional Commissioner, etc. before moving to the Planning Commission as Adviser (Agriculture). As a keen student of Agricultural Extension, I am aware of the great contribution & achievements of Dr Paroda Sir as science manager of par excellence. I found him always cheerful, supportive of innovations in R&D and encouraging the views of young scientists and programme managers.

I did enjoy his guidance and support in organizing and coordinating DAC-ICAR Interfaces, on pre-rabi and pre-kharif basis during my Krishi Bhawan inning. Further, I received immense encouragement from him in regard to formulation and implementation of Innovation in Technology Dissemination (ITD) Component of National Agricultural Technology Project (NATP). It's there we conceptualized and implemented integrated agricultural extension approach covering 7 States and 28 districts (4 in each State) through Agricultural Technology Management Agencies (ATMAs). It not only streamlined agricultural extension system in pilot districts but also provided an excellent platform for planning and funding technology dissemination programmes on bottom up mode across the sectors. Dr Paroda Sir and Madam Rita Sharma, then Joint Secretary, DAC in Krishi Bhawan always encouraged combining the strengths of KVKs and of ATMAs as frontline and field extension instruments respectively and considered them as two sides of the same coin. The NATP provided for intensive use of ICT application in technology dissemination. It also promoted decentralized decision-making systems at lower levels of R&D. Therefore, the NATP was rated as one of the best managed project and impacted tremendously on innovations in extension management.

I was lucky enough to interact with Dr Paroda very personally and closely in some social and personal interactions. We met couple of times in Haryana Kisan Aayog interactions, in the TAAS functions and at Madam Rita Sharma's place. I found him ever cheerful, composed. He guided the young generation of scientists for higher goals. At times Dr Paroda is very witty and humorous too, that way he would make the tense situations easy and keep everyone in good spirits in official meetings. There

are many more events and meets that I would always cherish in my memory. Dr Paroda Sir always believed in strong basic research as fundamental to agricultural development and at the same time emphasised quite a lot on integrated extension delivery through an effective linkage between various service providers and promoting farmer participatory approaches. Dr Paroda's concern for effective R&D linkages is well known. I did attend number of Regional Committee meetings of ICAR wherein Dr Paroda used to mention that the science has demonstrated its potential adequately, it is now the challenging task for the State Development functionaries to carry it forward to all the districts, blocks and villages. In fact, this spirit prevails today also; he is of the firm opinion that the joint actions between research, development departments and more importantly farmer's effective participation would give the desired results.

It's always a pleasure to be around this great scientist, visionary & wonderful human being. I convey my greetings to Dr Paroda Sir & family on completion of his glorious 75 years of young age and salute his dedicated and meritorious service to the agriculture & allied sectors of this great nation.



Dr R.S. Paroda: A Legend of Science, Technology and Administration

I had heard a lot from seniors about the visionary leadership of Dr R.S. Paroda during my early career in ICAR. I first came in contact with him during 1999-2000 when he was Secretary, DARE and DG, ICAR. It was a very short but extremely inspiring interaction in his office in Krishi Bhawan. It was during these years when CIFE was passing through a difficult phase of maintaining its deemed status and it was only Dr Paroda who prevailed on everyone including the planning commission and finally cleared the EFC despite several objections. Therefore CIFE, which has emerged as a top fisheries university, now in the county owe a great deal to this visionary and courageous leader. The subsequent leadership in ICAR provided all support towards the realization of his dream of CIFE as a Centre of Excellence in higher fisheries education.

Dr Paroda was extremely happy to see the development in the lush green new campus of CIFE with state-of-the-art infrastructure including International Guest House, 2 students' hostels, Type IV, V and VI residences, indoor (Gymnasium Complex) and outdoor sports facility when he visited the Institute during my tenure as Director in 2014 as Chief Guest for the Convocation. This is exactly what he had envisioned when he was DG, ICAR.

My close interaction happened during his tenure as Chairman, Haryana Farmers' Commission as I had the privilege of leading the fisheries working group. We had several meetings at TAAS, New Delhi, HAU, Hisar and NDRI, Karnal and his deep understanding of the farmers' issues provided new insights to the group as well as to all the stakeholders.



Dr Paroda is one of the most eminent agricultural scientists and statesman of science we



have in India today. If we call Dr M.S. Swaminathan, the father of Green revolution then Dr Paroda can be well considered as the Father of innovations and modernization of ICAR and the National Agricultural Research System including cutting-edge research, public-private partnership, infrastructure developments, creation of several NRCs besides administrative reforms in the organization.

With his grace and aura unparalleled in the scientific community, Dr Paroda has been guiding and inspiring millions of scientists and farmers across the globe with great humility.

I extend my highest gratitude and wish him a very long and healthy life on his 75th Birthday.

Wais Kabir

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I came to Dr Paroda by his deeds, without meeting him personally till 1998. I came across of his book on agriculture written for wide audience long back, that is being used by many professionals involved in agriculture.

While visiting his creation, National Agricultural Science Complex during 2006, I could measure his height in visioning agriculture of large and diverse India. Establishment of Agriculture Science museum is one of the many examples that carries his footprints of creativity and devotion.

I met him for the first time at an international event for which I was waiting for long. Meeting Paroda ji and to know him personally has been great for me. It appeared to me as if he knew me for many years. Since then I used to see him often, mostly in scientific conferences and continue discussing with him on contemporary development of agriculture. I found myself lucky to work with him in a steering committee of CIMMYT regional project. While working with CIMMYT policy formulation meeting, I saw Paroda ji sharing his wisdom on regional agriculture and advocating inclusiveness of all actors in the region. He feels that science has no boundary and for the sake of accelerating and intensification of agriculture in the whole region, all nations should be aligned with their capacity. That reflects in Tagore saying, "We will offer, we will accept and nobody will be left out in this wholly land of Indian Subcontinent ". That made me more attached to this great person.

Dr Paroda values others, his smiling face, soft and loving words are inspiring for those who are growing professionally - for which he is respected and admired.

I wish him a long and healthy productive life for the benefit of the scientific community particularly for the South Asia.

I sincerely acknowledge to have his affection that will remain a treasure in my life.

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Blessed with Inspirational Mentorship from Padam Bhushan Dr R.S. Paroda

As a young agri-professional, I heartfully share that words can neither qualify nor quantify Dr Paroda's professional and personal guidance, mentorship, encouragement, and inspiration in carving my scientific acumen and career. While memorializing about him, I reminisce the famous quote of Drucker "Management is doing THINGS RIGHT; Leadership is doing RIGHT THINGS". But even Drucker's quote cannot predicament his vision and achievements. He is an Accomplished Researcher, Visionary Leader, Astonishing Manager, Inspirational Mentor and Miraculous Person.

My first congregation with him dates back to more than a decade ago during Global Forum on Agricultural Research (GFAR) conference in 2006 at NASC Complex New Delhi. Listening his views and vision on involvement of youth in agriculture was a mesmerizing moment for me. His vision on engaging and attracting youth in agriculture transpired into formation of a youth-led International Platform namely "Young Professionals in Agricultural Research for Development (YPARD)" based at FAO Rome and now working in 33 different countries now. He provided me opportunity to attend Second Global Conference on Agricultural Research for Development (GCARD-2) organized under his leadership at Punta del Este, Uruguay during 2012. During GCARD-2 his foresight that agriculture is an ageing and undervalued profession, and to attract youth AR4D needs innovations and reorientation towards farming systems' and entrepreneurial mode by ensuring inter-institutional, trans-disciplinary collaboration, creation of excellent research infrastructure, and greater involvement of young scientists in decision making bodies. His visionary approach was well taken by NARS and International organization. Subsequently, several national, regional and international workshops were held globally as well national programs like "ARYA" were initiated in India. These are simple glaring examples of far-sightedness of Dr RS Paroda, which I have experienced.

A true opined and implementer of "Think Globally, Act Locally", developed world-class infrastructure at ICAR and legendarily called as architect of modern ICAR. He

is well-accepted global leader in agricultural sector and has served at several important positions as Founder Chairman of Global Forum, and Former Executive Secretary APAARI. Dr Paroda has been linked with several CGIAR institutes as Board member and served ICARDA at different positions. During his working with ICARDA, he has played a significant role in strengthening



the NARS in Central Asian countries. Central Asian countries policy makers speak always high about his vision, contribution as well as his humble nature towards different cultures. Even one of the CGIAR institutes, International Crop research Institute for Semi-Arid Tropics (ICRISAT), Hyderabad has named its Gene Bank after him as 'Rajendra S. Paroda Gene Bank. Currently, he is providing his visionary leadership to the High Level Policy Body of CGIAR.

After coming from the international assignment he organized several conferences namely on conservation agriculture, youth and agriculture, role of women in agriculture, International Agronomy Congress and First World Agrobiodiversity Congress. I have been associated with most of these conferences and gained a lot from his vast experiences in organizing the conference. The key recommendations of these conferences have been endorsed by highest-level policy makers and are being adopted nationally and internationally to enhance farm productivity, profitability, sustainability and ensure nutritional security. Some of glaring examples include the adoption of 1st International Agrobiodiversity Congress recommendations in the Central Asian Countries and inclusion of youth strategy in all the CGIAR-CRP programs.



Dr Paroda has immensely contributed as the Chairman of Haryana Kisan Ayog. He invited me as member of working groups on conservation agriculture. He believes in seeing is believing and understanding the farmers problems at their field. During that time had several round of meetings with farmers as well as visit to their fields. He is firm believer that science-led and

knowledge based innovation models can provide sustainable solution to the farmers. He believes to reorient agriculture into agricultural research for result (AR4R) by promoting agri-innovation, agri- business and entrepreneurship at the national, regional and international level. He also endorses that rural youth empowerment through vocational trainings is the way forward to retain youth in agriculture. To make agriculture intellectually interactive and rewarding for rural population, special emphasis is needed henceforth on secondary agriculture, diversification, protected cultivation, crop intensification, service providers and use of ICT for faster delivery of technology to the end users. I feel proud that I got the opportunity to work with this great visionary personality and salute him. In the last, I pray almighty for his long life and wish that he continued to guide the world agricultural research community, farmers in many many years to come.

Yogendra Shankar Nerkar

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Dr R.S. Paroda: A Friend, Scientist and Administrator-Par Excellence

It was October of 1964 in Delhi with the typical October heat in the daytime and cool breeze in the nights. I joined the post-graduate school of the IARI for my master's degree programme in genetics. It was perhaps one of the largest batches admitted in the then Botany Division that included genetics, plant physiology and seed technology. Thirteen students were admitted for each of the two degrees-M.Sc. and Ph.D. It was our first experience of the trimester system and evaluation based on grades. As the first trimester proceeded with the severe winter, we had the taste of the biting cold, black-outs due to the Pakistan war and the un-announced quiz tests. Initially, we the M.Sc. students, kept distance from the Ph.D. students who had common courses with us (out of fear). But slowly the distance vanished when the results of the first trimester were out. Soon a smart, bright Ph.D. genetics student from Rajasthan, Rajendra Singh Paroda, became a friend and guide for every one of us.

Rajendra Singh Paroda, an all-rounder, became popular among the students because of his friendliness, intelligence and leadership qualities. He contested and won the students' council election to become our General Secretary. It was a great pleasure for the genetics students like me to canvass for him. Even then, we knew that he is a 'rising star'.

After completion of his doctorate, Dr Paroda went to the University College of Wales in the U.K. on a Commonwealth Fellowship. We felt proud of him and longed for such a scholarship. I returned to Maharashtra with a Ph.D. degree from the IARI that fetched me an assistant professorship in the Mahatma Phule Agricultural University. For some years I did not have communication with Dr R.S. Paroda.

Subsequent to his return from the U.K., Dr Paroda shouldered the responsibilities of various coveted positions including the Head, Plant Breeding Department of the Haryana Agricultural University, Director, National Bureau of Plant Genetic Resources, Deputy Director General of the ICAR and Secretary, DARE & Director General of the ICAR. In his various capacities, I had opportunities to discuss with him research and development issues of crops. Various crop workshops, National

Seminars and Symposia organized by the ICAR Institutes and the SAU's have been providing opportunities to meet Dr Paroda. His thorough grasp of the subject, practical approach and excellent synthesis and critical analysis have been a guiding force in every meeting.

Dr R.S. Paroda's term (1994-2001) as the DG, ICAR and Secretary, DARE has been extraordinary. The leadership provided by him to the development of ICAR Institutes, SAU's and agriculture of the country is unparalleled and is well known. The planning and development of the NAS Complex by him has been a monumental work that will be serving the country in the many decades to come. His contributions have been appropriately recognized by conferment of the title, '*Padma Bhushan*' upon him by the President of India in 1998. He is recipient of over a dozen prestigious research awards and more than 15 honorary doctoral degrees from renowned Universities of the World. Under the CGIAR, Dr Paroda has served as an expert in the Central Asian Republics and in the South-East Asia. His service has been aptly recognized by these countries by decorating Dr Paroda with their respective national awards.

Dr Paroda has always been praise-worthy of the Maharashtra farmers. As the DG, ICAR he frequently visited Maharashtra, talking to farmers, students, teachers, researchers and the seed companies. He is an ardent believer of public-private partnership, especially in the spread of the hybrid seed programme of sorghum, maize, rice, cotton, etc. Dr Paroda has been instrumental in strengthening/establishing the ICAR Institutes in Maharashtra including the NRC-Grapes, NRC-pomegranate, NRC-Onion & Garlic, CICR, NISS & LUP and many research projects including the NATP of the World Bank. Dr Paroda was kind enough to accept my invitation to be the chief guest for the nineteenth convocation of the Mahatma Phule Agricultural University. The convocation address delivered by him on 29th March, 1997 has been a great memoir.

Late Dr A.B. Joshi was very fond of his student, 'Raj' (Dr R.S. Paroda). Whenever Dr Paroda visited Pune, I accompanied him to Dr Joshi's house and enjoyed their scientific discussion. Once I travelled with Dr Paroda in Vice Chancellor's car from Nagpur to Pune (more than 900km). He enjoyed the profile of Maharashtra's agriculture. He was so much impressed by the beauty of the thrifty Pandharpuri buffalo that after his return to Delhi Dr Paroda displayed the buffalo's photograph at the entrance of DG's office. Such is his rare passion for agriculture and the farming community. No strange that he is carrying on his service through the Trust for Advancement of Agricultural Sciences. In the true Borlaug spirit, 'Take it to them', as a Borlaug Award Laureate.

As a humble friend, I wish Dr Rajendra Singh Paroda a very healthy, happy and long life on the occasion of his Platinum Jubilee.

Yoginder K Alagh

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Professor Rajendra Singh Paroda is an iconic figure in the field of Agricultural Technology, Rural Development and Agricultural Research. When I was in the Planning Commission, I was working on requesting the then Prime Minister on the RAX to give a special fund for Industrial Research. Paroda requested the PM for a special fund. The Prime Minister was impressed by this audacious young man, gave him the asked for money. He is a great team builder, supports task oriented science and its application and enforces the discipline of time bound research. His career is full of examples of autonomous scientific research and fighting for the independence of science. I have no regrets in admitting that I took on an Agriculture Minister, who incidentally is a friend, taking strong exception to his Office creating problems for a younger head strong Paroda, not agreeing to some vendors. His contributions to the FAO are well known and folks there with whom I worked in the FAO's Global Models have the highest respect for him.

It is a privilege for me to join his friends in celebrating his achievements. I wish him good health for many years and look forward to more of his devoted services to Agricultural Science and to India and the World which he has served with great distinction.



Messages From Family





Anju Tomar

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A Daughter's Perspective.....

A very dear friend of mine recently asked me to start a gratitude journal. I was supposed to write 10 things that I was grateful for each day and try and not repeat anything I was thankful for. What was supposed to be a 21 day challenge, turned into a habit. As I write this message today, I am on day 123 of my gratitude journal and it continues. I clearly missed the condition of not repeating what I was grateful for (and I am glad I did). Because, as I read thru my journal, there was one common theme in it and it is you “Dad”. On every single page, every single day-----

I am grateful for YOU – my dear loving father, the best father one can have.

I am because you are. If I can be 20% of what you are, I would think I have achieved something in life. You are the epitome of a role model one can have in life. I do not know anyone else that is as selfless, loving, caring, giving, kind, fair, hard-





working and dedicated as you are. I am in awe of you every single day and you are my inspiration. When times are tough, you are my strength. When times are good, you are my cheer leader. I am grateful to have learned from your actions so I can be “the best me” I can be. I am grateful for you loving

me unconditionally, for being there for me always, for being my guiding light, my sounding board and my strength. You amaze me with all that you have accomplished in life (and continue to) with your hard work and perseverance – personally and professionally. You are a true inspiration. I do not know of anyone that has a bigger heart than you. You never bat an eye when it comes to giving unconditionally, caring with love and nurturing anyone that needs you, whether they ask you for anything or not.

You are God’s greatest gift for me and I thank him for you every second I can.

Happy 75th birthday dear daddy. Love you more than words.

Your eternally grateful daughter.



Dr Rajender Singh Paroda – From the Eyes of a Relative

It was for the first time, in the year 2008 that I happened to meet Dr R.S. Paroda, during a formal dinner meeting. Dr Paroda's intellect yet down to earth personality left a deep impact on me. As I was born in an agriculture family myself, I felt that I could benefit from his expertise to improve my knowledge and my farm. The more I acquainted myself with him, the more invigorated I was with his broad outlook and understanding of global agricultural affairs.

I have had lengthy discussions with him regarding various aspects of Indian agriculture. With my granular perception and grasp gained during my stint as village Sarpanch, I realised that this man has got not only bookish and theoretical knowledge but he also has a deep understanding and clear solutions, with long term planning for global and Indian agriculture. I found his global exposure had been very much productive in reference to India. Conceptualising and subsequently establishing a "gene bank" is a global gift to agri-community by Dr Paroda. It is surely going to be a basis of all future research work surrounding global agricultural matters.

I consider myself lucky as by God's grace, my closeness with Dr Paroda soon turned into a sacred relationship. Today my daughter is the happiest daughter-in-law on earth. In my nine years of knowing him, I can assert that no one can match Dr Paroda, as a relative and an expert in his field. Even though Dr Paroda has been conferred with so many Doctorates and higher honours, but for me, the most memorable one is the Doctorate awarded by Punjab University as I was a witness to the whole ceremony. It was a very thrilling experience.



In seventy years of my life, I have yet to meet a person who is so composed in all situations, concerned about persons around him and devoted to his mission. Honestly speaking I am short of words to define such a perfect combination of a son, husband, father, samdhi, administrator, planner, researcher, socially active and energetic young person. I wish Dr Paroda a very happy 75th birthday and pray for his happy, healthy and prosperous long life.

Balram Solanki

सलाहकार वेब इन्फ्राटैक, पूर्व निजी सचिव राज्यपाल,
पूर्व अति. निजी सचिव कृषि एवं जल संसाधन मंत्री, भारत सरकार,
पूर्व अति. निजी सचिव सदस्य योजना आयोग, पूर्व अध्यक्ष आर्य कन्या इंटर कॉलेज,
जिवाना गूलियान, बाणपत, उत्तर प्रदेश
पूर्व विशेष कार्य अधिकारी बजाज हिन्दुस्तान लि.



डॉ राजेन्द्र सिंह परोदा जी की पहचान में मैंने एक प्रखर वैज्ञानिक, योग्य प्रशासक, जिज्ञासु अन्वेषक, अनुभवी व्याख्यानकर्ता एवं गांव-किसान के उत्थान को समर्पित उत्कृष्ट इंसान को पाया। उनमें प्रशासक की पैनी दृष्टि देखी तो अनुशासन का संयम भी। स्वाभिमान से दमकती महान कृषि वैज्ञानिक की छवि देखी तो चौपाल के किसान की सहृदयता भी। उनके व्यक्तित्व में अपनी परंपराओं के पथ पर चलते हुए आज की युवा पीढ़ी के साथ कदम मिलाकर नवीनता को अपनाने की अद्भुत क्षमता है। वे पुरानी मान्यताओं के साथ जीवन मूल्यों में आने वाले वर्तमान के परिवर्तनों को अपनाकर आगे बढ़ने वाले ऐसे पथिक हैं जो बिना विश्राम किये अपने नये-नये मार्गों पर पदचिन्ह छोड़ते आगे बढ़ते ही जा रहे हैं। इतने विभिन्न पक्षों से सम्पन्न व्यक्ति विरले ही मिलते हैं।

बालक राजेन्द्र का जन्म उस समय हुआ जब देश 'भारत छोड़ो आंदोलन' की तपिश से गर्म था तो राजस्थान सूखे-भूखमरी से जूझ रहा था। संभवतः राजस्थान के समृद्ध किसान माता-पिता के यह भाव उनके रक्त में सम्मिलित हैं। बाल्यकाल में आसपास के किसानों को प्रकृति व कठिन चुनौतियों से लड़ते देखकर उनके स्वभाव का अभिन्न अंग बना 'परिश्रम'। माता-पिता ने अपने जेष्ठ मेधावी पुत्र को बचपन से ही मृदुभाषी, कर्मठ एवं परिश्रमी होने के जो संस्कार दिये थे उनका स्थायी प्रभाव उन पर है। अपनी इसी कर्मठता से इन्होंने विश्वपटल पर अपनी छाप छोड़ी।

डॉ परोदा जी के अमृत महोत्सव का सौभाग्य प्राप्त करना हमारे लिये गर्व की अनुभूति है। उनके लिये किन शब्दों में कृतज्ञता प्रकट करूँ, अपने को असमर्थ पा रहा हूँ। मेरे लिये आज केवल आज के अभिनन्दन का प्रश्न नहीं है। पहले ही सम्पर्क से उनके लिये हृदय में श्रद्धा उपजी और तभी से मैं मौन रूप से उनका मन-ही-मन से अभिनंदन करता आया हूँ। मैं 15 वर्ष की आयु में सर्वप्रथम उनसे अपने बहनोई डॉ धर्मवीर सिंह बालियान के साथ मिला था। तब वह हिसार में कृषि विश्वविद्यालय के परिसर में रहते थे। बाद में श्रीमती शशि जी से संबंध होने के कारण यदा-कदा पास से दूर से उन्हें देखा जाना। उनके दिल्ली आ जाने पर अक्सर भेंट होती रही। वर्ष 1992 से अब तक अनेकों बार निकट से वार्ताकर मुझे उनमें स्नेह की एक गंगा मिली है, एक पथ प्रदर्शक मिला, एक अनुभवी विद्वान, एक उदारचित्त मानव और एक उच्चतम भारतीय वैज्ञानिक जिसके लिये मैं हमेशा नतमस्तक रहा हूँ। कई बार ऐसे अवसर आये जब भारतीय कृषि अनुसंधानों पर उनका दृष्टिकोण विशिष्टता की छाप छोड़ गया। अपने महानिदेशक के पद

पर लम्बे समय के कार्यकाल में कई कृषि मंत्रियों से उन्हें तालमेल करना पड़ा किंतु संस्थान की प्रगति सुनिश्चित रही। परोदा जी के आवास पर उनका अतिथि सत्कार प्राप्त करने वाले उनके स्नेह पूरित भावों को सदैव अपनी स्मृतियों में जीवंत रखते हैं। मेजबानी उनकी सौम्यता तथा प्रेम की प्रतीक बनकर अतिथि को स्नेह से भिगो देती है। स्थापत्यकला की विशेषता भी उनके व्यक्तित्व का अभिन्न अंग है। भारतीय कृषि अनुसंधान परिषद के अनेकों संस्थानों के भवन मेरी इस बात की पुष्टि करेंगे। स्वच्छता व्यक्तिगत रूप से भी, सामूहिक रूप से भी उनकी आदत रही है। अपने इस स्वभाव के कारण ही वह अपने समकालीनों से निराले व्यक्तित्व के धनी हो जातें हैं। भारतीय एवं विश्व की कृषि पर अपने इस विद्वान की छाप लंबे समय तक उसे प्रकाशित करती रहेगी, ऐसे मुझे आशा है।

मानवता की कसौटी पर कौन कितना खरा उतरता है ये हमें महामानव से सीखना चाहिए। मेरी अभिलाषा है कि ये इसी तरह कार्य करते रहें, सेवा में लगे रहें क्योंकि जहाँ भी रहेंगे यशकीर्ति इनके चरण चूमती रहेगी। व्यक्तिगत रूप से आपकी निकटता व स्नेह पाकर स्वयं को गौरवान्वित अनुभव करता हूँ। प्रभु आपको दीर्घायु प्रदान करें, आप इसी तरह प्रसन्नचित्त एवं स्वस्थ रहें, बुढ़ापे की बात आप तक पहुँच ही न सके।

शतं जीव शरदो वर्धमानः

शतं हेमन्ताद्गतमु व सन्तान

अर्थात् आप शत वर्ष जीयें और निरंतर आगे बढ़ते रहें। सौ हेमन्त, सौ शरद और सौ बसंत सब बराबर आयें और आप बसंत की तरह से प्रफुल्लित रहें और समाज का मार्ग दर्शन करते रहें।

G P Chowdhary

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It's indeed an honour to script few texts about a man who enjoys an iconic status amongst frontline intellectuals, academicians and high-profile scientists of our country. Let me accept that my only claim to fame is that he happens to be my uncle. It has been purely my pleasure to be his nephew. My relation qualifies me to express my emotions on such an eminent personality.

A man who derives his determination to deliver from simplicity and enthusiasm which was injected by birth. "A never say die" configured personality who witnessed critical challenges in his life, however he converted those challenges into lifetime opportunities. He has been a light house, a landmark not only for the family but for the entire society who has always guided & steered needy lot. A prism who reflects multicolours of life when exposed to ray of hope and opportunity.

It has been my privilege to be associated with him and I consider myself fortunate for those valuable moments spent with him. I wish I could spend more time in his august company.

A man with varied interest including gardening and music, is a very easy person to get on with especially if you have gained his trust. He confides in you on important matters with a view to educating and preparing you to handle problems if and when they arise. A philanthropist who has contributed maximum to the society.

A thoroughbred gentleman, who enjoys impeccable trust of his closer ones. He has been more than generous looking after each one of them which includes his subordinates. It will be apt to say that he now is an institution who will guide the generations of scientists. His contribution in the field of agricultural science will propel and motivate the young scientist of the country.

I am an orthodox fan follower of him and could produce voluminous book on him.

Once I asked him, "Fufaji, you have been working for half a century relentlessly, aren't you tired and don't feel like retiring", and in his trademark smile he said, "Few more years and then of course I will". However, till date he continues and motivate us to work hard. I am reminded of a saying "Soldiers don't retire they just fade away".

Dr Paroda's life would be incomplete without naming the fabulous ladies in his life, the pillars of strength, Dr Shashi Paroda (she makes him complete), loving daughters Anju & Sonal & yes not to forget, Late Mrs Suman (void left) as also the young Czars in his life Prashant, Shipra & two young angels.

Fufaji, it's a privilege knowing you and I respect & admire you. I conclude with Dr Paroda's favourite personality, Dr APJ Abdul Kalam's quote, "*A great mind and great heart go together*", which is apt for him.

My gratitude to Sonal, my dear sis, for providing me the opportunity to exhibit my feelings.

Salute to a great Scientist and human being... You inspire us Sir...

Jai Hind!

Geeta Paroda Chowdhary

Gynaecologist
Fatehabad, Haryana



From a Sister's Perspective

अजमेर मेरवाड़ा राजस्थान के एक गांव सराधना में स्व. श्री रामकरण सिंह परोदा व इन्द्रा देवी परोदा के घर 28 अगस्त 1942 को एक पुत्र ने जन्म लिया। क्या ही शुभ दिन था एक तरफ जन्माष्टमी का त्यौहार मनाया जा रहा था दूसरी तरफ मेरे मम्मी-पापा की शादी के 7 साल बाद पुत्र ने जन्म लिया था। मां बड़े प्यार से उन्हें राजा बाबू कहकर बुलाती थी। सबसे बड़े भाई हैं व उनके बाद हम चारे बहनें हैं। हमारे पापा ने व मां ने कभी बेटा व बेटी में कोई फर्क नहीं समझा।

भाई साहब के जन्म के समय मेरे पापा अजमेर में मार्केटिंग ऑफिसर थे। उस समय मेरे पापा शान व शौकत से रहते थे। उस समय गौरी कुण्ड माता जो कि हमारी कुल देवी हैं और गांव से 4-5 किलोमीटर दूर पहाड़ों में स्थित है, मेरे पापा ने गांव से गौरी कुण्ड माता तक मेरे भाई के पैदा होने की खुशी में कच्ची सड़क बनवाई थी। जिंदगी अच्छी चल रही थी, अचानक एक मोड़ आया व फिर सब कुछ बिखर गया। मेरे पापा पर झूठे इल्जाम लगवाकर कुछ केस लगाए गए। ऐसे में मेरे पापा तो हिम्मत हार गये, परन्तु मेरी मां ने कभी हिम्मत नहीं हारी। बाद में, केस जीत जाने पर वे फिर जिला कृषि अधिकारी के पद पर लग गये। हमारे घर में पढ़ाई का अच्छा माहोल था व सभी खूब पढ़ते थे। आस-पास के बच्चे या तो खेत में काम करते या गाय-भैंस चराते थे।



मेरे भाई एक मेधावी छात्र थे। अपनी क्लास में वे अक्सर प्रथम आते थे व सभी गतिविधियों में भी भाग लेते थे। छोटे ही थे जब अजमेर में अकेले रहकर व खुद खाना बनाकर उन्होंने अपनी हाई स्कूल की पढ़ाई पूरी की। मुझे याद है जब डी.ए.वी. कॉलेज में बी.एससी. (कृषि) पास की तो उन्हें वहीं पर डेमोस्ट्रेटर की जॉब मिली। मेरी मां इस जॉब से बिल्कुल खुश

नहीं थी। उन्होंने कहा बेटा इसके आगे कोई और पढ़ाई नहीं होती है क्या? फिर उन्होंने राजस्थान कृषि विश्वविद्यालय, उदयपुर में प्रवेश लिया। उस समय पैसे की अक्सर कमी रहती थी परन्तु उन्हें हमेशा छात्रवृत्ति मिलती थी। एक बार जरूरत पड़ने पर उन्होंने 500/-रु. मंगवाये जो मैं ही मां के कहने पर उधार लेकर आई व उन्हें मनी ऑर्डर किया। भाई साहब ने बहुत मेहनत की और एम.एससी. में गोल्ड मेडल लेकर उत्तीर्ण हुए। उन्होंने जब वह गोल्ड मेडल मां के हाथ में दिया तब हमारी मां बहुत खुश हुई और उन्हें आगे पढ़ाई करने को कहा।

इसके बाद भाई साहब ने पूसा इंस्टीट्यूट, नई दिल्ली में पीएच.डी. में प्रवेश लिया व आगे बढ़ते रहे। वे विदेश गए तथा खूब अच्छा काम किया। फिर जब भारत के सर्वोच्च पद डायरेक्टर जनरल, आईसीएआर पर लगे तो हम सब की खुशी का ठिकाना नहीं रहा। सबसे ज्यादा खुशी तो तब हुई जब उन्हें महामहिम राष्ट्रपति ने 'पद्म भूषण' पुरस्कार देकर सन् 1998 में सम्मानित किया। आज हमें गर्व है कि वे विश्व विख्यात कृषि वैज्ञानिक हैं।

मेरी पढ़ाई व बच्चों की पढ़ाई में उन्होंने मुझे बहुत साथ दिया। वो भाई ही नहीं उनमें मुझे एक पिता का रूप दिखाई देता है। मैं उस परम पिता से प्रार्थना करती हूं कि उनकी लम्बी उम्र हो, किसी भी तरह की कोई परेशानी न आये व हमेशा स्वस्थ व धनी बने रहें।

मैं परम पिता शिव बाबा से यही प्रार्थना करती हूं कि मेरे भाई को खूब लम्बी उम्र मिले ताकि वे भारत के किसानों की सेवा करते रहें। यही मेरी उस प्यारे प्रभु से प्रार्थना है।

Madhu Paroda

Sarpanch
Gram Panchayat Saradhana
Ajmer District, Rajasthan



From a Sister's Perspective

My brother, Dr. R.S. Paroda is the eldest sibling in the family and I am the youngest. He has always been very kind and affectionate towards me. He took over the social responsibility of being the head of our family after my parents passed away. He has carried out the responsibility by watching over me and our siblings and being present at weddings and other social functions. He is the person we turn to when we need advice or direction regarding decisions that could have long lasting impact.

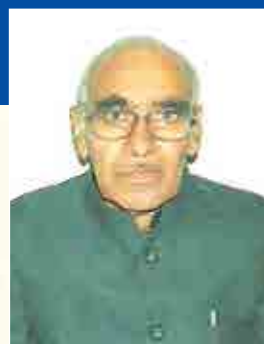
He is the most hardworking person I know. He grew up in a village and during the time when opportunities were few and far in between, he went to college and post-graduation and so on to become one of the most brilliant scientists the world has ever known. His hard work and dedication inspired me and my sisters as well to pursue life with a goal and a purpose. I ran for Public Office during Gram Panchayat Saradhana's election in 2014 after he pushed me and inspired me to run for it. During that time, I had just been diagnosed with Cancer and was just starting my Chemotherapy sessions. My brother would drive from New Delhi to Jaipur for all my sessions. The love, dedication and immense support he showed me during my tough time is something I will be forever be grateful for. I was able to get through trying times with his support. He has inspired my children to excel in education and to make their life worth living and something that we all could be very proud of.

He is the most recognized name in our neck of the woods, his name has instant recognition not only due to what he has achieved in his life but also due to the thousands he has helped along the way with advice, suggestion and directives to achieve their goals. Being the only son in our family, an immense burden has been placed on him, he has taken that mantle with grace, poise and affection and taken our family to greater heights than any would have imagined.

I would want to take this moment to wish my brother a very happy, healthy and prosperous life ahead of him as he celebrates his 75th Birthday. I wish I was there personally but I wish him the very best life has to offer. Thank you for everything you have done for our family and we want you to know that we all love you very much.

Mahi Pal Singh

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It is a matter of great pleasure and honour to convey my hearty congratulations to Dr R.S. Paroda on completing 75 years of age. I wish him a happy and healthy life. Every person has many dimensions in his personality like professional and personal. His contribution in agriculture and allied sciences has been well recognized in India and abroad. As I have not been associated with him professionally, so I will share some of my personal experiences. Whenever we meet him, always there is something new which comes out of his charismatic personality.

Dr Paroda is very alert and active both physically and mentally. He has abundance of energy. In my forty years of association with him, I have never seen a sign of tiredness on his face. He is always fresh and energetic as morning dew. Many times we saw him coming very late at night from abroad or domestic tours and meetings, but never saw him sleeping till late in the morning. Infact in the morning we always found him ready before everybody.

People who meet him are impressed by his simplicity, open mindedness and energy. His presence brings positivity and dynamism in the atmosphere.

Despite his very busy schedule, he finds time to meet his relatives and friends frequently. His stay may be short but his intensity makes a long lasting and deep impact on everybody. Sometimes he visited us for very short time on the way from some meeting may be only for an hour, but we felt so nice that he remembered us and came to meet us after already travelling for 8-10 hrs.

He gives personal attention to everybody. Some 8 years ago, my mother was alive and was 103 years old. During his visits, he would definitely talk with her individually and she felt immense satisfaction with his conversations. She also liked him very much. He also interacts with my very young granddaughters and asks them about their studies and hobbies? He motivates them to work hard and give their best performance. Not only relatives and friends, he even takes care of his driver and workers personally.



He is a great host. He is frequently in personal touch with his close ones and even his village men. He communicates us about his family functions and also invites. He likes different types of food. Many fruits and dishes we have tasted only because of him. Whenever my family and even colleagues have met him, his reception has been warm, cordial and hospitable. He takes a personal interest in the comfort of each and every one.

I highly appreciate his concern about us. About a year ago I was bedridden due to a severe heart problem. He frequently enquired

about my health and also visited me. Once he asked me to take rest and have a change by staying at his place during my recovery. He said that it will provide him an opportunity to help me. This speaks volumes about his kind and compassionate nature. Not only me I have seen him personally helping many people, including his workers. He has always stood with every near and dear in the time of need and distress.

He would always find time to visit his village in Ajmer. Few years back, I also visited his village and saw that he has developed an orchard in the dry land of Rajasthan. There he used sprinkler system of irrigation. With his efforts, a government farm for growing commonly used herbs has been set up near Ajmer. During my discussion with him, he told me that farmers have begun to grow trees and herbs there. Earlier such projects were mere dreams for the locals of that area but now they are benefitting from these. He also gifted us gooseberries, mangoes and chikoos from his garden

Once I got an opportunity to travel in some villages with Dr Paroda. He very simply explained farmers to increase the density of plants in the area. In another village he told farmers to enhance plant life to get higher yield. He motivated youth to take up career in agriculture science and help the farmers. He was so friendly with farmers that it was impossible to make out that he is not one of them, although he was from a different state and a scientist of international repute. They were also talking to him as he is one of them and understands all their problems. Although he is very simple and nature loving person but new gadgets are not unknown to him. He is well conversant with all the gadgets of this new age which seems difficult for a person of his age. This shows that he is an avid learner. He is a keen observer. He watches each and everything very minutely. He will not hesitate to point out if something

is not found in order. He will try his best to get the things in perfect order. Cleanliness is god gifted to him.

Dr Paroda firmly believes in God and spirituality. He has always been calm and composed even in adverse situations. And with God's grace, he overcame such problems with the good wishes of colleagues and other well wishers. I feel blessed to have a relative and a friend like him. We have always enjoyed his joyous company and helpful attitude. I again wish and pray that he lives a long and healthy life and keep serving the society by his mature experience.

Prashant Paroda

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From a Son's Perspective.....

My father has always been my role model. He is passionate about everything he does whether at home or in office. I have shared thousands of memorable interactions with my father in my lifetime. I would like to share a few such instances that have left an indelible impression on me.

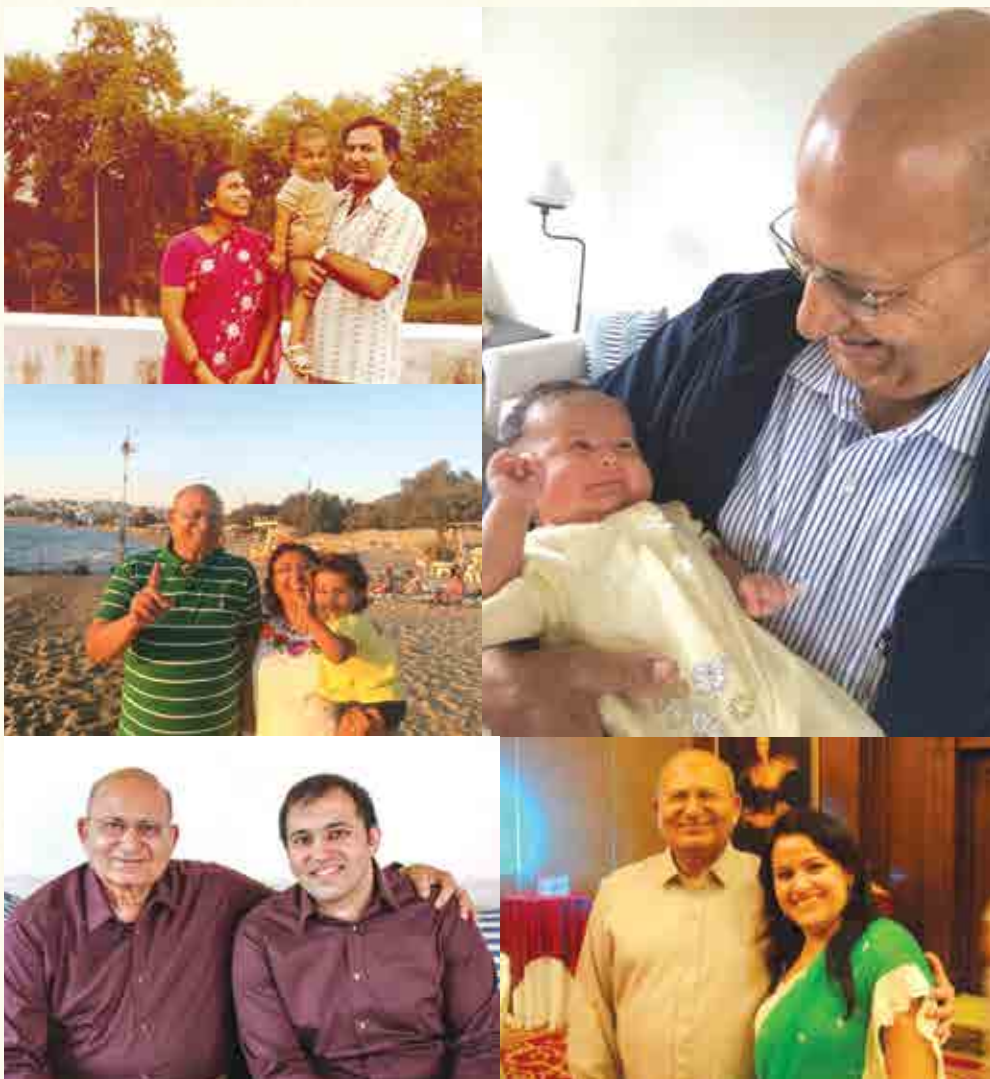
While studying for my school board exams, I had to wake up early in the morning at around 4:30 am to do my revisions. Every day, he would come to wake me up as he already would be diligently working on his office work. While I was struggling to motivate myself to study early in the morning with an important deadline approaching, my father never needed any motivation to do his work. His presence pushed me to work harder. For him, there are no half measures, and everything needs to be done to perfection. He has an indomitable spirit that is so endearing and motivates people around him.

After my high school, I was still in two minds of whether to go for my undergraduate education to USA. I knew that my father would have to use a large portion of his life savings to send me there. However, he never ever blinked an eye, and encouraged me to go abroad for my studies. He always told me that education is the best investment. His words became so true. Going abroad was probably the best career decision of my life. I was able to grow professionally and personally and had an incredible undergraduate experience. However, it was not all rosy initially. During my first semester, I became homesick and wondered if I had made the right decision. I wanted to go back home. When my father came to visit me, I was very excited to see him but also apprehensive. I expected some pushback from him given that he had invested so much to send me abroad. My father to my surprise comforted me and told me that I would always be welcome back home if that is what I want. His unconditional love pushed me to stay on for another semester. I always knew that I had an understanding father who will support my decision to go back if it didn't work out. That semester was a turning point and I started to enjoy college life a lot more, made new friends and never looked back.

Papa has always showered and doted on his kids with a lot of gifts. Whenever he returned from his trips abroad, we would look forward to what he brought for us in his luggage. They were always very innovative gifts for each one of us. He is always in tune with the changing times and very fashionable. Even today, whenever he visits us in Boston, he often inspects our house to see what needs an upgrade, and goes ahead and buys it for us. He is always thinking of others and puts their needs ahead of his own.

On my father's 75th birthday, I wish him a healthy, happy, and long life. My two precious daughters are looking forward to grow up under the guidance of their endearing grandfather.

Papa, thank you for everything. I am indeed very lucky to be born as your son.



R K Tomar

Former Deputy General Manager
IFFCO



Whenever I hear the name Dr R.S. Paroda, a smiling and content face appears before my eyes. I, being his brother-in-law, have had the chance to know him both as a person and a mentor.

Apart from his hardworking nature, the best quality of Dr Paroda is his overtly helping nature and the ability to remain calm even in the most adverse situations. The words like stress, fatigue and lack of time are non-existent in his dictionary.

I remember, it was my daughter's mehendi function in 2013 and jijaji (brother-in-law) was not available as he had gone for a very important meeting. It was a close family function so his absence was felt by all in the room. The function was nearing its end when we received his surprise call saying "I will be there in an hour". The already happy crowd was filled with extreme joy on hearing this news. It was a treat seeing jijaji dancing on the floor that night. The whole room was in a state of euphoria and even the hotel staff joined in to dance. This was the kind of impact and his level of energy after a whole day of giving lectures and flying back home.

As a concerned and involved fufaji (uncle) he has always kept himself informed about the education and career of my children. He has helped them whenever they needed support or needed more ideas as they hit a creative block. Children could always approach him for his guidance on the various career or academic choices they made. After working with the United Nations and heading top organizations in India, he is best placed to render them advice. To my daughter, who aspires to join the UN one day, Dr Paroda is her role model.

I can never forget when my mother, who is not with us anymore, was unwell and could hardly recognize or recall anyone's names. But to everyone's surprise she would have a big smile on her face and say 'Dr Paroda' when asked to identify him, every time he visited. It takes a lifetime of love and respect to create such kind of an impact on someone's heart and sub conscious mind. Dr Paroda always took time out from his busy schedule to meet his dear mother-in-law and I wouldn't be wrong in saying that she enjoyed his company the most. It was a beautiful relationship to remember.

In the moments of distress he has always been my constant support and a source of motivation. Around 30 years ago, I had a pending legal dispute due to which I was highly stressed. It was agreed that it will be settled by arbitration. Such is the greatness of his character that the opposite party nominated him to be the arbitrator even though they were very well aware of our relation. This in itself shows the ethical and impartial figure he is in the eyes of the society.

Although occupied with all kinds of work, jijaji never shies away from taking on any new responsibilities. He finds special joy in arranging family meetings and get togethers. Being a food aficionado, he makes it a personal task that everyone tastes everything. Overeating is a common after effect when a party is hosted by him. True Indian hospitality in every sense.

He has a never ending thirst when it comes to self-up-gradation and imparting knowledge. I had a chance to visit him in Tashkent and at every historical site, he always had something to add on to the local guide's information. The urge to keep himself updated is not limited to academics but also extends to the latest technology and gadgets. He is a pretty tech savvy person and you can always see him with the most upgraded and latest electronic devices. This quality of jijaji comes with its own perils as now I have to update myself with the latest electronics as my excuse of "*Ab iss umar mein kaun seekhe*" fails to stand before my children as they have a perfect example before them.

You are an inspiration for every one of us and I hope you keep touching more lives with your aura.

I wish you a very long, healthy and fulfilling life!

Rajendra Singh

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My association with Dr Paroda dates back to May 1979 and during these 38 years I have had the opportunity to spend considerable time with him at Hisar, London, Tashkent, his native village Saradhna and at multiple locations in NCR starting from Krishi Vihar to his own home in Sushant Lok, Gurgaon.

Apart from his well-known outstanding organising ability and stellar contribution to Agriculture Research both in India and abroad, what has impressed me the most, is his equanimity both in times of deep distress and at the zenith of his success. I have watched him very closely and was deeply impressed as to how he was able to handle the crises in his life with so much serenity and calmness! He staunchly believes in the plans of God and has always upheld his faith, trust and positive attitude even in the most trying circumstances.

Personally, he has been a beacon of strength for me, and somehow, he happened to be present when I needed him the most! Known for his hospitality, and passion to create order out of disorder, he is an ideal guest to host. I vividly recall, my Tashkent visit and visits to Samarkand and Bokhara. I had the privilege to be at the Rashtrapati bhawan, Prime Minister's House, Vigyan Bhavan and several other awards functions

as his guest. I also owe him enormous gratitude for the valuable guidance he gave to my younger son at crucial moments in his career.

I conclude with his favourite disclaimer " There may be many people more able than me but the blessings of the elders and the good wishes of the youngers always tilt the scales in my favour" .



Rameshwar Lal

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Dr R.S. Paroda is a living legend, he is an institution in himself. He has been a source of inspiration and a role model for us from the very early stage. People quote him as the best example of self-made man, who achieved everything in life with his hard work, sincerity and abundant intelligence.



He has always been a gold medallist, a topper in all institutions he studied.

He is a quintessential family man, who makes all the family functions lively with his active involvement. He reached the pinnacle and yet remained so down to earth that most people would have hard time believing. He takes interest in his friends' and relatives' lives, even the most distant ones; giving them valuable

guidance and helping them in whatever way he can. As Swami Vivekananda has rightly said- "Take up one idea. Make that one idea your life -- think of it, dream of it, and live on that idea. Let the brain, muscles, nerves, and every part of your body be full of that idea, and just leave every other idea alone. This is the way to success."



This is the truth about the success of Dr Paroda. He believes in what he does and follows it to its fruition, despite all the odds he faces. It was because of his strong will and endurance that he rose up against all odds in his life to become a man loved and admired by all who know him.

Saroj Hooda

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My family joins me in conveying our best wishes on Dr Paroda's 75th birthday, an occasion of a major landmark stage of an illustrious and highly rewarding journey of life!

May he have many wonderful years ahead with continued good health, success and happiness. Having known him closely for the last four decades, I wish to share that:

- At 75, I am amazed how full of positive energy he is! He is a very caring father to all his children and grandchildren. Despite his heavy professional responsibilities, he manages to cater to the demands of family and find time for all his family and extended family members.
- He has worked harder than anyone I have ever known! His passion and ability to work tirelessly for long hours has made him a role model for all of us and our children.
- He is a great host. He is very informal and joyful at social gatherings. His delightful nature, ever smiling disposition and ability to connect to people of all ages is matchless. He makes the surroundings very light and cheerful with his lively presence. Though always busy, he does not miss any chance of clicking photos and creates beautiful pictures and memories.
- He is very affectionate and helpful person and is very sensitive to the needs of all. Whether it is his own family or extended family, he is ever ready to do his bit whenever required. Also, he does not mince words if some straight talk is required.
- He is a very humble and down to earth person in his personal life. He is an early bird and is very particular about his morning walks.

I pray to Almighty for his long life and that the road ahead be smooth with good health, lots of laughter and meaningful experiences!



Dr Paroda being given the customary welcome as the groom by Mrs Saroj Hooda

Col. Sanjay Chowdhary

Colonel (Retd.), Indian Army
83, 1st Pologround
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I have had the good fortune to be not only related as a nephew to Dr. R.S. Paroda but have been a witness to some of the important landmark events not in the knowledge of most persons. In the bargain, I have always benefitted from his sage advice and guidance, during my association with Dr R S Paroda till date.

Dr. Paroda comes from a rural background and through perseverance, diligent hard work, and resolute determination, he has risen to such an eminent status and position. He has had a brilliant academic record by virtue of which he has reached the pinnacle in Agriculture Science and his research work has been recognised internationally as well. In recognition of his abilities and hard work, the honour of PadmaBhushan was bestowed upon him.

A person endowed with sterling qualities of both head and heart, he has faced adverse circumstances with courage and tenacity and has emerged with flying colours. A person's personality shines forth in adverse circumstances.

As DG, ICAR, he brought about all round improvements both professionally and administratively. He approached the Planning Commission with good reasons, for additional funds which was accepted. The IARI had vast empty lands which it was

envisaged would be acquired by the Government of India for expansion of other departments. However, Dr. Paroda had his own vision to expand and upgrade all departments. Thus he gave impetus to construction of clusters of buildings to accommodate new institutions of international standards. The Agriculture Universities were expanded by provision



Dr Paroda and his family at my wedding

of advice and funds. Several new institutes were established under the ICAR throughout the country. In fact he had then, laid the roadmap of Vision 2020 for Indian Agriculture as a true visionary. For his brilliant achievements, he was elected as General President of the prestigious Indian Science Congress.

Dr. Paroda presided over the Indian Science Congress Session 2000-01 with great *éclat* and the Prime Minister congratulated him for his successful conduct of such a mega event. He thereafter accepted assignment as Head, CGIAR Programme for Central Asia and Caucasus, Tashkent, where he was accorded Ministerial rank. He gave a boost to their small scale farming as well as laid out a detailed plan for sound agriculture policies, infrastructure development and he was their think tank for futuristic expansions.

Till three years back, he was contributing as Chairman of Haryana Farmers' Commission and Advisor to the Govt. His eminent status as an agriculture scientist has been acclaimed internationally and he has chaired Global Forum on Agricultural Research. Till date he is on the board of numerous international organizations, and has been lauded internationally for his research work and outstanding contribution towards agriculture.

On the personal front, he is an ardent walker, an early bird who would finish his pending work as well as write diligently on various issues in the early hours of morning. He has displayed tremendous acumen for progress in all spheres of life as well as maintained very good, humane and cordial relations both as a friend and personal relations. He is easily approachable and most amenable to help others when in need and I found him most dependable. He is an outstanding human-being, gifted with near genius insight for progress of society and for associated scientific agriculture research.

Seetu Dhaka

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From a Sister's Perspective.....

My brother, Dr Rajender Singh Paroda, was born on August 28, 1942 at Ajmer. It was an auspicious and long-awaited day for my parents- Late Smt. Indira Devi Paroda and Late Shri Ram Karan Singh Paroda- when they were blessed with a son who was christened Rajender- nick named Rajan. Rajan's birthday coincided with 'Janmashtami' which is an auspicious day.

My father was serving as District Marketing Officer, Ajmer at the time of Bhai Sahib's birth. The event was celebrated with great fanfare in the company of members of my family and friends. Rajan enjoyed excellent up-bringing during the formative years of his childhood. However, after Independence, circumstances somehow changed and my father had to restart his career, thus forcing my family to shift to our ancestral house in village Saradhna, very near to Ajmer. Bhai sahib, as we all sisters call him, was just 8 years old and had to start his schooling in the village Primary and then Middle School.

We are four sisters and one brother; Bhai Sahib being the eldest and me being the second youngest in our family. I am 11 years younger to Bhai Sahib. In VIII class, he moved to study in Government High School, Ajmer. He later did B.Sc (Agriculture) from DAV College, Ajmer whereas rest of us studied at Saradhna up to secondary level before two of us moved to Ajmer for our graduation.

He toiled hard during his studies at Ajmer and used to visit us frequently during vacation. During his visits, he used to share stories of movies with gusto. Also, he would help us in all the house-hold chores, including washing, cleaning dishes, bringing drinking water from the well and even lending a helping hand in our embroidery work on the pillow covers. I vividly remember the stories of couple of movies- Shri 420, Guide and Bees Sal Bad- narrated by him with actions as if he was himself an actor. In fact, Bhai sahib was our leader and four of us were his team-mates.

My mother used to assign duties to all five of us during the summer and winter vacations. It used to include harvesting and threshing of wheat, corn, chillies, tomatoes

and plucking of cotton. Every one of us used to work so enthusiastically that other farm labour employed would often wonder at our pace.

My father remained posted as District and later as Divisional Soil Conservation Officer at Barmer and Jodhpur for long time during his service. My mother somehow continued looking after our agricultural activities in the village only. My mother and we all used to visit him during the school vacations. I remember having played hide and seek with Bhai sahib and other sisters during such visits. Here too Bhai sahib would help us in shopping, cleaning the house and fetching drinking water from the hand-pump.

It had been a part of culture in our family to treat a male child and a female child at par in all matters of his/her growth. Though my mother was illiterate, she accorded highest priority to children's education in spite of financial constraints. Bhai Sahib was blessed with sharp intellect. My mother prevailed upon my father and sent Bhai sahib to Udaipur to do his M.Sc. (Agriculture) by borrowing Rs 500.00 at that time from a money lender. He proved his mettle while studying there and was a Gold Medalist of his batch.

The journey for academic excellence continued thereafter as he obtained his Ph.D. in Genetics from the prestigious IARI (Pusa Institute) in New Delhi and then post-doctoral studies in UK as a Commonwealth scholar. On return from UK, he started his professional career as Forage Breeder and then Head, Plant Breeding Department, Haryana Agriculture University, Hisar. My father visited Hisar in 1980 when Bhai sahib became Head of the biggest department in the university. He was very happy to see his son in that position at such a young age. While complimenting Bhai sahib on this achievement, he did express his desire to see him one day as Director General, ICAR. As luck would have it, Bhai sahib did become DG, ICAR later in 1994, but unfortunately my father was not there to see him in that position. However, my mother was fortunate to see him in that capacity. She was so happy that her sacrifices to get him best possible education had eventually paid off.

The achievements of Bhai sahib in his professional life are so well known nationally and internationally. Indeed, I am very proud of the name and fame earned by him in his career. He was conferred Padma Bhushan for his outstanding contributions in the field of agricultural research and development in our country.

I cannot believe he is turning 75 now! The members of my family join me in wishing Bhai sahib many more blessed years of good health and happiness. May God's choicest blessings be showered on him on his birthday!

Shanker Bhanuda

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"Glowing personality in the humblest format" Rajendra 'bhai sahab', as we fondly call him, is the proud possession of our family. His greatness is masked by his easy approachability, and a treating with kid gloves attitude that removes any inhibition you would feel to share your problems with him. This helps you find the most satisfactory solution, an easy way out or the best course of action to achieve your goals. I remember his first visit to our newly built JB Hospital about 15 years ago when, while moving in its basement, he observed that the hospital can be compared with any of the admirable hospitals of Europe. These ecstatic utterances of him elated me so high that I still remember it afresh, albeit I know that was a bit of exaggeration to encourage me & make me comfortable with his position of Director General & the country's top scientist stature. He tries to take everybody along, always remembers his friends, relatives, seniors or juniors wherever he goes. That's why he has vast posse of his admirers all over India & even abroad. This is because of his ability to instantly connect with various types of the people, and that he could create, nurture and raise great institutions all over India of international standard. He has always been forthcoming when asked for help, even when he was on foreign assignments. He is one of those few who can easily let go of their bitterness for anyone who was not fare to him in the past & come forward to assist them; contrary to what most people believe is very hard to do. This quality of casting away all ego (that most men in his shoes would have), makes him an ever shining example to humanity; as he strives to live a joyous, sustaining and fruitful life that adds infinitely more to the lives of those around him. "Live as if you were to die tomorrow. Learn as if you were to live forever" - that is the way Dr Paroda is living his life. Learning at every moment and giving back twice as much to the society.

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From a Daughter's Perspective.....

Writing a paragraph/essay on 'My Father' is an exercise we all have attempted in school. However, writing about your father when he is known as Dr R.S. Paroda, is a little overwhelming as a I am greeted by a myriad of emotions at the same time - the feeling of being blessed, proud, indebted, inspired and most of all being loved.

So where do I begin?

I believe many have already said a lot about him as a scientist, as an administrator, a colleague, a friend. I would like to share about him from the perspective of being his daughter. My earliest memories of him go down to the time when I realised as a kid that I had the most handsome and the most doting father. His love for good music, introduced us to some of the best like Boney M, ABBA and Michael Jackson and as kids we always had the latest music records. I still fondly remember the way music used to play loudly on our stereo system in the car and how at home he used to dance with us. His love for shopping was a bonus for us as we always had the latest things without even asking for it. It is amazing how inspite of literally giving us more than we could ever imagine, he always kept us very grounded. He (and our mom of course!) brought us up with the right mix of love and discipline.

As a child, every single night when I went to wish him goodnight, I would find him immersed in some official work and the next morning I would still find him there working. Over the years, papers and files have been replaced by Ipad and laptop but the one constant factor in his life (as well as ours!) has been his dedication to his work. It will be an understatement to say that till date he works more number of hours than me or my siblings.

Everything has a flip side and his involvement with his work had too! Whenever, we had visiting guests and someone asked him which grade I was in, he would look for some prompting from us. But that did not make him any less involved as a father. He has been the most caring father as inspite of his busy schedule, he had his ways of making his presence felt even in his absence. In the middle of a hectic day, he would make sure to call and check on us if we were not well.

The perfectionist in him always insisted that we keep the house spic and span. There have been instances when after hours of dusting and cleaning, we would be sure of having met his standards and maybe few words of appreciation from him, only to find him walking in and saying that there was dust on the tubelight! Years later I heard from someone that he used to be the same walking down the corridors of ICAR asking the concerned to make sure there was no dust on the posters on the walls. I could so relate to that! Nonetheless, I must admit that in our quest to seek his appreciation, we imbibed so many good values without even realising it.

I have always considered myself to be his favourite child among the three of us and he has always given me reasons to feel this way. I could always get away with things that my siblings could not. I can never thank him enough for placing so much trust in me and instilling the confidence in me.

As I have matured over the years (not sure if I have earned that compliment from him yet!), I have come to admire his humility the most. He is so concerned about the people that he works with and who work for him. His personal touch and concern in the form of a call, a compliment, a visit, a gift make him so endearing to people around him. He finds time for everything and everyone. It fills me with awe to see how he conducts all his relationships. He is always so giving that we often fondly refer to him as the 'Santa Claus' of the family.

On his 75th birthday, I just hope and pray that he continues to inspire us with his special presence in our lives.

So blessed to be his daughter!



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