# Indian Society of Plant Genetic Resources (ISPGR)

ISPGR 1987

# 4th Dr A.B. Joshi Memorial Lecture

*on*

## Farmers' varieties, grassroots innovations and the emerging role of global genebanks

*by*

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**Friday August 27, 2021 | 12 noon onwards**

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*Lecture Abstract*

# Farmers' varieties, grassroots innovations and the emerging role of global genebanks

Farmers have been making selection both in the wild as well as in the landraces (selected over millennia sometimes). One of the critical indicators of changing climate and other conditions is the way selection criteria have evolved over a period of time in a given region. Farmers, both men and women, select from natural variation at the plot, plant, pod and seed level. The Honey Bee Network (HBN) has been recognising such farmers breeders after validating their claims through various ICAR centres/programs and other R&D centres/widespread trials. Along with varietal development, farmers also develop associated culinary diversity and processing qualities. It is well known that when the income of the people increases in any society, the share of processed food also increases in the consumption basket. The descriptors in the genebank have paid rather limited attention to the indigenous/local knowledge about processing, culinary, nutritional and even medicinal uses. If such knowledge is added to the germplasm, then industrial interest in local varieties might increase several folds. Since some of these varieties, even if slightly low in productivity, have high climatic and edaphic adaptation besides having industrial uses, then farmers income may increase without increasing too much input expenditure.

Similarly, there are very few animal scientists involved in screening early-stage selections for palatability by animals. Very few examples exist of such screening so that crops, particularly in dry regions are not only optimized for grain product but also for fodder quality. Why should this be so rare.

Soil minerals are invariably transported to our body through food chain and affect our health. Crops and varieties grown on mineral rich soil could easily add to the emerging functional food market.

The popularity of flax seed shows that special nutritional characteristics of some of the neglected crops and varieties could further open new ways of increasing farmers income and augmenting agrobiodiversity.

Characterization of germplasm by urgent documentation of local knowledge of women and men offers with due credit to knowledge providers a buoyant opportunity for re-connecting community and scientific knowledge. Time has come to connect ex situ and in situ conservation efforts of agrobiodiversity and associated knowledge systems through long term monitoring studies. Exchange of such germplasm should also augment and address community search for viable sources of diversity globally. Traditional food festivals in different parts of the world like the Sattvik organized by HBN would provide a bottom-up platform for meeting such goals.

## *About the Speaker*

**Professor Anil K. Gupta** is an independent thinker and activist whose mission is to expand the global as well as local space for innovations *from* and *for* grassroots, link ideas in informal and formal sector, ensure recognition, respect and reward for creative communities, individuals, children and tech students by augmenting open innovations by individuals, institutions, corporations, and countries through frugal empathetic platforms. He pursues research on sustainable resource management and conservation of biodiversity, building global value chain to get the grassroots and youthful creativity its due.

He earned his Ph.D. degree in Management from Kurukshetra University (1986) after his masters in Biochemical Genetics (1974) from Haryana Agricultural University, Haryana. He worked on a three-year Pew Conservation Scholar Award for Biodiversity Conservation and Environment at University of Michigan (1993-96).

He is currently Visiting Faculty, Indian Institute of Management (IIM), Ahmedabad (from where he retired after teaching for 36 years),

Indian Institute of Technology (IIT), Bombay and Academy of Scientific and Innovative Research (AcSIR). He is Founder of Honey Bee Network, National Innovation Foundation (NIF), Grassroots Innovations Augmentation Network (GIAN) and Society for Research and Initiatives for Sustainable Technologies and Institutions (SRISTI).

Professor Gupta facilitated the 'Festival of Innovation & Entrepreneurship (FINE)' through NIF hosted by the office of President of India at the President's House (March 19-23, 2018) and Festival of Innovation (FOIN), 2015-2017. He also helps in organization of Dr A.P.J. Abdul Kalam ignited Mind children creativity and innovation competition and global HBN creativity and inclusive innovation Awards HBNCRIIA.

Professor Gupta is a highly decorated scientist/teacher at national and global levels, endowed with several awards including the prestigious Padma Shri (2004). He is Fellow of National Academy of Agricultural Sciences (NAAS), Indian National Science Academy (INSA), AcSIR, World Academy of Art and Science, California, and CSIR, Bhatnagar Fellow, amongst many other honors and recognition. He was adjudged as one of the 50 most influential people in the field of intellectual property rights around the world (2003) and one of the Star Personalities of Asia, Business Week, 2001. He has delivered several lectures on unleashing innovation potential at numerous top corporate, academic and public policy institutions worldwide. He has pursued 'Shodhyatra', learning walk in every state of India at least once covering more than 5000 km during 1998-2001 and has started second round from 2017 along with HBN volunteers. He has served as member of many governmental and corporate bodies.

(for more details visit www.sristi.org; www.gian.org; www.nifindia.org)

## About ISPGR

The Indian Society of Plant Genetic Resources (ISPGR) was founded in 1987 as a multidisciplinary scientific body involved in the various issues of plant genetic resources (PGR) and related fields. It currently has more than 830 members, nearly 800 of them being life members. The genesis of the society was from the initiative taken by the scientists at the National Bureau of Plant Genetic Resources (NBPGR), New Delhi, under the leadership of Dr R.S. Paroda, who was then Director of NBPGR and is also currently the President of ISPGR (2019-21). The ISPGR was formally registered under the Indian Societies Act (1860) on November 3, 1987 with the Registrar of Societies, Delhi (Registration No. S/18336 of 1987). The ISPGR is also registered under section 12A and 80G of Income Tax Act 1961, for tax exception on any surplus funds of the ISPGR and for donor's tax exception, respectively. Membership is open to all persons interested in the field of PGR, in India and abroad.

## Objectives

The primary objective of the society is to provide a forum to various workers in the field of PGR to express their views, publish their findings and interact with different stakeholders. The society aims at the following:

1. To promote research in the field of PGR especially in germplasm exploration and collecting, conservation, evaluation and characterization, introduction and exchange, quarantine and related activities.
2. To encourage the management of PGR in an integrated fashion involving different disciplines such as Economic Botany, Ecology, Ethnobotany, Biosystematics, Biotechnology, Physiology, Horticulture, Seed Science, Agronomy, Pathology, Entomology, Nematology, Chemistry & Biochemistry, Computer Science and Informatics.
3. To provide a forum to the scientists for expressing their critical views based on scientific knowledge, rational thinking on policies related to PGR.
4. To collect, collate and disseminate information on PGR programmes.
5. To encourage and promote close association and collaboration among members belonging to various disciplines.
6. To provide recognition to persons having made significant contribution in furthering the science of PGR.
7. To work in association with international organizations and other societies with similar interests.
8. To publish research journal at periodical intervals.

## Executive Council (2019-2021) of ISPGR



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