Indian J. Genet. Plant Breed., (2023) 83(4): 622-624

ISSN: 0975-6906

www.isgpg.org

OBITUARIES

"I am firmly convinced that hunger and deprivation can be eliminated sooner than people consider feasible, provided there is synergy among technology, public policy and social action" – **M.S. Swaminathan**

Prof. Monkombu Sambasivan Swaminathan was born on 7th August 1925 in the temple town of Kumbakonam, Tamil Nadu. He had his schooling at the Native High School and Little Flower High School, Kumbakonam. Prof. M. S. Swaminathan displayed brilliance from the very beginning of his educational career. Having felt the devastating impact of the Bengal famine of 1943, he chose the field of agricultural science as his career over other glamorous opportunities. During 1940-44, he studied at University College, Trivandrum (now Thiruvananthapuram). He obtained his B.Sc. (Agri.) degree from the Agricultural College, Coimbatore (now, Tamil Nadu Agricultural University) in 1947, and the Associate IARI Diploma Course in Genetics and Plant Breeding from the Indian Agricultural Research Institute (IARI), New Delhi in 1949. Soon, he was selected for the Indian Police Service; however, he opted for continuing his research work and joined the Department of Genetics, Netherlands Agricultural University, Wageningen, in December 1949 as a UNESCO Fellow. In 1950, he joined the School of Agriculture at Cambridge and worked on the cytogenetics of the tuber-bearing *Solanum* species. Attracted by the scientific papers he published during the period, he was offered by the University of Wisconsin, USA a Research Associateship in Genetics and worked at Madison and Sturgeon Bay till his return to India in January 1954. In April, 1954, he joined a temporary project of *indica-joponica* rice hybridization at the Central Rice Research Institute, Cuttack. In October 1954, he joined the IARI, New Delhi as Assistant Cytogeneticist. Subsequently, he became Cytogeneticist, Head of the Botany Division (now Genetics) and in July, 1966 he became the Director of IARI, New Delhi. In January 1972, Prof. Swaminathan succeeded his teacher Dr. B.P. Pal as the Director General of Indian Council of Agricultural Research (ICAR), New Delhi. He continued in this position until March 31, 1979, when he joined as Secretary to the Government of India in the Department of Agriculture and Rural Development. On April 3, 1980, he retired from Government service and joined the Planning Commission (now NITI Aayog) as Member for Agriculture and Rural Development. He served as Deputy Chairman of the Planning Commission between April and June, 1980. Prof. Swaminathan also served as Chairman, Scientific Advisory Committee to Cabinet, Govt. of India (1980-1982), and the Chairman of the UN Science Advisory Committee in 1980. He was holding an independent position of Chairman of FAO Council during 1981-85. Prof. Swaminathan also served as the Director General of International Rice Research Institute (IRRI), Los Banos, the Philippines during 1982-88. He was elected as the President, International Union for the Conservation of Natural Resources for six years (1984-1990). He was also elected as the President of World Wide Fund for Nature (India) during 1989, which he continued till 1996. He headed the National Commission on Farmers, Govt. of India as Chairman (2004-06) and recommended that the minimum support price (MSP) should be at least 50% more than the weighted average cost of production. He was elected as President of the Pugwash Conference on Science and World Affairs for 2002 to 2007 and was Chairman, High Level Panel of Experts to the World Committee on Food Security in 2010. Prof. Swaminathan was a nominated member of the Rajya Sabha for the term 2007 to 2013.

Prof. Swaminathan had been recognized and honoured with several awards including, Shanti Swarup Bhatnagar Award for Biological Sciences, 1961; Padma Shri, 1967; Ramon Magsaysay Award for Community Leadership, 1971; Padma Bhushan, 1972; Borlaug Award, 1979; Albert Einstein World Science Award, 1986; First World Food Prize, 1987; Padma Vibhushan, 1989; B.P. Pal Memorial Award, 1995-1996; UNESCO Gandhi Gold Medal, France, 1999; Franklin D Roosevelt For Freedom Medal, Netherlands, 2000; Sahametrei Medal, Royal Govt. of Cambodia, 2007; Life Time Achievement Award of All India Management Association, 2007; Golden Peacock Life Time Achievement Award, 2007; Lal Bahadur Shastri National Award, 2007; Shining World

Leadership Award, Singapore, 2007; ISCA Award 2007-2008; and the World Agriculture Prize, 2018. He was the recipient of about 70 honorary doctorates from universities around the world.

Prof. M.S. Swaminathan was elected as Fellow of several professional academies, viz., Indian Academy of Science, 1957; Indian National Science Academy, 1962; National Academy of Sciences, India, 1976; Royal Society, London, 1973; National Academy of Sciences, USA, 1977; Russian Academy of Agricultural Sciences, 1978; Royal Swedish Academy of Agriculture and Forestry, 1983; National Academy of Arts and Sciences, USA, 1984; Accad. Naz. Delle Sciencz detta del XL, Italy, 1985; European Academy of Arts, Science and Humanities, 1988; American Association For the Advancement of Science, Founder Fellow TWAS, 1983, and Fellow of the Indian Society of Genetics and Plant Breeding. Prof. Swaminathan was a Founder Member of the Executive Council of National Academy of Agricultural Sciences (NAAS), India in 1990 and served the Academy as President twice, i.e. 1992-96 and 2005-07. He was the founding Chairman of the XV Genetics Congress Trust, New Delhi, and the M.S. Swaminathan Research Foundation (MSSRF), Chennai. He also served the Indian Society of Genetics and Plant Breeding (ISGPB), New Delhi as President during 1964, 1975 and 1983 and as Secretary continuously from 1955 to 1962.

When India faced the famine like situation in the early 1960s, his pioneering work in agriculture and other related sectors, like wheat applied genetics and breeding led to the tremendous increase in wheat production. His visionary leadership and perseverance in convincing the government and the farmers to adopt the new wheat seeds, fertilizers and production technology transformed the Indian agricultural scenario and India became modern and progressive and, a country infamously living "Ship to Mouth" on imported US grain became surplus to store and export with current annual production of more than 112 million tonnes. For his remarkable contribution towards increasing production and productivity in agriculture, Prof. Swaminathan is popularly called as 'Father of Green Revolution' in India.

His research activities spanned over a range of subjects such as cytogenetics, radiation genetics, plant breeding, agriculture, biodiversity and eco-development. He established a "Gamma Garden" at IARI, New Delhi in 1964 for mutagenesis and crop improvement. His deep involvement in research enabled improvements in crops like potato, which faced parasitic attack and withstand cold weather, encouraged millets cultivation, rice improvement, soil health improvement, etc. He consistently advocated for sustainable agriculture emphasizing the delicate balance between human development and ecological sustainability, and giving special importance to lives of small farmer who should enjoy the fruit of scientific advancement. He was well aware and passionate to improve the lives of women farmers also. He mooted the idea of the first bio-technology park for women that gave a platform for aspiring entrepreneurs. Thus he transformed the Indian Agriculture.

He introduced and established the Agricultural Research Service (ARS) system in 1975 and tried to improve the status of ICAR scientists and the research activities as a whole. Upon recommendation of the Parliamentary team headed by Prof. Swaminathan, the Govt. of India established an Advanced Centre for Agricultural Research and Education (ACARE) and a Rice Bio-park at Yezin Agricultural University, Yezin and donated it to the people of Republic of Myanmar. Thus, the contribution of Prof. Swaminathan to the humanity can never be forgotten.

He had very great organizational capabilities who successfully organized and celebrated 100 years of Mendels' work on discovery of laws of inheritance through International Symposium on the "Impact of Mendelism on Agriculture Biology and Medicines" in 1965. Subsequently he also organized 8th International Wheat Genetics Symposium in 1978, and International Genetics Congress in 1983, to name a few. He was a very loving personality and whomsoever he met felt encouraged. He is the role model for hundreds of scientists globally. His contributions continue to inspire and guide the Indian farm scientists to follow the path of agricultural innovation, fostering growth and attaining sustainability and prosperity.

He was a teacher par excellence. He believed that there is nothing called 'teaching', all are 'learning' only. Both the 'teacher' and the 'taught' learn all the time. Between 1954 and 1972, Prof. Swaminathan taught several courses every year without missing a single class. He guided 77 students in their thesis work including 12 Associate of IARI, 10 M.Sc. and 55 Ph.D. degree. Prof. Swaminathan admitted that a letter received from Jawaharlal Nahru in 1964 worked as a stimulant for him to spend long hours in teaching young scholars.

An outstanding human being, champion of farmers, a researcher, administrator, and an excellent and inspiring teacher left this world for his heavenly abode on September 28, 2023 at an age of 98 years. The nation lost a visionary who revolutionised the agricultural science, whose contribution to India will always be remembered and be inscribed in golden letters. The members of the Indian Society of Genetics and Plant Breeding mourn his sudden demise and pay their homage, and pray for peace of the departed soul.

Akshay Talukdar, *Editor*
S.M.S. Tomar, *Ex. Editor*

Dr. Balram Sharma was born on 7th September 1940 in a village Andhyari, in the district of Bharatpur, Rajasthan. He completed his primary and secondary school education at Uchain, Rajasthan from 1944 to 1952. He studied at B.R. College, Agra and completed intermediate in 1955, B.Sc. in 1958 and M.Sc. in 1960. After completing post-graduation, he became lecturer at DAV College, Ajmer, Rajasthan and taught Horticulture. Subsequently, he joined Timiryazev Agricultural Academy, Moscow, USSR (now Russia) in 1962 for doctoral study and obtained his Ph.D. degree in 1965.

Dr. Sharma joined the Indian Agricultural Research Institute (IARI), New Delhi initially as a Pool Officer on ad hoc basis and later became Associate Professor (Junior Class I) Genetics in 1967. In 1990, he was appointed as Head, Division of Genetics, IARI and continued till 1993. He became Head of the Genetics Division, IARI for the second time in 1998 and continued it till his superannuation in 2000. Post retirement, he worked as an Emeritus Scientist, Council of Scientific and Industrial Research (CSIR) in the Division of Genetics, IARI, New Delhi from 2000 to 2005.

In research front, his primary focus was on genetics, crop breeding and mutagenesis in pulse crops such as pea and lentil. Based on his research works, he published a series of research papers on breeding for disease resistance, particularly powdery mildew in pea, mutation and genetics of various agronomic traits in field pea and lentils. He had developed many high yielding varieties of pea and lentil, which became popular among the farmers.

Dr. Sharma was a teacher par excellence. Among all the courses he taught, he is fondly remembered by the students especially for the course "Development of Gene Concept" which was attended by a large number of Master and Doctoral students of the PG School, IARI, New Delhi. He also guided a large number of M.Sc. and Ph.D. students including some foreign students who have now achieved prestigious positions in the country and abroad. Dr. B. Sharma was decorated with several prestigious awards and recognition, viz., Prize of Bhartiya Vigyan Patrika Samiti, New Delhi, 1972; IARI Best Teacher Award, 1997; Hari Om Ashram Award, 1997-98; N.I. Vavilov Medal, USSR Academy of Sciences, Moscow; IARI Certificate of Appreciation for developing varieties in 2001-02 and 2006. He was a Fellow of several academies including National Academy of Sciences, India, National Academy of Agricultural Sciences and Indian Society of Genetics and Plant Breeding (ISGPB), New Delhi. He served the ISGPB as Editor of the Indian Journal of Genetics and Plant Breeding from 1985 to 1997. He had also edited another journal Lentil Research and a large number of books. He had a great organizational capability and had successfully organized Golden Jubilee Symposium on "Genetic Research and Education: Current Trends and the Next Fifty Years" in 1991 besides organizing several important events of national importance. He had a firm scientific temper and conviction.

Dr. Balram Sharma left this world for his heavenly abode on September 17, 2023 at an age of 83 years. The members of the Indian Society of Genetics and Plant Breeding, New Delhi mourn his sudden demise and pay their homage, and pray for eternal peace of the departed soul.

Akshay Talukdar, *Editor*
S.M.S. Tomar, *Ex. Editor*