

TATA INSTITUTE OF FUNDAMENTAL RESEARCH

Homi Bhabha Road, Mumbai-400 005

May 13, 2018

ASET Colloquium

- Speaker** : **Dr. S.J. Jambulkar** (*Head, Nuclear Agriculture & Bio-Technology Division, BARC*)
- Title** : **Food and Nutritional Security in India: The Role of Nuclear Energy**
- Date & Time** : **Friday 18 May 2018 at 16:00 hrs.**
- Venue** : **Lecture Theater (AG-66.)**

Abstract :

Food grain production from mere 50 million tonnes in 1950s to present 275mt is the transformational output of “Green Revolution”. However, the ground reality is that India ranked 100th position among 119 countries on Global Hunger Index (GHI) 2017. This has raised the question on food and nutritional security of Indian population. Increasing food grain import, shrinking land and water resources, climate change, increasing health consciousness of people and the burgeoning population are the major challenges for food grain production in future. Strategies to face these challenges need to be drawn to shrink the gap between demand and supply. Mutation breeding has paved the way to strengthen the germplasm of crop plants and to tailor the plant of choice. Concentrated efforts on mutation breeding throughout the world have resulted into the development of 3250 high yielding varieties in various crop plants and contributed a lot in agricultural economy of various countries. In India, 340 varieties in different crops have been developed through mutation breeding.

Since last six decades, Bhabha Atomic Research Centre (BARC) is actively involved in the crop improvement programme using mutation breeding technique. Forty two high yielding varieties in oilseeds, pulses, cereals and fibre crops have been developed. Farmers are happy to cultivate these varieties due to high yield potential resulting into their satisfactory monetary gain. Besides, techniques on plant tissue culture, soil health improvement through biological agents, and Sterile Insect Technique (SIT) have been developed.

About the Speaker:

Dr. Sanjay. J. Jambhulkar did his M.Sc. and Ph.D. from Indian Agricultural Research Institute (IARI), New Delhi and joined BARC in 1991. Some of his prominent achievements are isolating large spectrum of novel mutations in Sunflower, Indian mustard and Rice as well as development of high yielding genotypes, Sunflower and mustard. He won BARC Group Achievement Awards in 2007, 2009, and 2014 as well as Team Member of International Atomic Energy Agency (IAEA) Institutional Achievement Award.



Dr. Satyanarayana Bheesette
(Coordinator, ASET Forum)