# COTTON Innovate

Weekly Newsletter from Central Institute for Cotton Research, Nagpur

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## National Science Day Celebration

National Science Day was celebrated at CICR, Nagpur on February 28, 2015. Dr. K.R. Kranthi, Director, CICR, presided over the function. Dr. A.K. Joshi, General Manager, Regional Remote Sensing Centre, ISRO/Department of Space, Nagpur was the Chief Guest and speaker of the day. Dr. Sandhya Kranthi, Head, Crop protection Division welcomed the Chief Guest. Dr. G. Balasubramani, Principal Scientist, Biotechnology, conducted the program. Heads of various Divisions and all the Scientists, Research Associates, Senior Research Fellows, Project Assistants, Technical and Administrative Staff were present. Dr. A.K. Joshi, in his talk entitled "Mangalyaan- India's Mars Mission " elaborated the step wise execution of the mission of ISRO to launch Mangalyaan to Mars. His presentation threw light on the difference between Earth and Mars in various aspects. He also explained about the largest Volcano Olympus Mons, largest canyon - Valles marineris, river systems and Ice formation in Mars. He briefed about the components of Mangalyaan – Mars Colour Camera – for providing images in the visual spectrum, Thermal IR imaging Spectrometer- for measuring the temperature and emissivity of the Martian surface, allowing for the mapping of surface composition and mineralogy of Mars, Methane Sensor- for detecting life on Mars, Mars Enospheric Neutral Composition Analysis, and Lyman Alpha Photometer for study of escape processes of Martian Upper Atmosphere through Deutrium / H2 availability. An active interactive session was held at the end of the presentation. Dr. G. Balasubramani, Principal Scientist, Biotechnology, proposed the vote of thanks.





## Meetings

The M. S. Swaminathan Research Foundation (MSSRF) organized a meeting with their stake holders at CICR, Nagpur on Feb. 22 and 23, 2015. MSSRF was established in 1988 as a non-profit trust by Professor M. S. Swaminathan with proceeds from the First World Food Prize received by him in 1987. The Foundation aims to accelerate use of modern science for agricultural and rural development for development and dissemination of technology to improve lives and livelihoods of tribal and rural communities. The agenda of meeting held at CICR, Nagpur was on Women empowerment under Leveraging Nutrition for Agriculture in South Asia (LANSA). LANSA is a new international research partnership with MSSRF as partner and focuses on policies, interventions and strategies that can improve the nutritional status of children in South Asia. The meeting was attended by Director, CICR and Dr. Sandhya Kranhti, Head Crop Protection Division. During his visit to CICR, Dr. Swaminathan was felicitated by Director, CICR, Nagpur.





## Scientific Talk

As a part of weekly scientific talk, Dr. M. Amutha, Scientist (Entomology) delivered a talk on "Endosymbionts - Untapped tool for insect pest Management" on February 23, 2015. This seminar outlines about evolutionary history of endosymbionts, endosymbiosis theory for mitochondria and chloroplast evolution. Classification of endosymbionts in insects and their characteristics, distribution of primary and secondary endosymbionts, Role of endosymbionts in insects and how endosymbionts can be exploited for insect pest management. Normally insects and endosymbionts play a mutualistic relationship. Endosymbionts plays an essential role in insects for proper development and survival. They provide nutrients to the host; they are helpful for digestion of food, essential for the host growth, reproduction and provide immunity to host. They protect their host by providing insecticide resistance and stress tolerance to host, resistance to fungal and bacterial and parasitoid infection also. Hence endosymbionts can be exploited for pest management in two ways, by disruption of the symbionts required by pest or by introducing the endosymbiont into host to disrupt the traits contributing to the insect pest status. Endosymbionts also switch over from commensal to pathogen based on its location in the host. Recent researches are going with gene silencing, proteomics and transcriptomics level. Hence, endosymbionts are untapped resource for insect pest management.

## Superannuation

Shri S.S.Sahare, Skilled Support Staff was accorded warm farewell by ICAR-CICR Welfare Club on his superannuation from ICAR service on Feb. 28. 2015. He was felicitated by Dr. Sandhya Kranthi, Officiating Director & Head, Crop Protection Division. All the staff members attended the function and expressed their good wishes for Shri Sahare.


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