

COTTON *Innovate*



Weekly Newsletter from Central Institute for Cotton Research, Nagpur

Visit : www.cicr.org.in

Issue : 3, Volume 11, November 16-22, 2014

Research Advisory Committee: *Review Meeting* held

Research Advisory Committee (RAC) review meeting was held at Central Institute for Cotton Research (CICR), Nagpur on November 21-22, 2014 to review the progress of work and to discuss the technical programme for the year 2014-15. The meeting was chaired by Dr. B. V. Patil, Former Vice Chancellor, UAS, Raichur, Karnataka. The meeting started with welcome address by Dr. K. R. Kranthi, Director, CICR. Chairman, RAC in his introductory remarks provided an overview of cotton scenario this year and emphasized on High Density Planting System (HDPS) and mechanical picking of cotton as two important research areas. Dr. S. K. Mukherjee, Member RAC stressed on development of drought tolerant cotton varieties. Dr. T. Pradeep, Member RAC emphasized on need for prioritization of research efforts benefitting the farmers' and other stake holders. Dr. A. K. Dhawan, Member RAC discussed about Cotton Leaf Curl Virus (CLCuV) in north India and its management approaches. Dr. A. J. Shaikh, Member RAC talked about the challenges for scientific community with respect to availability of cotton in 2050. Dr. N. Gopalakrishnan, ADG (CC) and member RAC, called for tailoring crop improvement programmes for sustainable cotton production. He also appreciated the E-kapas effort which was included in 100 days achievement of government of India.

Dr. K R. Kranthi, Director, CICR presented 'CICR Vision 2050' before RAC members. The Action Taken Report (ATR) was presented by Dr. M. V. Venugopalan, Member Secretary, RAC. The research achievements of 2013-14 and technical programmes for 2014-15 of various divisions and regional stations were presented by Dr. Suman Bala Singh, Head I/C, Crop Improvement Division, Dr. Blaise Desouza, Head, Division of Crop Production, Dr. Sandhya Kranthi, Head, Division of Crop Protection, Dr. A. H. Prakash, Project Coordinator and Head, Regional Station, Coimbatore, Dr. D. Monga, Head, Regional Station, Sirda and Dr. G. Balasubramani, Acting I/c, Biotechnology Section. The RAC members also visited and reviewed the experimental fields.

The meeting concluded with vote of thanks proposed by Dr. Sandhya Kranthi, Head, Crop Protection Division, CICR, Nagpur.



ISA Best poster award

Dr.Nalayini, Principal Scientist (Agronomy) participated in the National Symposium on Agricultural Diversification and Environmental Security held on November 18-20, 2014 at PAU, Ludhiana and presented an invited Lead paper on Prospects of women empowerment through agricultural Diversification and acted as Convener for a technical session on Agriculture diversification: Gender Empowerment, Extension, Marketing and Policy Issues. Dr.Nalayini received ISA Best poster award from Dr.Gurbachan Singh, President ISA and Chairman, ASRB.



Literature Scan

CRISPR/Cas Technology

CRISPR/Cas is a new genetic engineering method that makes possible targeted modifications of almost any gene and a simple gene-editing system. Specific genes can be turned off, turned on, and/or edited. Chinese scientists modified monkey genes that regulate metabolism, immune cells, stem cells, and sex. The potential applications of the CRISPR/Cas system include genetic medicine and genetically modified organisms of all sorts: plants, animals, and even microbes to serve as living factories for producing drugs, biofuels, biodegradable plastics, and other green chemistry and biotechnology applications. Genes can also be modified in groups, which will permit study of how combinations of genes and gene mutations affect function. And the CRISPR/Cas methodology is simpler and cheaper than any other current approach to genome modification. CRISPR stands for Clustered, Regularly Interspersed Short Palindromic Repeats. Palindrome is a sequence that is the same forward or backward. A CRISPR sequence is a string of non-coding DNA that is a palindrome, or nearly so, followed by a spacer, followed by the same palindrome, followed by a different spacer, followed by the same palindrome, followed by yet a different spacer, etc. The spacers are chunks of genomes from an invading virus. Microbes can add new chunks when they encounter new viruses. The spacers are a kind of stored memory of the invaders. Microbes use the spacers as search strings. There are a number of Cas enzyme for example, Cas9 (Cas = CRISPR-associated)–that matches the CRISPR spacer sequences to sequences in an invading virus and then cuts the virus at a targeted site. Usually the cut the Cas enzyme makes destroys the virus. So CRISPR/Cas might be a tool for gene therapy, a real cure for genetic disease by disabling a disease-causing gene.

Reference:

Tabitha M. Powledge , “Latest on rewriting genomes, humans’ included” February 11, 2014, Genetic Literacy Project.

Contributed by Dr. J. Amudha, Senior Scientist, Biotechnology Section, CICR, Nagpur.

Produced and Published by : Dr. K. R. Kranthi, Director, CICR, Nagpur

Chief Editor : Dr. Nandini Gokte-Narkhedkar

Editors : Dr. J. Annie Sheeba, Dr. Vishlesh Nagrare, Dr. J. Amudha, Dr. M. Saravanan

Media Support & Layout design : Mr. M. Sabesh

Production Support : Mr. Sanjay Kushwaha

Citation : Cotton Innovate, Issue -3, Volume - 11, 2014, Central Institute for Cotton Research, Nagpur



Publication Note: This Newsletter presented online at <http://www.cicr.org.in/NewsLetter.html>
Cotton Innovate is the Open Access CICR Newsletter

The Cotton Innovate – CICR Newsletter is published weekly by
Central Institute for Cotton Research

Post Bag No. 2, Shankar Nagar PO, Nagpur 440010

Phone : 07103-275536 Fax : 07103-275529; email: cicrnagpur@gmail.com