



A Monthly Insight into the ICAR-CIRCOT

e - News Letter

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In this Issue >>

Technology Insight

Technology Mela

Training

Meeting

Event

Visit of Dignitary

Down Memory Lane

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Director's Desk...

At the outset, On behalf of ICAR-CIRCOT, I congratulate Dr. Trilochan Mohapatra, for resuming charge of Secretary (DARE) & Director General (ICAR). We also place a record our sincere gratitude to Dr. S. Ayyappan, former Secretary (DARE) & Director General (ICAR), for his help, guidance and support during his tenure period.

Although there is a dwindling cotton production scenario in the world, India remains a major contributor to the world cotton production with its output touching 6.21 million metric tons in 2015-16. The quality worthiness and cost competitiveness are major factors influencing the competition of cotton with synthetic fibres. ICAR-CIRCOT has to play a significant role in ensuring the quality and create diversified utilization of Indian Cotton through its R&D efforts besides creating skilled human resource and providing commercial services to the stakeholders in the Sector.

ICAR-CIRCOT provides skill development for the farmers and other stakeholders in the area of DR ginning, value addition to cotton by-produce and specialized training programme in the area of nanotechnology, absorbent cotton technology, physical and chemical characterization of textiles materials. Twenty three training programmes were organized during 2015-16. The Institute is also involved in the capacity development in Cotton sector of the African countries through the Cotton TAP programme, under which two training programme were organized at Mondou, Chad and Zaria, Nigeria.

ICAR-CIRCOT has achieved the budget utilization (Plan) figures of 99.98 % during the year and has generated a revenue of ₹ 105.26 lakhs. The resource generated through consultancies was ₹ 19.99 lakhs (34 per cent higher than the previous year); the skill development component yielded a revenue of ₹ 14.74 lakh (117 per cent of the previous year). Through Commercial testing a revenue of ₹ 60.85 lakhs, which is 84 per cent higher than previous year (₹ 33 lakhs during 2014-15) has been generated. On technology commercialization and transfer activities front: Twelve consultancies were undertaken, 12 MoU's were signed with stakeholder, organized four exhibitions & five awareness programmes and showcased the technology in seven exhibitions organized across the country. 30 villages have been adopted in Wardha, Selu, Samudrapur and Hinghanghat taluk under the Mera Gaon Mera Gaurav program of Government of India.

P.G. Patil



ICAR-CIRCOT, Mumbai



ISO: 9001:2008

Dr. Sanjeev Kumar Balyan, Hon'ble Union Minister of State for Agriculture and Farmers welfare visited ICAR-Central Institute for Research on Cotton Technology, Mumbai on 17th March, 2016. Director, ICAR-CIRCOT briefed the activities of the institute to the Hon'ble minister. Minister had a discussion with the expert members and the scientist of the institute on the recent developments in the cotton sector. Dr Balyan urged the scientists to give more emphasis on development of farmer-centric technologies. In addition, to make cotton cultivation more remunerative, development of cutting edge technologies for the industry must be accelerated. The Institute should ensure to have better coordination with industries and commercialization of technologies.



Dr. Sanjeev Kumar Balyan, Hon'ble Union Minister of State for Agriculture & Farmers Welfare, discussing with the Experts and the Scientist at ICAR-CIRCOT on 17th March, 2016.



Dr. P. G. Patil, Director, ICAR-CIRCOT felicitating Dr. Sanjeev Kumar Balyan, Hon'ble Union Minister of State for Agriculture & Farmers Welfare, Govt. of India.

Technology Insight

Cotton as Oil Sorbent Material

“Sorbents can be a useful resource to clean a spill of oil. They permit recovery of oil in situations which may be unsuitable for other methods. The synthetic sorbents, in vogue, can cause secondary contamination if used excessively. A material can be sorbent, if it attracts oil preferentially to water. The low Mic (3.0 and less) cotton can be an eco-friendly sorbent for controlling the oil spillage in ocean as well as on surface. A method for measuring oil-pickup % in raw cotton was developed which not only measured the amount of oil pick up but also the rate of pick up. The method was further refined using Instron for better control on the test parameters. Initial trials has suggested that the raw cotton plug of a certain density, having mic 3.0 or less, can absorb oil up to 30-35 times of its weight.”

Technology and Machinery Demonstration Mela 2016

Technology and Machinery Demonstration Mela-2016 was organized by ICAR-CIRCOT, at GTC, Nagpur in association with Agro-plus Foundation, Nagpur on March 21st, 2016. Over 300 farmers from 30 villages of district Wardha and Nagpur and stakeholders from industry and research organisation attended the program. The mela aimed to demonstrate the technologies in post-harvest processing of cotton and value addition to cotton stalks and other crop residues. At the outset, Dr. S.K. Shukla, Sr. Scientist and Officer In-charge, GTC, welcomed the guests and briefed about

the programme. Dr. Sharad Nimbalkar, Hon'ble former Vice Chancellor of Dr.Punjabrao Agricultural University, Nagpur in his presidential address, expressed concerns over underutilization of cotton by-products for value addition. He emphasized that farmers should work in groups for on-farm utilization of crop residues to increase farm income. In his special address, Dr. S.K. Singh, Director, ICAR-NBSS&LUP, Nagpur explained the role of soil health card and importance of soil fertility management in crop production and reduction in cost of production. Dr. M.S. Kairon, Former Director, ICAR-CICR, Nagpur highlighted the ways to improve the soil organic carbon by solid wastes recycling. Shri Luv Bajaj, Bajaj Steel Industries Pvt. Ltd, Nagpur insisted the young entrepreneurs to adopt ICAR-CIRCOT technologies on cotton stalks utilization for achieving new heights. Shri G.H. Wairale, former GM, Maharashtra State Cotton growers Federation meeting & co-ordinator, CITI-CRDA, Mumbai highlighted the methodologies that led to increase in cotton productivity in Wardha Dist.

On this occasion, 15 progressive farmers and budding entrepreneurs were also felicitated for attaining higher cotton productivity and supplying chipped cotton stalks in bulk quantities to different industries for its value addition. In addition, Soil Health Cards were also distributed to the farmers covered under *Mera Gaon Mera Gaurav* programme. Live demonstration of numerous farmers' friendly

technologies, machines and products related to value addition to cotton and its by-produce were exhibited during the programme.

Technical presentations on utilization of cotton stalks for briquettes, pellets, power generation and compost were made by various industrial entrepreneurs and scientific experts. The programme concluded with vote of thanks by Er. V.G. Arude, Scientist, CIRCOT, Mumbai.



Dr. Sharad Nimbalkar, Hon'ble former Vice chancellor, Dr.PDKV, Akola addressing the gathering during the inaugurations



Farmers and stakeholders attending the Mela



Demonstration of pelleting of cotton stalks to the farmers and stakeholders at GTC, Nagpur



Felicitation of a farmer by Dr. Sharad Nimbalkar, Chief Guest



Distribution of soil health cards to farmers covered under Mera Gaon Mera Gaurav Programme

Training

Training on “Spectroscopic and Chromatographic Techniques for Material Characterization”

ICAR-CIRCOT organized a four days training programme on “Spectroscopic and Chromatographic Techniques for Material Characterization” during March 2 - 5, 2016. The training was inaugurated by Dr. P.G. Patil, Director, ICAR- CIRCOT. Dr. Sujata Saxena, In-charge Head, CBPD, and Course Co-ordinator welcomed the participants and provided a brief outline of the course. Dr. P.G. Patil, after delivering the inaugural address, released the CD containing the training lectures. Sixteen participants from educational institutions, State Agricultural University and R&D institutions attended the training programme which included four students from Ethiopia currently pursuing

their studies in India. Main objective of this training was to acquaint the trainees with the basic and advanced spectroscopic and chromatographic methods for the characterization of materials and to provide hands on training on various analytical equipment. Dr. P.G. Patil, Director, ICAR-CIRCOT, distributed the certificates to the participants in the valedictory function held in the afternoon of 5th March, 2016. Dr. ASM. Raja, Senior Scientist & Head I/C, QEID, Dr. Virendra Prasad, Senior Scientist, CBPD, Er. A. Arputharaj, Scientist, CBPD were the course co-coordinators of this training programme.



Group Photo: Training on "Spectroscopic and Chromatographic Techniques for Material

Farmers Training

GTC of ICAR-CIRCOT conducted a farmers training programme on "Post-Harvest Technology and value addition to cotton" during 21-23, March 2016. Twenty one farmers from Nagpur district, participated in the training.

The training program was financially supported by Maharashtra Agricultural Competitiveness Project, MACP, ATMA, Nagpur. The training module dealt with logistics and supply of cotton stalks to industries and in-situ utilization of cotton stalks for additional remuneration and soil fertility management.



Group photo of farmers' training programme conducted at GTC, Nagpur

Meeting

Research Advisory Committee Meeting

The 22nd meeting of the Research Advisory Committee (RAC) of ICAR-CIRCOT was held on March 17, 2016. Dr. P. R. Roy, Chairman, RAC presided over the meeting. Chairman emphasized that the scientists should explore the use of cotton both for spinnable as well as non-spinnable applications and formulate the research projects keeping in view the national as well as the global changes happening in the sector. The Chairman stressed that the institute need to keep its focus on improving the quality of cotton produced in the country and subsequent value addition for the benefit of stakeholders and act as a bridge between the farmers and the industry.

He stressed that the institute need to strive to become a Centre of Global Excellence in Cotton, since this is the only institute undertaking Research work exclusively on Cotton and other Natural fibres but the same has to be Commercial, so that the visibility of the institute is brought to the fore. The recommendations on policy, research and general issues were made by the Research Advisory Committee. On the occasion of RAC, Dr. U.S. Sarma, Director IJIRA and Member, RAC delivered a lecture on "Versatile Coir and Jute Textiles" on March 16, 2016 for the staff of CIRCOT which led to very lively discussion and was appreciated by all.



Discussion during XXII RAC Meeting

Annual review workshop of CRP projects at CIAE, Bhopal

Annual review workshop of CRP projects implemented under Agricultural Engineering Division of ICAR was held under the chairmanship of Dr. K. Alagusundaram, DDG (Agril. Engg) at Central Institute of Agricultural Engineering (CIAE), Bhopal from March 09-11th, 2016. Dr. Kanchan. K. Singh, ADG (FE), and Dr. K. K. Singh, Director CIAE, Bhopal were present.

ICAR-CIRCOT is the lead centre for CRP on Natural Fibre, under which nine projects are implemented in collaboration with CICR, Nagpur, NIRJAFT, Kolkata and Assam Agricultural University, Jorhat. All the PIs of the projects attended the meeting and presented the progress of their projects during the meeting. The project wise budget utilization was also reviewed during the meeting. Dr. A. S. M. Raja, Dr. S. K. Shukla, Dr. N. Vigneswaran, Senior Scientists and Dr. P. Jagajanantha, Scientist, ICAR-CIRCOT participated and presented the progress of their project.



Annual review workshop of CRP projects at CIAE, Bhopal



Dr.K.Alagusundaram, DDG (Agril. Engineering) along with ICAR-CIRCOT scientist

Lecture

1) Dr. U.C. Sarma, Member RAC & Director, Indian Jute Industries Research Association (IJIRA), Kolkata delivered a Lecture on the topic " Versatile Coir and Jute Textiles" on 16th March, 2016.



Dr. U.S. Sarma on Versatile Jute and Coir Fibre

2) Dr. S.K. Shukla and Er. P. S. Deshmukh, Scientist presented the deputation report of their visit to Nigeria for organizing In-country training programme under the cotton TAP for Africa on March 16th 2016.



Dr. S.K. Shukla, Sr. Scientist and Er. P.S. Deshmukh, Scientist presenting deputation report

Visit of Dr. Gajendra Singh, former DDG (Engg), ICAR, New Delhi

Dr. Gajendra Singh, former DDG (Engg), ICAR, New Delhi visited ICAR-CIRCOT on 31st March 2016. He visited the Nanocellulose Pilot Plant and interacted with the scientists about the potential of nanocellulose production technology and means of its commercialization. Later, he visited the exhibition room to understand the overall advancements in the research activities of this Institute. Also, he had a brief look on the Agri-Business Incubation centre and Guest House. He appreciated the work done by this Institute in the advanced research areas.



Director P.G.Patil, Director, ICAR-CIRCOT welcoming Dr. Gajendra Singh, former DDG (Engg), ICAR, New Delhi



Dr. Gajendra Singh, former DDG (Engg), ICAR, New Delhi visited Nano pilot plant, ICAR-CIRCOT



Dr. Gajendra Singh, former DDG (Engg), ICAR, New Delhi visited Exhibition Centre at, ICAR-CIRCOT

HRD Activity

- 1) A training on "Technology Commercialization & IP Management" was organized at this Institute during 14-15 March 2016 (one & half days). This training was conducted by the National Institute of Industrial Engineering (NITIE, an autonomous body under Govt of India), Mumbai and 25 staff (Scientists and Technical Officers) attended this training programme. In addition to detailed explanation of technology commercialization methodologies and IP management protocols, case studies and group discussion were arranged during the programme.
- 2) Training on "First Aid & Fire Fighting" was organized at this Institute on 3rd March, 2016 by Civil Defence Area II of Mumbai.

About 22 skilled supporting staff attended this training programme. A detailed demonstration of first aid and fire fighting was done by the faculties in addition to theoretical explanation.



Demonstrations for SSS during the training on First Aid & Fire Fighting



Dr. P.G. Patil, Director along with the faculties from NITIE, Mumbai and trainees of ICAR-CIRCOT, Mumbai.

- 3) Smt. T. P. Mokal, Shri R. S. Pathare, Asstt. Administrative Officers, Shri S. D. Ambolkar, Assistant, undergone a Training on RTI Act., 2005 at CIFE, Mumbai on 18th March, 2016.

Personnel

Appointment

Dr. P. G. Patil, Head, TTD Joined as Director, ICAR-CIRCOT, w.e.f. 21-03-2016.

Students Visit

Around 100 students from Kerala Agricultural University visited ICAR-CIRCOT, Mumbai on March 16, 2016.



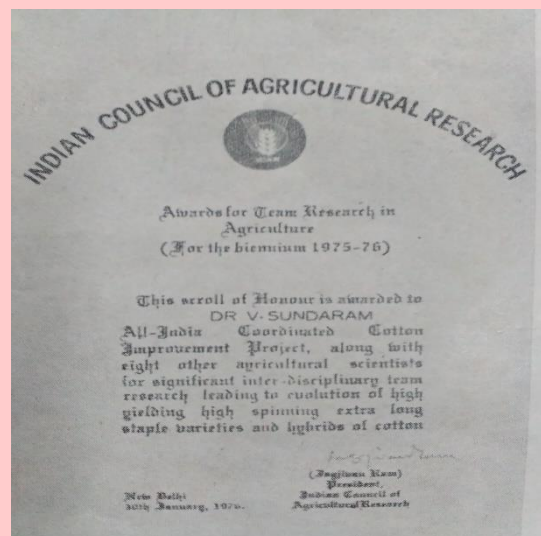
Students visited at Mechanical Processing of Cotton

Seminars & Conferences

- 1) Dr. A. S. M. Raja, Senior Scientist, participated and presented a paper on "A one bath Chemo-enzymatic Process for the preparation of Absorbent Cotton" an International Conference on Recent Trends in Engineering and Material Science at Jaipur held on March 17-19th, 2016.
- 2) Dr. C. Sundaramoorthy, Senior Scientist, participated in "Textile Meet" organized by IL&FS at New Delhi on 21st March, 2015 under cotton TAP for Promoting Trade & Investment in cotton & Textile sector in Africa.



Dr. V. Sundaram, former Director, CIRCOT, receiving the award for Team Research from the hands of Shri Jagjivan Ram, Hon'ble Union Minister of Agriculture and Irrigation (1975-76)



Facsimile of the above award for Team Research in 1975-76



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