



A Monthly Insight into the ICAR-CIRCOT

e - News Letter

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Published by:

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Dr. C. Sundaramoorthy

Er. G. Krishna Prasad

Dr. T. Senthilkumar

Dr. S. V. Ghadge



Director's Desk...

The Cotton production estimates for the current year is estimated at 35.6 million bales. The lower production is attributed to high incidence of sucking pest (white fly) in Punjab & Haryana region and the incidence of pink bollworm in Gujarat. There is also a significant reduction in the planting acreage in the current year owing to stagnant demand in the market for the cotton. CCI has reported nationwide arrivals at 14.4 million bales as on 29th January, 2016, the slowest arrivals in the past three years. The lag in arrivals is attributable to late sowing, inadequate rains, and high levels of pest incidence during growth stages which subsequently affected boll maturation.

Some of the state governments has announced MSP bonus Rs.110 per 20 kg of seed cotton to the cotton farmers over and above MSP. Almost 80 percent of the CCI procured cotton under MSP is from the southern states of Telangana and Andhra Pradesh followed by the central cotton growing state of Maharashtra. Seed cotton prices remain firm and continue trading above MSP prices in most of the cotton growing states.

Although Indian ex-gin prices are lower than the Cotlook A Index and make Indian cotton very competitive, the mill demand remains sluggish. Government of India has approved the "Amended Technology Upgradation Fund Scheme (ATUFS) for technological improvement in textile industries primarily focusing on promotion of exports, technical textiles and upgradation of looms and processing in garment sector. The new schemes and the weaker rupee are expected to provide a boost to the domestic textile industry and improve the exports.

P.G. Patil



ICAR-CIRCOT, Mumbai



ISO: 9001:2008

Technology Insight

Development of Cotton Rich Tri-blend Functional Fabrics

Cotton, PLA and bamboo viscose fibres were blended in different proportions namely, 60/20/20, 50/30/20, 50/20/30 and 40/30/30 respectively to produce three component blended yarns of 40s Ne using compact ring spinning. These tertiary blended yarns were then knitted into single jersey structure of 110 GSM and subjected to chemical pre-treatments. It was found that the addition of PLA and bamboo viscose fibres contribute to the improved hand feel of the blended fabric. The PLA fibres contribute to the smoothness of fabrics and the bamboo viscose fibres contribute to both smoothness and softness of fabrics. The smoothness of the fabrics has increased in the range of 35 – 58% (according to the blend proportion) whereas the softness has increased in the range of 11-19% in comparison to 100% cotton fabric. This type of specialty fabric is suitable for making high value shirts and T-shirts that can provide enhanced comfort to the wearer.

Training

Training on Quality Evaluation of Cotton

Seventh batch of the training course on “Quality Evaluation of Cotton” for year 2015-16 was conducted during 4th January

– 8th January 2016. It was a special batch for 16 executive (Branch Manager, Assistant Manager, Administrative Officers etc) from The Cotton Corporation India Ltd. and one Manager from D. D. Cotton Pvt. Ltd., Mumbai. Er. A. K. Bharimalla, I/c TTD along with Er. V. G. Arude and Dr. Sundaramoorthy inaugurated the training course and interacted with participants. During the training period more emphasis was given on marketing of cotton along with demonstrations and practical of cotton testing. To make all the participants acquainted with every aspect of cotton, special guest’s lectures were arranged. Mr. Shirish Shah (Treasurer and ex-Director, Cotton Association of India), Mr. P. D. Mepani (Sr. Vice President, DD Cotton Pvt. Ltd) delivered the talk.

Mr. Kutty (HR Consultant, The Cotton Corporation of India) delivered a lecture on Human Resource policies of CCI. Also a special lecture on a topic ‘Organizational Behaviour’ was arranged. To understand national as well as international cotton grading, a visit to Cotton Association of India, Cotton Green was arranged. During valedictory function Dr. P. G. Patil, Director, ICAR-CIRCOT, Mumbai felicitated all the participants. Feedbacks and suggestions from the participants were collected by the Training in-charge.



Group photo: Training on Quality Evaluation of Cotton

Visit of Parliamentary Committee on Agriculture

The Parliamentary Committee on Agriculture comprising of 15 Hon. Members of Parliament under the Chairmanship of Shri Hukmdev Narayan Yadav visited ICAR-CIRCOT on 18th January, 2016. The Committee visited the institute exhibition centre and the Nanocellulose Pilot Plant and Director CIRCOT presented the activities of the institute and answered the points raised by the Honourable members.

Following Members of Parliament Visited CIRCOT

S. No	Honorable Members of Parliament
1.	Hon. Shri. Hukmdev Narayan Yadav, Chairman
2.	Hon. Pro. Richard Hay
3.	Hon. Md. Badaruddoza Khan
4.	Hon. Dr. Tapas Mondal
5.	Hon. Shri Janardan Mishra
6.	Hon. Ajay Nishad
7.	Hon. Shri Mukesh Rajput
8.	Hon. Shri C. L. Ruala
9.	Hon. Shri Arjun Charan Sethi
10.	Hon. Shri Satyapal Singh (Sambhal)
11.	Hon. Mohd. Ali Khan
12.	Hon. Shri Ram Nath Thakur
13.	Hon. Shri Shankarbhai N. Vegad

Other Officials visited CIRCOT

S. No	Name of the Other Officials
1	Shri. Arun K. Kaushik (Secretary to the Delegation)
2	Shri Sumesh Kumar (Under Secretary)
3	Shri Nirantar Kumar Singh (Reporting Officer)
4	Shri Ram Jiyawan (Sr. Chamber Attendant to the Chairper)

S. No	Name of the Other Officials
5	Shri Alok Agarwal, Director (DM)
6	Shri B.M. Patnaik, Under Secretary (DM)
7	Shri Kumar Santosh, Senior Secretariat, Assistant (DM)
8	Shri Utpal Kumar Singh Joint Secretary



Dr. P. G. Patil, Director, ICAR-CIRCOT welcoming Chairman & Hon. Member of Parliament Shri Hukmdev Narayan Yadav



Hon'ble Members of Parliament discussing with ICAR-CIRCOT Director & Scientist



Group Photo: Honourable Members of Parliament along with CIRCOT Staffs

Meeting

Director's meeting with staff

A meeting was arranged on January 01, 2016 at 3.30 p.m. at the Jubilee Hall of the institute. The meeting was to wish the staff on the occasion of the New Year. During this occasion, Dr. P.G. Patil, Director (Acting) welcomed the staff for the meeting and summed up the various research achievements of the previous year, training courses organised at the Ginning Training Centre, Nagpur and at the headquarters, participation of the institute in various exhibitions, MoUs' signed, accolades received at the ICAR West Zonal Sports Tournament 2015 held at Avikanagar, efforts undertaken in the Swachh Bharat Mission and the cleanliness achieved in the premises till now, Mera Gaon Mera Gaurav initiative undertaken by the institute, etc. He also requested the staff to reduce the consumption of electricity through switching off the lights and fans when not used so that the institute's burden on the bill could be reduced. He requested the staff to carry out good work and wished the staff and their family a Happy New year ahead.

Project Monitoring and Evaluation Committee

The first meeting of the newly constituted Project Monitoring and Evaluation Committee (PMC) of ICAR-CIRCOT was

held on 06th January, 2016 to discuss the following agenda:

- Broad programmes to be devised by the institute to achieve its vision/mission encompassing all core areas of research.
- Cutting edge research programmes for NASF and other externally funded projects
- PME Cell activities

Dr. P.G. Patil, Director, presided over the meeting attended by the HOD's and PME Members.

Sri. Appaji C S Nadgouda, Govt. of Karnataka Special Representative, New Delhi visited CIRCOT on 5th January 2016.

Sri. Appaji C S Nadgouda, Govt. of Karnataka Special Representative, New Delhi visited CIRCOT, Mumbai on 5th January 2016 to discuss the areas related to Cotton Technologies, Nano Technologies, Training opportunities for unemployed youths and for Collaboration with Agriculture Universities of Karnataka. A short video film about CIRCOT's activities was shown to Sri. Appaji followed by a detailed presentation on Institute's activities by Dr. P. G. Patil, Director. This was followed by a brief presentation on Nanotechnology related activities by Dr. N. Vigneshwaran, Senior Scientist.

Sri Nadgouda expressed his interest to arrange an on-site training by CIRCOT staff in rural areas on Post-harvest processing of cotton in Karnataka. Also, for imparting training for unemployed rural youths, following areas were identified after elaborate discussion:

Absorbent cotton technology, Natural dyes: Extraction and processing, Preparation of Briquettes and Pellets from cotton stalks and other agro-residues, and Accelerated composting of cotton stalks. This meeting was followed by visit of the Guest to Nanocellulose pilot plant and exhibition room that displayed all CIRCOT's research activities.



Meeting with Sri. Appaji C S Nadgouda, along with ICAR-CIRCOT Staff



Dr. P.G. Patil, Director, ICAR-CIRCOT, explaining on Institute's activities

HRD Activity

1. Dr. T. Senthilkumar, Scientist, Mechanical Processing Division, attended training programme of Composite Technology organized by FRP Institute, Chennai on 7-9th January, 2016.
2. Mr. Prasad Satyamurthy, PhD (Science) Microbiology student under the guidance of Dr. N. Vigneshwaran, Senior Scientist completed his viva-voce for his thesis entitled "Preparation of Nanocellulose by Controlled Fungal (Trichoderma Reesei) Hydrolysis of Microcrystalline Cellulose and its Application in Biocomposites" on 27th January 2016 in the University of Mumbai and became eligible for the award of the PhD degree.
3. Shri M.G. Ambare and Shri N. D. Kambli, Senior Technical Assistant, Two days training programme on Testing and Quality Evaluation of Packaging Materials, organized by IIP, Mumbai on 28-29th January, 2016.

Event

Lectures at ICAR-CIRCOT

Two scientists / ARS Probationers (FOCARS) from ICAR-CIPHET, Ludhiana who are undergoing three months professional training under Dr. N. Vigneshwaran, Sr. Scientist in Nanotechnology presented the following

lectures on 25th January 2016 at 4 pm in Dr. V. Sundaram Committee Room.

1. "Nano-Starch: Preparation and Characterization" By Mr. Dukare Ajinath Shridhar, Scientist (Agri. Micro)
2. "Rheological Behaviour of Nanocellulose" By Er. Bibwe Bhushan Ratnakar, Scientist (Agri.Proc. Engg)

Republic Day Celebration

The institute celebrated the 67th Republic Day at the Headquarters, Mumbai on 26th January, 2016. Dr. P.G. Patil, Director, ICAR-CIRCOT hoisted the tricolor flag.



Hoisting of National Flag by Director, CIRCOT

ISO 9001:2008 Auditing

An internal audit was conducted by the ISO trained auditors for different divisions in the institute on January 20 and 21, 2016. The auditors have communicated the observations to the MR.

Directors' visit

Dr. P. G. Patil, Director, ICAR-CIRCOT attend Interactive Meeting of Vice-Chancellors of Agricultural Universities and ICAR Directors held at NASC Complex, New Delhi, during 23-24th January, 2016. The meeting was inaugurated by Hon'ble Union Minister of Agriculture & Farmers' Welfare Shri Radha Mohan Singhji in the morning session on 23rd January, 2016 followed by Directors' Conference started, in which presentations on various prioritized Research, Administrative and Technical

issues were discussed. Issues like Digital ICAR, E-monitoring & Governance, commercialization of technologies, Mera Gaon Mera Gaurav were discussed in detail. Also he attended the meeting chaired by DDG (Engg.), ICAR, which was attended by ADGs, Directors, PCs. various issues related to the SMD regarding research and development, institutes issues were discussed.

Visit of Dignitaries

Dr. S.N. Jha, ADG (PE) ICAR visited ICAR-CIRCOT QE Unit, Coimbatore on January 07th, 2016. Dr. S. Venkatakrishnan, Officer-In-charge, of the unit, explained the various activities of QE Unit, CIRCOT, Coimbatore to ADG (Engineering) and other Scientists accompanied along with him from CIPHET, Ludhiana.



Dr. S. N. Jha, ADG (PE) Keenly observing the demonstration of HVI and AFIS at QEU, Coimbatore



Dr. V.M. Mayande, farmer Vice Chancellor, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola, Mumbai visited Nanocellulose Pilot Plant, ICAR-CIRCOT



Dr. Kanchan Singh, ADG (FE), ICAR, Keenly observing various exhibits at Exhibition Centre of the Institute

Farmers Visit to GTC, Nagpur

GTC of ICAR-CIRCOT, Nagpur is always forefront in providing first hand information on recent advances in post harvest processing of cotton to the farmers from various parts of the country whenever they make visit to GTC. Fifteen farmers from Katani, Madhya Pradesh under Chief Minister's Khet Thirth Yojana visited GTC on January 11, 2016. Similarly, fifty farmers from Jhalawar, Rajasthan through Office of Additional

Director, Horticulture visited GTC on January 29, 2016. Dr. S. K. Shukla, Officer I/C, GTC, Nagpur addressed the farmers about various activities undertaking at GTC, Nagpur. The farmers were explained about ginning, cottonseed and cotton stalks utilization. Dr. V. Mageshwaran, Scientist, GTC highlighted the use of beneficial microorganisms in production as well as processing of cotton and its by-products.



Farmers from Jhalawar, Rajasthan visited GTC, Nagpur on 29 Jan 2016



Farmers from Katani, Madhya Pradesh visited GTC on Jan 11 2016

Students Visit

A group of student and faculty from Cornell University, USA, Visited ICAR-CIRCOT Quality Evaluation Centre, Coimbatore on 13th January, 2016 to know the activities carried out by this Centre.

Dr. S. Venkatakrishnan, Officer-In-charge of this Centre welcomed the delegates, and then highlighted the Importance of various fibre quality parameters evaluated using HVI and AFIS by demonstrating the Instruments to the visitors.



Dr. S. Venkatakrishnan, demonstrating quality evaluation of cotton sample through the HVI and AFIS to the students



Students of Integral University of Lucknow, Uttar Pradesh visited CIRCOT on 07th January 2016 (70 students)

Invited Lecture

Dr. N. Vigneshwaran, Senior Scientist, delivered two invited lectures in Faculty Development Programme on "Applications of Nanotechnology in Textile Engineering" held during Jan 18-23, 2016 at UP Textile Technology Institute, Kanpur, on the topics "Basics and potential properties for application in textiles" and "Nanofinishing of cotton textiles"

Seminar/Conference

Dr. P. S. Deshmukh, Scientist attended 50th Annual Convention of ISAE and Symposium on Agricultural Engineering in Nation Building: Contributions and Challenges organised by Indian Society of Agricultural Engineers (ISAE) & presented a paper on "Study of some properties of Arecanut Husk (areca Catechu L.) Complimentary in farm machinery design" which scheduled to be held on 19-21st January, 2016, at Bhubaneshwar.

Awards and Recognition

Best Poster Presentation

The **Sajjan Gupta - Konark Memorial Award 2016** was awarded to Ms. Siddhi Juikar, Dr. N. M. Ashtaputre and Dr. N. Vigneshwaran for the poster presentation entitled "Eco-friendly preparation of Nano-lignin from cotton stalks and coconut fibres by lignolytic microorganisms" in the 6th Research Meet in "Biotechnology, Environmental Sciences, Phytochemicals & Life Sciences" held on 15th January 2016 at Wilson College, Mumbai and organized by Konark Group & Wilson College.

Best Paper Award

Er. V. G. Arude has been awarded with the Best Paper Award for his lead paper entitled "Development of GIS and GPS based spatial cotton fibre quality maps" presented in the National Seminar on "Future Technologies: Indian Cotton in the next decade" held at Guntur during 17-19 December, 2015. The seminar was jointly organised by Cotton Research and Development Association (CRDA), Hisar and ANGRAU, Regional Agricultural Research Station, Guntur. The award ceremony will be held during All India Co-ordinated Cotton Improvement Project (AICRP) workshop going to be held during 7-9th April, 2016 at Surat.

Personnel

1. Dr. T. Senthilkumar, Scientist has been nominated as a Co-Nodal Officer for implementation of the training functions of the institute and utilization of HRD funds of the Institute w.e.f 18th January, 2016
2. As per the Departmental Promotion Committee meeting held on 10th August, 2015, the following Scientist Probation was cleared and the date mentioned against their names.

S. No	Name of Scientist	W.E.F (With effect from)
1	Dr. R. Guruprasad	27.04.2013
2	Er. G. T. V. Prabu	15.09.2013
3	Er. G. Krishna Prasad	
4	Dr. T. Senthilkumar	
5	Er. Sekhar Das	
6	Er. Santanu Basak	

Upcoming Events

- 1) Training Course on “Quality Evaluation of Cotton” at ICARCIRCOT, Mumbai

Training Calendar for 2015 -16

S. No	From	To
1	08.02.2016	15.02.2016
2	22.02.2016	26.02.2016

Course Contents

- Advances in Ginning Technology
- Cotton Grading
- Cotton Crop By-products
- Fiber Length Measurement
- Demonstration in Fibre Fineness and Maturity
- Cotton fibre Testing using High Volume Instrument (HVI) and Advanced Fibre
- Information System (AFIS)
- Mechanical Processing of Cotton
- Contamination in Cotton and Marketing & Commercial aspect of Cotton
- Techno Entrepreneurial Activities and Business Planning Development
- Visit to Cotton Association of India
- Fee: Rs. 11,450/- (Inclusive of taxes)

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- 2) Training programme on Spectroscopic and Chromatographic Techniques for Material Characterization from March 2-5 2016

Course content

- An overview of spectroscopic and chromatographic techniques used in characterization of materials
- UV-Visible spectroscopy and its application
- Concept of colour, colour coordinates, colour difference and its measurement using reflectance spectrophotometer
- Application of FTIR spectroscopy for chemical group characterization
- UV transmittance measurement and its use in determination of UPF
- Atomic Absorption Spectroscopy(AAS) for analysis of heavy metals
- Introduction to chromatographic techniques
- Basics of HPLC, its operation and applications
- GC-MS and its application in material characterisation

The programme fee is Rs. 12000 + 14.5% service tax per person. The charges include course fee, course material, and working lunch. The fee does not include travel, lodging, conveyance and other personal expenses. Students and NARS applicants will be given 50% concession in fee

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Dr. A. B. Joshi, Formerly DDG (C.S), ICAR & VC, MPKV, Rahuri, Inaugurating the Renaming Function of Central Technological Research Laboratory to Central Institute for Research on Cotton Technology on 1st April 1991.



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