



FRICITION SPINNING SYSTEM



HIGH VOLUME INSTRUMENT



ATOMIC ABSORPTION SPECTROPHOTOMETER

A Monthly Insight into the ICAR-CIRCOT

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Director's Desk...

India's cotton production and area for cotton cultivation during year 2014-15 was around 40 million bales and 12.6 million hectares respectively. In the enhanced cotton production scenario, the quality worthiness and cost competitiveness are dictating agricultural and industrial operations, so the role of CIRCOT has widened many fold and the Institute is gearing up well to full-fill the R&D, Skill Development and commercial testing needs of the Industry.

CIRCOT is in catering to the needs of the industry by providing trained manpower to the industry through its skill development programmes. Besides serving the Indian textile sector, the Institute is also involved in the capacity development in textile sector of the African countries under the Cotton TAP programme. In this connection a training programme for the stakeholders involved in the development of cotton sector in Benin (West Africa) was conducted on "Post-harvest management of cotton and value addition to cottonseed and crop residues". Besides a training programme on 'Advances in Textile characterization' was also organized during 16-20th March, 2015.

I would like to present to you the achievements of ICAR-CIRCOT in Fund utilization and Resource Generation during the financial year 2014-15. ICAR-CIRCOT has achieved the budget utilization (Plan) figures of **99.99 %** during the year and the revenue generation was **Rs. 79.78 lakhs** as against the targets of Rs.66 lakhs assigned by the Council. The **resource generated through Consultancies was Rs. 14.9 lakhs** (136 per cent higher than the previous year); The Training component was revitalized with specialized training programme for the stakeholders besides the regular ones during the year 2014-15, yielding a revenue of **Rs. 12.5 lakh** (130 per cent increase over the previous year).

Testing plays an important role in maintaining the competitiveness of a company, especially in a highly competitive sector like textile industry. CIRCOT is accredited by NABL with ISO 17025 quality systems by the Department of Science and Technology, Govt. of India. Under this accreditation which inter alia is linked to APLAC and ILAC CIRCOT's test results are valid and acceptable in 26 other countries and does not require any retesting. CIRCOT functions as the Referral Laboratory for textile testing with the State-of-the-art facilities for evaluation of fibre, yarn and fabric quality both in terms of chemical and physical testing. Through Commercial testing a revenue of **Rs. 33 lakhs**, which is 29 per cent more than previous year (Rs. 24 lakhs during 2013-14) has been generated.

P.G. Patil
Director



ICAR-CIRCOT, Mumbai



Technology Insight

Jute Fibre Reinforced Polypropylene Composite using Core-spun Technology

DREF friction spinning process (core spinning system) was used to prepare jute reinforced polypropylene composite. A good distribution of reinforcement material can be achieved through this process. Nine different Jute core polypropylene wrapped yarns were produced with varying core yarn twist level and Jute:Polypropylene proportion. The core spun yarns were converted into fabrics in both plain and twill weave and finally the fabrics were converted into 18 different composite materials using compression molding process. It was found that with increase in jute reinforcement, the composite tensile strength either increased or remained constant. Also, it was found that the plain weave structure had a little advantage over twill weave for this type of composite material. These types of composites can be used as an alternative to plastics, especially where there is a need for high strength applications.



Jute reinforced Polypropylene Composite

Training Programmes

Advances in Textile Characterization

A Training programme on Advances in Textile Characterization was organized at CIRCOT during 16-20th, March 2015. The training was inaugurated by Dr. R.P. Kachru, Former ADG (PE) and Member, Governing Body, ICAR. Dr. P.G. Patil, Director, CIRCOT welcomed the participants and the guest in the presence of Dr. A.J. Shaikh, former Director, CIRCOT

and Heads of Divisions. There were nine participants from various organisations viz. University of Agricultural Sciences, Dharwad, Anna University, Chennai, M/s. Ajit Seeds, Aurungabad, Cotton Research Station, Nanded and Institute of Chemical Technology, Mumbai. The objective of the training programme is to impart theoretical knowledge and practical skills on textile characterization using advanced instrumentation. Dr. R.P. Nachane, former Head, QEID, CIRCOT, Mumbai, was the guest for the valedictory function and he distributed the certificates to the participants. In his speech, he appreciated CIRCOT for organizing this course and highlighted the importance of Quality systems and testing in the field of agriculture and textiles. Dr. N. Shanmugam, Senior Scientist and In-charge, QEID was the Course Director and Dr. P.K. Mandhyan, Dr. S.K. Dey, Senior Scientists were Course Coordinators.



Dr. R.P. Kachru, former ADG (PE), ICAR Chaired the Inaugural Session and released the Training Brochure



Group Photo: Training on Advances in Textile Characterization

International Training

Cotton TAP for Africa: In Country Training Programme on “Post-harvest Management of Cotton and Value Addition to Cottonseed and Crop Residues” conducted at Benin during 10 – 14th March, 2015

ICAR- CIRCOT conducted “In-country training programme on Post-harvest Management of Cotton and Value Addition to Cottonseed and Crop Residues” at Benin under Cotton Technical Assistance Programme (TAP) for development of cotton sector in Africa. The training programme was inaugurated by Dr. David Y. Arodokoun, Director General, National Agricultural Research Institute of Benin on 12th March, 2015 at Bohicon, Benin.



Dr. P.G. Patil, Director, CIRCOT and Er. Ashok Kumar Bharimalla, Senior Scientist & In-charge, TTD along with the Participants

A group of 25 professionals from different organizations engaged in development of cotton sector viz., ginneries, government and private sector, policy makers, production technologists, scientists and entrepreneurs attended the training programme. The objective of this programme was to strengthen the human resource from government R&D, production and extension professionals and entrepreneurs from private sectors in the field of ginning, cotton quality and utilization of cotton by-products and crop residues. Besides the training, the scientists from CIRCOT selected a site for establishment of Regional Knowledge Cluster on Ginning Technology & By-product Utilization at Cana, Bohicon. Dr. P. G. Patil, Director, CIRCOT, Mumbai and Er. A. K. Bharimalla, Senior Scientist from CIRCOT,

Mumbai conducted and coordinated the programme at Benin.



Site selected for setting up of regional knowledge cluster for ginning and value addition to cotton biomass

Training Cum Awareness Programme

Training cum awareness program on utilization of cotton stalks for value added products and operation of small gins for tribal farmers under tribal sub plan (TSP)

A one day training cum awareness program on utilization of cotton stalks for value added products and operation of small gins for tribal farmers under tribal sub plan (TSP) was conducted on 29th March 2015 at Boarda village, Tah. Ramtek, Nagpur by GTC, CIRCOT, Nagpur. The program was presided over by Dr. M.S. Kairon, former Director, CICR, Nagpur as chief guest, Shri M.R. Kadu, Proprietor, Tanmay Industries, Nagpur and Shri G.H. Wairale, Retd. General Manager, MSCCGMF Ltd., Nagpur were the guests of honour. There were one hundred and ten farmers registered and attended the program. Dr. S.K. Shukla, Senior Scientist and Officer Incharge, GTC, CIRCOT welcomed the guests and briefed about the program. During this program, the experts have delivered the lecture on various aspects on cotton production, processing and value addition. Dr. M. S. Kairon, highlighted the salient point

on best package of practices for cultivation of cotton to maximize productivity and fiber quality. The proper cotton picking practices and training programs offered by CIRCOT was briefed by Shri V. G. Arude, Scientist, CIRCOT. Dr. S.K Shukla elaborated harvesting methods of cotton stalks and its industrial applications. The method on preparation of bio-enriched compost from cotton stalks and its uses was described by Dr. V. Mageshwaran, Scientist, GTC. The potential of preparation of briquettes and pellets from cotton stalks was highlighted by Shri G. H. Wairale. Shri Manish R. Kadu shared his personal experience on marketing and preparation of briquettes from cotton stalks and other agro-residues. The program ended with vote of thanks by Miss Varsha B. Satankar, Scientist, GTC.



Participation of tribal farmers in training cum awareness program at Boarda Village, Tah. Ramtek, Nagpur

Meeting

(1) Meeting on Mera Gaon Mera Gaurav

A meeting was convened by Dr. P.G. Patil, Director, CIRCOT on 3rd March, 2015 at Dr. V. Sundaram Committee Room to discuss about **Mera Gaon Mera Gaurav** programme an initiative of ICAR as per the directives from the Govt. of India. This meeting was attended by HOD's, Scientists, Technical Officers (T-6 and above), A.O., Asst. FAO and AAO's. It was decided that groups consisting of four or five scientists will be identified, to implementing the

initiative in the pre-identified villages along with Technical Personnel. Dr. S.K. Chattopadhyay, Head & In-charge, MPD has been identified as the Nodal Officer for this programme, which is to commence from April 2015.

(2) Results Framework Document (RFD) Committee Meeting

The meeting of Results Framework Document (RFD) committee was held on 4th March, 2015 in Dr. V. Sundaram Committee Room to discuss the preparation of draft RFD 2015-16. Dr. P. G. Patil, Director, CIRCOT, Mumbai Chaired the meeting. The meeting was attended by all RFD committee members and scientists of the institute. Er. V. G. Arude, Nodal Officer, RFD briefed about the preparation of draft RFD for 2015-16. He made a presentation on the guidelines and various issues that needs to be incorporated in RFD 2015-16. Deliberations were held to suggest changes to be made in objectives/actions/success indicators based on new priorities and programs. After extensive discussion realistic and challenging targets were set for different success indicator viz. process developed, value added products/machinery developed, breeders and commercial samples evaluated, training programmes conducted, patents / MOU signed and exhibitions / demonstrations/awareness programmes conducted. Based on these targets the draft of RFD 2015-16 was prepared.

(3) Sixth Review Meeting of Nanocellulose Pilot Plant Expert Committee Meeting

The sixth meeting of Nanocellulose Pilot Plant Expert Committee Meeting was held on 17th March, 2015 at Dr. V. Sundaram Committee Room to review the progress of work and to seek guidance regarding commissioning of Nanocellulose Pilot Plant. The meeting was Chaired by Dr. P.G. Patil, Director, CIRCOT, Dr. R.P. Kachru, Governing Body Meeting & Former ADG (PE), ICAR, Dr. S. Sreenivasan

and Dr. A. J. Shaikh, former Directors of CIRCOT, Dr. M.S. Banerji, former Director, IRMRA, Mumbai, Dr. S.P. Deshmukh, Associate Professor, ICT, Mumbai, Shri Venugopal, In-charge, Engineering Section, CIRCOT, Er. Ashok Kumar Bharimalla, Senior Scientist and Member-Secretary, Dr. A. S. M. Raja and Dr. N. Vigneshwaran, Senior Scientists, Shri V.G. Arude, Scientist, Shri P.N. Sahane, Senior Technical Officer, Shri Sunil Kumar, Administrative Officer and Shri S. V. Kasabe, Assistant Administrative Officer were the invitees. The committee reviewed the progress of the work of Nanocellulose Pilot plant and has decided that inauguration of the plant may be done by May - June 2015.



Nanocellulose Pilot Plant Expert Committee Meeting



Nanocellulose Pilot Plant Site Inspection by the Committee Members

(4) Dr. A.S.M. Raja, Senior Scientist, CBPD, CIRCOT, attended Review Meet on Management System Certification Licensees of Western Region Organized by Bureau of Indian Standards (BIS), Western Regional office on 25th March 2015.

(5) Dr. P. G. Patil, Director, CIRCOT, attended meeting of cotton TAP Project held at IL&FS cluster Development Initiative Limited, Noida, Uttar Pradesh, on 26th March 2015.

Swachh Bharat Mission

The staff of the Institute formed a human chain and removed old files, broken furniture, chairs, and unserviceable items files from Room No. BS01 in the basement area of MS building, CIRCOT on 24th March, 2015, Thirty eight staff members participated in this programme.



Cleaning work by CIRCOT staff members

HRD Activity

(1) Dr. N. Vigneshwaran, Senior Scientist, CBPD and Nodal Officer, HRD, CIRCOT, in the meeting held on 3rd March, 2015 at Dr. V. Sundaram Committee Room briefed about the preparation of HRD activities of the institute and made a brief presentation on the outcome of his recent training at NAARM, Hyderabad. It was decided that the nature of training required by different categories of staff has to be planned at Divisional level before finalizing the Institute HRD programme.

(2) Dr. M.V. Vivekanandan, ACTO, CIRCOT attended a Training Programme on Office Automation using Oracle ERP at ICAR-IASRI, New Delhi during 9-13th March, 2015.

Lecture

Dr. R. P. Kachru, former ADG (PE), ICAR delivered a lecture on Human Disabilities v/s Motivation for Society Upliftment on 17th March, 2015. He presented a short video with an aim to induce the motivation of the participants to achieve greater heights. He emphasized on the need for the social responsibility of the individuals.



Dr. R.P. Kachru, Former ADG (PE) delivering lecture on Human Disabilities v/s Motivation for Society Upliftment

Seminars/Conferences/Workshop

- (1) *Dr. N. M. Ashatputre, A.C.T.O and Kum. C.P.D' Souza, Technical Officer, CBPD, CIRCOT attended a Seminar on Bioreactors - Scale up and Data Processing organized by M/s. Spinco Biotech in collaboration with M/s. Applikon Biotechnology on 4th March, 2015 held at Mumbai.*
- (2) *Dr. C. Sundaramoorthy, Scientist, TTD, CIRCOT, delivered a lecture on "Challenges faced in Data Analysis" in the Short term Training Programme on "Data Analytics through Statistical Software SPSS" organized at CIFE, Mumbai on 27th March, 2015.*

Accolades

(1) ICAR Inter zonal sports Tournament

The institute participated in the ICAR Inter Zonal Sports Meet at National Dairy Research Institute, Karnal from 11-14th March, 2015. The institute participated in Table Tennis (Men & Women), Badminton, Athletics and Chess. Smt. Smita Paiyala & Smt. Vijaya Walzade won runner up in Table Tennis (Women Doubles) event.



Smt. Smita Paiyala (extreme right) receiving award from Dr. A.K. Srivastava, Director, NDRI, Karnal

- (2) *Smt. T. T. D'souza, Personal Assistant, Mechanical Processing Division, participated in DNA I Can Women's Half Marathon held on International Women's Day on 8th March, 2015 at BKC, Bandra, Mumbai in 10km (Spirit Run) and finished in 1:21:05.*
- (3) *Smt. T. T. D'souza, Personal Assistant, Mechanical Processing Division, participated in 35th National Masters Athletic Championship 2015 organized by Haryana Masters Athletic Association at Rajiv Gandhi Stadium, Rohtak from 19-22nd March, 2015. She won the following awards*
 - 5000 meter Walk completed in 40:22 min – Gold Medal
 - 800 meter Run completed in 4:06 min – Silver Medal
 - 1500 meter Run completed in 9.35 min – Bronze Medal



Smt. T. T D'souza participated 1500 meter running competition

Personnel

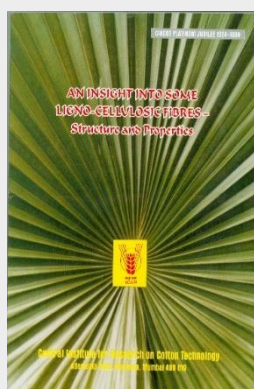
Twenty-one cases of Administration & skilled support staff have been given upgraded to the next higher grade pay under MACP, during the meeting held on 11th march 2015

Obituary

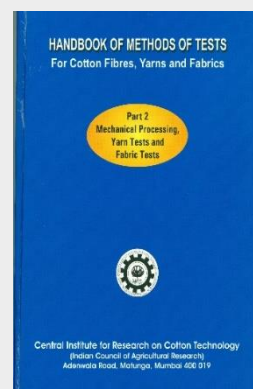
Dr. R.R. Mahangade, Sr. Technical Officer, CBPD, CIRCOT, who had served over 19 years, passed away on 12th March, 2015



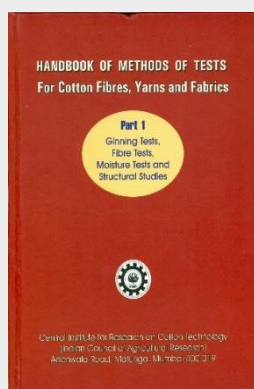
CIRCOT Priced Publications



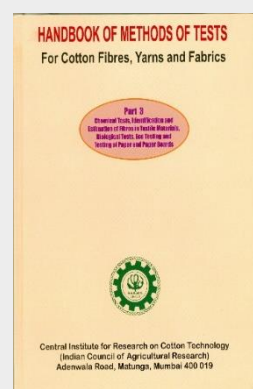
An Insight into some Ligno-Cellulose Fibre – Structure and Properties Price: Rs.150/-



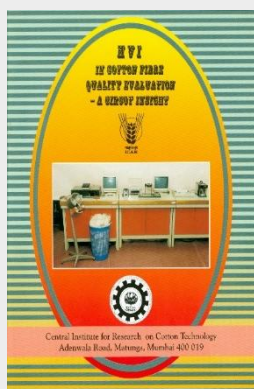
Hand Book of Methods of Tests for Cotton Fibres, Yarns and Fabrics (Part 2) Price: Rs.200/-



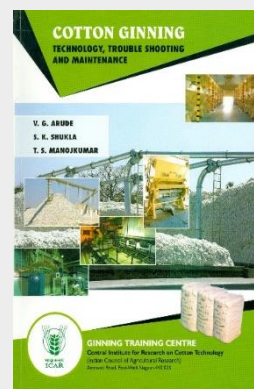
Hand Book of Methods of Tests for Cotton Fibres, Yarns and Fabrics (Part 1) Price: Rs.200/-



Hand Book of Methods of Tests for Cotton Fibres, Yarns and Fabrics (Part 3) Price: Rs.200/-



HVI In Cotton Fibre Quality Evaluation – A CIRCOT Insight
Price: Rs.100/-



Cotton Ginning Technology, Trouble Shooting and Maintenance
Price: Rs.500/-



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