IRCOT news

Newsletter of the Central Institute for Research on Cotton Technology, Mumbai

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CIRCOT bags the Sardar Patel Outstanding ICAR Institution Award 2004

The Sardar Patel Outstanding ICAR Institution award for the year 2004 was awarded to the Central Institute for Research on Cotton Technology (CIRCOT) for its outstanding contribution in the field of Cotton Technology.This most prestigious recognition of ICAR carries a cash award of Rs. 5 lakhs apart from a silver plaque. The citation released on the occasion of the award by ICAR reads :

CIRCOT, one of the pioneering institutes dedicated to research on cotton is on the forefront in developing technologies in the area of textile processing, byproducts and waste utilization and transferring them to appropriate user groups. The visibility of the institute has enhanced in the recent past by its renewed vigour in the areas of commercial testing with significant revenue generation. CIRCOT has forged strong meaningful linkages with like minded, progressive organizations and is poised for achieving greater goals in the post harvest processing and value addition of natural-grade fibres, agro-residues and processing wastes.

On the 16th of July, 2005, in a glittering function organized by ICAR at the NASC Complex, New Delhi, Shri Sharad Pawar, Hon'ble Union Minister for Agriculture, Food and Civil Supplies, Consumer Affairs and Public Distribution presented the award to Dr. S. Sreenivasan, Director, CIRCOT.


Indian Council of Agricultural Research

Sardar Patel Outstanding ICAR Institution Award 2004

The Sardar Patel Outstanding ICAR Institution Award for the year 2004 is presented to

Ca. Technology, (CIRCOT).

for outstanding contribution in the field of

Sharad

Sardar Patel Outstanding ICAR Institution Award

Dr. S. Sreenivasan, Director, CIRCOT receiving the Award from the hands of Shri Sharad Pawar, Hon'ble Union Minister for Agriculture, Food & Civil Supplies, Consumer Affairs and Public Distribution, Government of India

Sreenivasan, Balasubramanya, Suryanarayanan,

Editorial

Cotton is a very important cash crop of the country providing livelihood to 30 million people engaged in cultivation and to another equal number involved in processing, value addition, trade, exports etc. India has the distinction of having the largest area of around 9 million hectares under cotton cultivation and growing all the four species apart from hybrids. The country can take pride in having a huge diverse raw material base right from fibre of 15 mm, i.e. the coarsest and shortest to 40 mm the longest and finest fibre.

Thanks to the sustained efforts of Government of India through Indian Council of agricultural Research and all other agencies connected with cotton; the country has a huge raw material base of quality cotton. The productivity of the crop has jumped to 460 kg/ha and the production base today stands at 2.4 million bales of 175 kg each. The country has adequate stock of cotton pertaining to all staple grades much beyond the requirements of the user industry except in extra long staple where still import takes place

All along, the linkage between production and utilisation has remained weaker and as a result the Post harvest Processing and value addition have suffered for want of liaison with the production system. The Technology Mission on Cotton, the Govt. of India effort since 2000, has firmly addressed this issue and today the country can boast of having the raw material in adequate quantity of appropriate quality satisfying the requirements of user industry. Thanks again to the flurry of Governmental promotion activities, the country has surplus cotton beyond its needs and the carry over stocks have risen to about 0.7 million bales. This stock in a shortest time is bound to rise to 1 million bales. In order to sustain the growth achieved and to provide livelihood security to millions of farmers and processors apart from strengthening export of quality yarn, fabric and garments (value added items), there has been impetus given to the export of raw cotton lint. Here comes the crucial issue of contaminant-free clean cotton lint.

The primary operations in Post harvest processing of cotton viz. picking, collection, on-farm storage, transpotation to market yard and then to ginning factory, storage at factory and ginning operation, grading of both seed cotton and lint have not received the kind of attention it ought to have, and as a result Indian cotton despite having the desired fibre attributes had the tag of "most contaminated cotton" in the world. The scenario has today changed a little for the better thanks to the TMC, but still a lot needs to be done.

CIRCOT has been engaged in this crucial aspect of post harvest picking and handling of cotton apart from ginning and has been striving to actively interact with the farming community in improving the primary operations. "Dos and Donts" for the farmer, market yard personnel and ginneries have been made available in different languages to create awareness among the personnel involved in these activities on the need for producing contaminant- free clean cotton. Several awareness programmes have been organised in farming clusters to bring home the importance of clean cotton picking and contaminant -free handling and storage.

Close on the heels of a good crop, CIRCOT has taken up an ambitious programme as a front line activity to demonstrate to the farmers on appropriate picking, on-farm storage and transportation of kapas with a view to facilitate provision of contaminant - free, grade related remunerative price to the growers for their produce. Preliminary discussions held with the farmers and CICR who are the collaborators in the said activity have culminated in selection of villages identified at Sirsa, Nagpur and Coimbatore for demonstration. It is hoped that in the following months a full-fledged demonstration of the primary post-harvest operations in the designated villages would not only spur the growers to do better but also make available clean quality material to the ginner for an appropriate price.

S. Sreenivasan
Director

FLD ON TOTAL PACKAGE FOR PRODUCTION AND PROCESSING OF COTTON

A meeting was convened at CIRCOT under the Chairmanship Dr. Pitam Chandra, ADG (PE) of ICAR to discuss FLD on Total Package for Production and Processing of Cotton on May 7, 2005. This meeting was intended to serve as a common platform for bringing together the production and processing institutes so that they can jointly plan out to demonstrate to the cotton farmers the benefits of both the production and processing technologies developed by the ICAR system. Since CIRCOT's role starts right from cotton picking, management and technological intervention in post harvest processing, the Institute decided to join hands with CICR, Nagpur in developing an appropriate package of technologies for demonstration for the benefit of cotton growers in the country.

On behalf of CIRCOT, Dr. K.M. Paralikar, Head, TTD made a presentation on the present scenario of cotton picking, storage and transportation and gaps in post-harvest processing of cotton and what "CIRCOT intends to do". On behalf of the production institute, Dr. Phundan Singh, Acting Director, CICR, Nagpur, Dr. T.P. Rajendran, Project Coordinator, AICCIP and Dr. Gajbhiye, Head, TOT informed that three centers, one each from Central, North and South could be chosen to demonstrate the benefits of technologies developed by CICR and CIRCOT to the farming community. Since the FLD programmes undertaken by CICR already are conducted in adopted villages in these areas CIRCOT has to intervene in the demonstrations from harvesting of seed cotton onwards. The study therefore can be taken up at Sirsa, Coimbatore and Nagpur during the 2005 cotton season itself. The sowing has already been taken up at Sirsa and the same will start in the adopted villages near Nagpur in June 2005 and in Coimbatore a little later. The study will be restricted to one variety each at Sirsa (Shresht)

Dr. Pitam Chandra, ADG (PE), ICAR displaying the booklet on ***Everything about Cotton Plant Stalks*** *published in different languages at the* ***FLD on Total Package for Production and Processing of Cotton*** *meeting at CIRCOT*

and Coimbatore (Surabhi) whereas in the adopted villages near Nagpur, it will be on multiple varieties namely, Ankur, PKV4, Ajeet 11, etc. as per the ongoing practice.

Mr. C.S. Teotia, General Manager, CCI Ltd., informed that the seed cotton produced by farmers in the identified villages in North and South can be purchased by CCI directly and price can be fixed based on quality attributes. This is however not possible in Maharashtra due to the prevalence of Monopoly Procurement Scheme in that state

The following action plan was finalized in the meeting :

CIRCOT to formulate a proposal and send to the Council to demonstrate the quality-based marketing of seed cotton with on-farm management components including picking, segregation of bolls, appropriate on-farm storage, transportation to market yard, ginning and grading at the market yard, pricing as per quality attributes. CICR should plan this activity accordingly in the current season in their FLD Programme. A separate proposal to be put up for demonstrating lint-based marketing at GTC, Nagpur as a test case to process seed cotton to prepare 500 bales.

REVIEW MEETING OF THE CONTRACTUAL PROJECT ON CREATION OF A DATABASE ON PHYSICO-CHEMICAL AND STRUCTURAL CHARACTERISTICS OF COCONUT FIBRES

A Review Meeting of the Contractual Project on Creation of a Database on Physico-Chemical and Structural Characteristics of Coconut Fibres was held on May 13, 2005 at the Seminar Hall of CIRCOT. Dr. S. Sreenivasan, Director, CIRCOT presided over the meeting and the following persons participated :

1. Ms. V. Bhawani, Additional Secretary (Industries-Coir), Govt. of Kerala
2. Dr. C.J. Thampi, President, TMNRDC, Trivandrum
3. Dr. K.M. Paralikar, Principal Scientist and Head, TTD, CIRCOT
4. Dr. G.F.S. Hussain, Principal Scientist and Head, QEID, CIRCOT
5. Shri M. Ahmed, Principal Scientist and Head, MPD, CIRCOT
6. Dr. T. Vidhan Singh, Senior Scientist, CPCRI, Kasargod
7. Dr. A.J. Shaikh, Principal Scientist, CIRCOT
8. Dr. R.P. Nachane, Principal Scientist, CIRCOT
9. Mr. K. Sudhakaran, Administrative Officer In-charge, CIRCOT
10. Mr. R.K. Singh, Finance and Accounts Officer, CIRCOT
11. Mr. V.B. Suryanarayanan, Technical Officer, CIRCOT
12. Mr. D. Radhakrishnamurthy, Technical Officer, CIRCOT

Dr. Sreenivasan gave a brief detail about the work being carried out on natural fibres other than cotton and also the research on the feasibility of blending them with cotton. He said

Ms. V Bhawani, Additional Secretary (Industries-Coir), Govt. of Kerala addressing the meeting

that the current database would be useful in development of diversified products. Ms. V. Bhawani stressed the need for a serious research and development work on utilization of coir for making value added products. Dr. Thampi was of the opinion that important characteristics of some minor varieties also need to be included in the database apart from those of most popular varieties. Dr. Hussain presented a report on the progress made in the project at CIRCOT. This was followed by a presentation by Dr. Vidhan Singh on the progress made at CPCRI Kasargod. After a lot of discussion it was decided that only fibres of 11 month old coconut need to be tested. The fibres of 12 varieties identified by CPCRI will be evaluated for various properties after retting them using CPCRI method. Another set of samples from the same 12 varieties will be retted at Trivandrum in "Kayals" and then evaluated for various properties. The meeting ended with a vote of thanks by Dr. R.P. Nachane, Principal Scientist, CIRCOT.

REVIEW MEETING OF THE PROJECT MONITORING COMMITTEE FOR THE CFC FUNDED PROJECT ON UTILISATION OF COTTON PLANT BY-PRODUCE FOR VALUE-ADDED PRODUCTS

The first review meeting of the Project Monitoring Committee for the project on Utilisation of Cotton Plant By-produce for Value-added Products funded by CFC, Netherlands was held on June 30, 2005 at the Seminar Hall of CIRCOT. Dr. S. Sreenivasan, Director, CIRCOT presided over the meeting. The following committee members and invitees attended the meeting.

Mr. Sietse van der Werff, First Project Manager, CFC, Netherlands

Dr. S.K. Tendon, ADG (Engg.), ICAR, New Delhi

Dr. B.M. Khadi, Director, CICR, Nagpur

Mr. K.N. Gururajan, Project Coordinator (Cotton), CICR Regional Station, Coimbatore

Mr. S.C. Grover, Chairman-cum-Managing Director, CCI, Mumbai

Dr. R.P. Kachru, Former ADG(PE), ICAR, New Delhi

Dr. Anupam Bark, Director, DOCD, Mumbai

Mr. K.F. Jhunjhunwala, President, EICA, Mumbai

Dr. C.N. Pandey, Director, IPIRTI, Bangalore

Mr. S.L. Kolambe, Jollyboard Ltd., Mumbai

Mr. Mohammad Shakir, Ecoboard Industries Ltd., Pune

Dr. K.M. Paralikar, Principal Scientist & Head, TTD, CIRCOT

Dr. R.H. Balasubramanya, Principal Scientist & Head, CBPD, CIRCOT

Dr. G.F.S. Hussain, Principal Scientist & Head, QEID, CIRCOT

Mr. Muntazir Ahmed, Principal Scientist & Head, MPD, CIRCOT

Dr. A.J. Shaikh, Principal Scientist, CIRCOT

Dr. P.V. Varadarajan, Principal Scientist, CIRCOT

Mr. R.M. Gurjar, Principal Scientist, CIRCOT

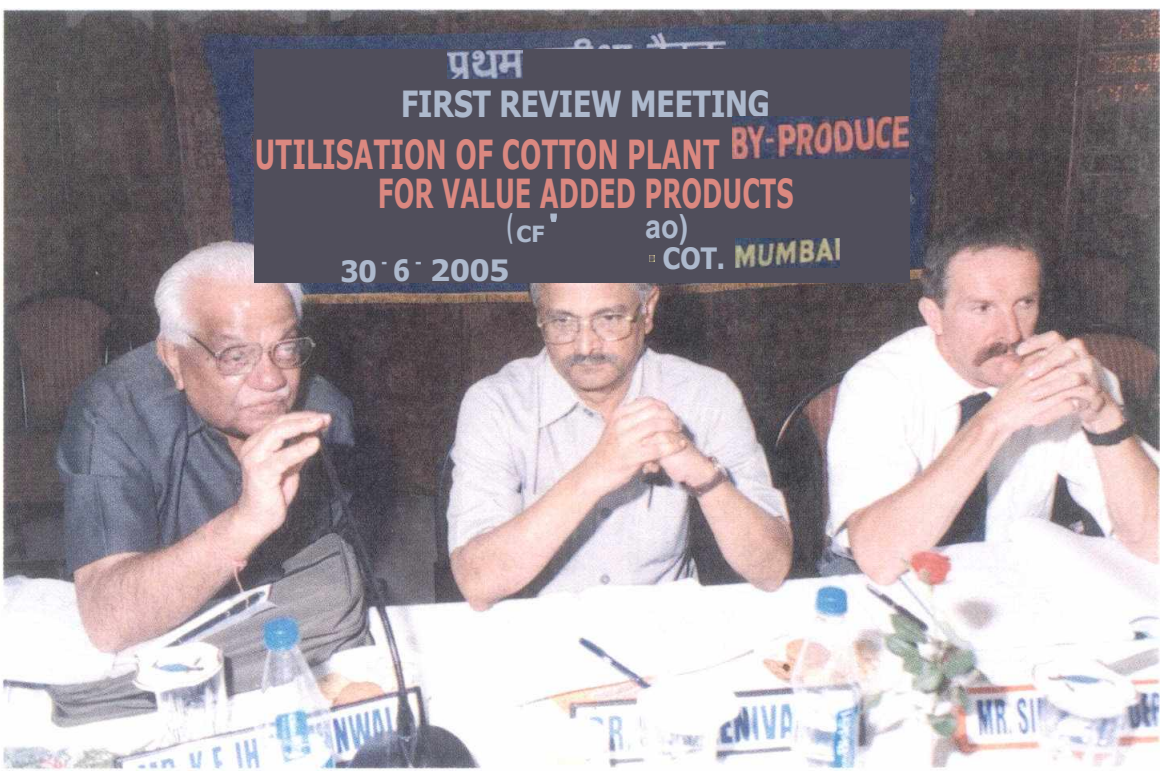
Mr. P.G. Patil, Officer In-charge, GTC, Nagpur

Mr. V.B. Suryanarayanan, Technical Officer, CIRCOT

Mr. D. Radhakrishnamurthy, Technical Officer, CIRCOT

Mr. B.K. Sinha, Administrative Officer, CIRCOT

Mr. R.K. Singh, Finance & Accounts Officer, CIRCOT.



First Review Meeting on the project ***Utilisation of Cotton Plant By-produce for Value Added Products*** *in session*

Dr. S. Sreenivasan welcomed all the members of the Project Monitoring Committee and other invitees for the first review meeting of the project. He said that the main objective of the project is to study the logistics of collection, compaction and transportation of cotton plant stalks and to make it available in a cleaner form as an industrial raw material for production of particle boards. Dr. Sreenivasan remarked that the said project is unique as CFC has allowed CIRCOT, India to carryout this project as a single country endeavour as against the normal set up of multi-country programme. Dr. Sreenivasan mentioned that the project also envisages private sector participation right from the initial stages of its implementation. M/s Ecoboards Industries, Pune and M/s Jollyboard Ltd., Mumbai are involved in the production of particle boards and hardboards respectively while EICA, Mumbai would be involved in marketing of the technology as well as in entrepreneurship development apart from assisting in creating awareness among farmers about the importance of the raw material.

After the welcome address by Dr. Sreenivasan, Dr. R.H. Balasubramanya, the Principal Investigator of the project and Principal Scientist & Head, Chemical and Biochemical Processing Division, CIRCOT presented the progress of the project. The meeting ended with a vote of thanks proposed by Dr. P.V. Varadarajan, Principal Scientist, CIRCOT.

WORKSHOP ON FUTURE OUTLOOK IN QUALITY ASSESSMENT OF TEXTILE

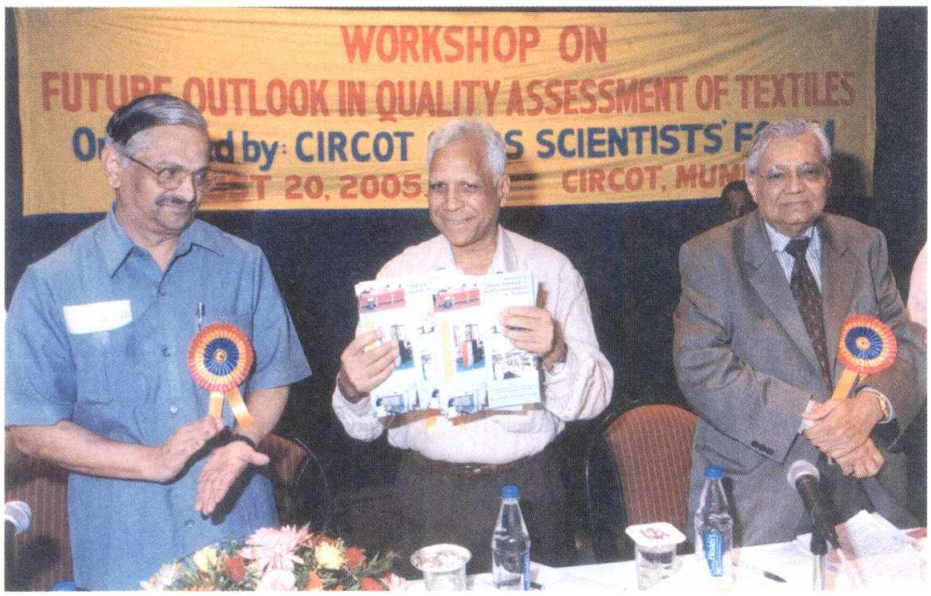
A Workshop on Future Outlook in Quality Assessment of Textiles was jointly organised by CIRCOT and ARS Forum, CIRCOT Unit on August 20, 2005 at CIRCOT. The theme of the workshop was selected against the backdrop of Government of India's plans for doubling the textile export from the country after value addition particularly through garment route. Further, the quality characterization of garments/made ups by objective means with modern instruments pose new challenges and opportunities and therefore, the workshop was intended to take stock of the current situation and prepare a roadmap for the future.

The workshop was inaugurated by Dr. Nawab Ali, Deputy Director General (Engg.), ICAR, New Delhi by lighting the lamp. Dr. Pitam Chandra, Assistant Director General (PE), ICAR, New Delhi and Mr. Suresh Kotak, Chairman, COTAAP Research Foundation, Mumbai delivered the Thematic Addresses. There were two Technical Sessions *viz.* Quality Requirements in Textiles and Quality Assessment in finished Textiles chaired by Dr. Pitam Chandra and Mr. Mahesh Sharma, Technical Advisor, Tesstex India and Textile Consultant, Mumbai respectively.

In the first session the following four papers were presented.

- Future Research Needs for Improving Quality of Cotton by *B.M. Khadi, Director, CICR, Nagpur*
- Innovation in Yarn Quality through Intelligent Quality Assurance Activities by *R.T. Iyengar, Dy General Manager, Rajapalayam Mills, Tamil Nadu*
- Quality of Textiles & garments — Buyers' Perspecive by *Shriyas Joshi, President, Raymonds Ltd., Mumbai*
- Textile Quality Through Communication within supply- chain by *Ulhas Nimkar, Chartered Colorist, CEO, Texanlab, Mumbai*

Dr. Nawab Ali, Deputy Director General, ICAR, New Delhi lighting the Inaugural Lamp at the Seminar



Dr. Nawab Ali, Deputy Director General, ICAR, New Delhi releasing the Book of Papers at the Seminar

Following two papers were presented in the second session.

- Eco-friendly products in Textile Processing-Benefits by *Shri P.S. Ramanathan and PV Varadrajan*
- Assessment of Toxic Chemicals in Textiles by *Edward Menzes, Rossari Biotech., Mumbai.*

A **Book of Papers** was released by Dr. Nawab Ali and a **Souvenir** by Dr. Pitam Chandra during the Workshop.

The meeting ended with Vote of Thanks by Dr. K.M. Paralikar, Head, Transfer of Technology Division.

TECHNICAL SEMINAR IN HINDI ON COTTON — PRESENT SCENARIO AND FUTURE CHALLENGES

An one day Technical Seminar in Hindi on Cotton — Present Scenario and Future Challenges was held on September 24, 2005 at CIRCOT. The seminar was inaugurated by lighting the lamp by Dr. Mangala Rai, Secretary, DARE and Director General, ICAR. Dr. Umakant Vajpayee, Director, ASHIRWAD, a literary and socio-cultural organization in Mumbai, Mr. Sudhir Bhargava, Member, ICAR Governing Body, New Delhi, Dr. Pitam Chandra, ADG (PE), ICAR, New Delhi and Dr. A.K. Basu, Consultant (Cotton), CCI, Mumbai were the special guests for the seminar.

The seminar had the following three technical sessions.

Session 1

Theme : Cotton Production

Chairperson : Dr. A.K. Basu, Consultant (Cotton), CCI, Mumbai

Session 11

Theme : Cotton Marketing & Textile Production

Chairperson : Dr. Pitam Chandra, ADG (PE), ICAR, New Delhi

Session

Theme : Chemical Finishing and Cotton By-products

Chairperson : Shri Ram Asarelal, Deputy Director, 0/o Textile Commissioner, Mumbai

In all, twenty-two papers were presented by scientists from various research and development organizations, state agricultural universities, textile and marketing organizations. A Book of Papers brought out on this occasion was released by Dr. Mangala Rai. Two CIRCOT leaf-lets in Hindi entitled **Testing Facilities at CIRCOT for Pulp and Paper** and **Eco-friendly**

Dr. Mangala Rai, Secretary DARE and Director General, ICAR lighting the Inaugural Lamp at the Technical Seminar in Hindi

Dr Mangala Rai addressing the gathering at the Technical Seminar in Hindi

Process for Scouring of Cotton Textiles : Bio-scouring were released by Dr. Pitam Chandra and Dr. Umakant Vajpayee, respectively. The seminar concluded with the Vote of Thanks proposed by Shri B.K. Sinha, Administrative Officer, CIRCOT.

TECHNOLOGIES AVAILABLE AT CIRCOT FOR TRANSFER

Products

Kisan Gin, CLOY Gin and Lilliput Gin
Ginning Percentage Balance
Kapas Extractor
Inclined type Pre-Cleaner
Halo Length Disc
Boll Hardness tester
Variable Speed Gin
Cotton Stalk Compacting Machine

Processes

Pulp and Paper, Particle Board and Corrugated Boxes from Cotton Plant Stalk
Biogas from Textile Mill Waste
Mushroom Crop on Agro-Wastes
Dyeing of Cotton Fabrics with Natural Dyes
Compost from Ginnery Waste
Absorbent Cotton from Non-Spinnable Cotton

CIRCOT CALIBRATION COTTON

CIRCOT is offering indigenously prepared Calibration Cotton Standards having quality characteristics similar to those of USDA Calibration Cottons.

Two sets of calibration cotton standards are available:

- One set comprises five samples coded A-1, M-4, D-1, E-4 and E-5 for conventional instruments such as Fibrograph, Micronaire and Stelometer
- The second set consists of five cottons coded as HM-5, HC-2, HD-2, HE-4 and Hlm-1

The net weight of each sample is 200 g and the cost is Rs. 750/-

Meetings

MANAGEMENT COMMITTEE MEETING

The sixty-first meeting of the Management Committee was held on September 6, 2005. Regular items like confirmation of minutes of the previous meeting, action taken on the recommendations of the committee, progress of works, action taken on the recommendations of the IJC and Grievance Committee formed topics of discussion in the meeting. Progress on the on-going research projects was also reviewed. Appointments of four private hospitals and three AMA for the employees were also approved.

A leaf-let on **CIRCOT's Eco-friendly Process for Scouring of Cotton Textiles : Bio-scouring** was released by Dr. Pitam Chandra, ADG(PE), ICAR.

LECTURES

The following lectures were held during the period under report and all the scientific and technical personnel attended them :

Dr. S.S. Ramkumar, Asst. Professor, Texas Tech University Texas, USA delivering his lecture on Nano fibre Research

- *Application of Zinc Oxide Nanoparticles on Cotton Fabric* by Shri M.R. Sampat Kumar, Research Associate on July 4, 2005.
- *Nanofibre Research at Texas Tech University* by Dr. S.S. Ramkumar, Asst. Professor, Texas Tech University, Texas, USA on July 11, 2005.

ECO-TESTING LABORATORY

An Eco-testing Laboratory for issuing certificate of compliance to textile exporters has been set up at CIRCOT. This laboratory is fully equipped with sophisticated instruments like High Performance Liquid Chromatograph, High Performance Thin Layer Chromatograph with Electron Capture, Flame Ionisation, NPD and Mass Detector Systems, UV-VIS Recording Spectrometer and Total Organic Carbon Analyser, besides all facilities for carrying out wet chemical analysis. The Eco-testing laboratory at CIRCOT has necessary infrastructure to carry out testing on textile materials for all the prescribed eco-parameters such as the detection and estimation of banned aromatic amines, pentachlorophenol (PCP), banned pesticides, toxic matrerials, free formaldehyde and halogenic carriers.

DEVELOPMENT OF A TECHNICAL MANUAL FOR TROUBLE SHOOTING IN MODERNISED GINNERIES

Continued interactions with gin manufacturers, service engineers, fitters and technical experts in modernised ginneries indicated that operational troubles exist in respect of the pneumatic conveying systems for seed cotton as well as lint. These operational troubles relate to suction fan/ blower, ducting line, and air separator; pre-cleaner, auto feeder and mechanical drives.

During a study on the cause and remedial measures of conveying system it was revealed that the major trouble observed with the suction fan/ blower was the accumulation of dust on the impeller, which results in unbalancing of impeller causing vibrations and abnormal noise. It also leads to reduction in pressure and loss in air volume resulting in less handling of seed cotton or lint, which directly affects the daily production. The major trouble associated with the air separator was found to be chocking at the screen/jali. It is caused due to use of lower grade rubber flaps or worn out flaps on the wiper roll. It also may happen due to air leakage at vacuum wheel, improper setting of flaps on wiper roller and high air suction. For smooth operation, use of flaps recommended by manufacturer and proper setting are to be ensured. The jamming/chocking of seed cotton at the cylinder was the most common trouble observed in pre-cleaner. It may occur due to variety of reasons such as over feeding, high moisture cotton, suction loss at the outlet etc. Over feeding in auto feeder leads to chocking, hence feeding should not be kept more than 75% capacity of the auto feeder. Spike patti mounted over the cloth in auto feeder should be checked regularly to avoid tearing of cloth and non uniform feeding of seed cotton to the beater of the DR gin. The major troubles observed in the ducting line are the air leakages and rusting of the line. The study clearly brought out the need to ensure periodical checking to avert the commonly found operational troubles.

CREATION OF A DATABASE ON • HYSICO-CHEMICAL AND STRUCTURAL CHARACTERISTICS OF COIR FIBRES

Eleven popular varieties of coir fibre were tested to determine various tensile, surface, structural and chemical characteristics. It was observed that thinner fibres possess higher tenacity compared to thicker fibres. Elongation of thicker fibres was greater than that of thinner fibres. Energy to break is higher for thicker fibres. Initial Modulus is always higher than final modulus (coir offers more resistance for initial elongation). Initial modulus as well as final modulus are higher for thinner fibres compared to thicker fibres. Data obtained for 3 varieties indicate that wetting does not affect the strength of coir fibres. Estimation of Moisture Regain (MR) indicated that coir fibres attain equilibrium after 72 hrs. MR ranges from 10.4% to 14.5% and it is higher for coir as compared to cotton. Surface of fibres shows pits and some inclusions in the pits. Pits are more in medium fibres as compared to finer and coarser ones. Surface of coarser fibres shows cluster of pithy matter. Systematic pattern of ultimate fibre cell is seen on coarser fibres. Cross sectional view of coir fibres shows that packing density of ultimate cell varies from fine fibres to coarse fibres. Cross sectional view of finer and medium fibres are very close to circular or elliptical while thicker fibres are almost elliptical or flattened. Coir fibres contain about 53%cc-cellulose (pure cellulose) while the lignin content is about 32% - highest among natural fibres.

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TRAINING

Sixty-six sponsored personnel underwent training in six batches under the programme on Quality Evaluation of Textile Fibres for Breeders, Traders and Textile Industry Personnel at the Headquarters.

Two Hundred and forty-six trainees sponsored from various ginning factories underwent training in various aspects pertaining to ginning, maintenance of ginning machines in the Training in Ginning and Bale Press for Fitters, Operators and Managers at GTC, Nagpur.

TESTING

Apart from a large number of samples tested under the AICCIP Programme, more that 6000 samples were tested at headquarters and six regional units of CIRCOT.

CONSULTANCY

Scientific consultancy in design and development of machines and processes and technologies was extended to the following industries and entrepreneurs.

- Cross sectional and surface morphology of drug pellets by SEM for M/s. Degussa India Pvt. Ltd., Mumbai
- Cross sectional and surface morphology of drug granules and the different layer thickness using SEM for M/s Sandoz Pvt. Ltd., PO., Thane
- SEM analysis of drug powder sample for M/s. Cipla Ltd., Mumbai
- Technical consultancy in ginning and baling for M/s Bajaj Steel Industries Ltd., Nagpur

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LOGISTICS OF COTTON STALK COLLECTION

Three centers, namely CICR, Nagpur, Umri Village and Seloo Village were selected to undertake a study on collection and transportation of cotton plant stalks. The study indicated that three labourers could uproot about 450 kg of cotton stalks in one day from one-acre land. Metallic uprooter helped in easy pulling. An expenditure of about Rs.200/- was incurred to collect material from one acre.

Trials were undertaken to transport cotton stalks as it is and after chipping employing bullock cart, tractor trolley and lorry. As expected, maximum quantity of chipped material could be transported. The study indicated that one tonne of cotton stalk chips would cost about Rs.1900/- per tonne which includes the cost of uprooting, bundling, raw material cost, transportation of stalks to a maximum distance of 5 km where chipping facility exists and transportation of chips to a maximum distance of 50 km including chipping cost.

Personnel

APPOINTMENT

SL No.	Name	Post to which appointed	Effective Date of Appointment
1	Smt. L.R. Sonke	Technical Assistant T-3	11-05-2005
2	Shri S.V. Kokane	Driver	02-06-2005
3	Shri R.S. Umare	Supporting Staff Grade I	19-06-2005

PROMOTIONS

Sl. No.	Name	Post to which promoted	Effective Date of Promotion
		Technical	
1.	Shri Sanwarmal Saini	Technical Assistant **T-1**	**19-10-2004**
		Administrative	
1.	Shri S.N. Bandre	Lower Division Clerk	08-06-2005

RETIREMENT

Supporting Staff

Shri V.Y. Unhalekar, Technical Assistant T-2 retired from service w.e.f. 31-07-2005.

TRAINING PROGRAMME ATTENDED BY STAFF

Training Programme	Period and Place	Participant(s)
Administrative Vigilance	4-4-2005 to 8-4-2005 New Delhi	Smt. M.V. Kamerkar
General Requirements for the Competence of Testing and Calibration Laboratories and Internal Audit as per ISO / IEC 17025	3-5-2005 to 6-5-2005 Mumbai	Shri D.U. Kamble Shri A.K. Chaphekar
Intellectual Property Rights and World Trade Organisation	27-6-2005 to 1-7-2005 Hyderabad	Dr. R.P. Nachane

TRAINING PROGRAMME ATTENDED BY STAFF

Training Programme	*Period and Place*	*Participant(s)*
Practical Approach to Understand Fabrics	15-7-2005 and 16-7-2005 Mumbai	Shri D.U. Kamble Shri R.K. Jadhav Smt. Bindu Venugopal
Computer Aided Textile Designing	1-9-2005 to 21-9-2005 Dharwad	Dr. N. Shanmugam
64th Plenary Meeting of the International Cotton Advisory Committee	25-9-2005 to 29-9-2005 Liverpool, USA	Dr. R.P. Nachane
Web Programming with PHP	26-9-2005 to 30-9-2005	Smt. Acushla Antony

ANNUAL COTTON QUALITY UPDATE

CIRCOT has been furnishing authoritative data on the technological properties of Standard and Trade varieties of cotton every year. The globalisation of economy and stringent quality norms required to be met by exporting units have made cotton trade and spinning industry realize the importance of objective testing of raw material. In view of the demand from textile industry and trade, CIRCOT publishes the **Annual Cotton Quality Update** every year. The update containing information on essential fibre quality characteristics of varieties under commercial transactions is available well within the cotton season of that year. Apart from the fibre quality parameters, ranges and mean values for each variety, frequency distributions for length, length uniformity, fineness and strength are also provided in the update. Highlights of statistical data are also given.

CIRCOT is now making available the fibre quality data through Internet starting from the current cotton season 2005-2006. Interested persons can get the information by visiting CIRCOT's web site http://circot.res.in.

Publications

PUBLICATIONS

1. CIRCOT Leaflet No. 50 - Particle Board from Cotton Plant Stalk - A Timber Substitute *(In Tamil)*
2. CIRCOT Leaflet No. 51 -Testing Facilities at CIRCOT for Pulp and Paper
3. CIRCOT Leaflet No. 52 - CIRCOT's Eco-friendly Process for Scouring of Cotton textiles : Bioscouring
4. CIRCOT Leaflet No. 53 -Testing Facilities at CIRCOT for Pulp and Paper *(In Hindi)*
5. CIRCOT Leaflet No.54 - CIRCOT's Eco-friendly Process for Scouring of Cotton textiles : Bioscouring *(In Hindi)*
6. Everything about Cotton Plant Stalks : An Annually Renewable Biomass for Industrial Use *(In Tamil)*
7. CIRCOT Annual Report 2004-2005.

PAPERS PRESENTED AT SEMINAR/CONFERENCES

Author	*Title*	*Seminar/Conference*
Balasubramanya, R.H., Gurjar, R.M., Shaikh, A.J, Sreenivasan, S.	*Preparation of Composite boards from Cotton Plant Stalks and Production of Biogas and Compost from Ginnery Waste*	**Organic Cotton Stakeholders Workshop** held at Hyderabad on May 5, 2005
Hussain, G.F.S. Varadarajan, P.V. Nachane, R.P.	*Influence of Aqueous Swelling and Stretching on the Quality Characteristics of Cotton Yarns*	International Conference on **Advances in Textile Materials Technology, Management and Applications** held at Coimbatore on July 7 and 8, 2005.
Raje, C.R. Gurjar, R.M. Kawlekar, S.R.	*Non formaldehyde DP Finishing of Cotton Fabrics*	International Conference on **Advances in Textile Materials Technology, Management and Applications** held at Coimbatore on July 7 and 8, 2005.
Sreenivasan, S., Nachane, R.P.	*X-ray Methods - Absorption/ Fluorescence/ Diffraction Techniques*	Seminar on **Analytical and Research Application of Spectroscopic Techniques** held at Mumbai on July 8-9, 2005

CENTRAL INSTITUTE FOR RESEARCH ON COTTON TECHNOLOGY

(Indian Council of Agricultural Research)

Adenwala Road, Matunga, Mumbai 400 019

Tel. : 24127273/76, 24157238/39, 24184274/75
Fax : 022-24130835
E-mail : circot@vsnl.com or circot@bom.nic.in
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