

CIRCOT news

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EDITORIAL

The Indian textile sector contributes substantially to India's export earnings. The export basket consists of raw cotton, cotton yarn and fabrics, man-made yarn and fabrics, wool and silk fabrics, flax and jute items, variety of garments, carpets, floor coverings and non-woven items. USA, EU, Canada, U.A.E., Japan, Saudi Arabia, Republic of Korea, Bangladesh, Turkey, etc are the major importers of our textiles. Textiles exports grew from US\$ 14.3 billion in 2004-05 to US\$ 17.9 billion in 2005-06, recording a growth of 25.2%. The textile sector aims at achieving a target of \$50bn worth of exports by the year 2010.

The target for textile exports for the current year has been fixed at US\$ 25.1 billion keeping in view the growth that had taken place after the termination of Multi Fibre Arrangement (MFA). The appreciation in the value of the rupee since October 2006 along with increase in the interest rates had an adverse impact on textile exports. The export deceleration has been fuelled by the demand recession in developed nations. The exports have shown negative growth particularly in USA and in other countries where our contracts are in terms of US dollar.

The recent strengthening of the rupee has shown a departure from past trends. The trend of steady month-on-month appreciation of rupee in recent times suggests that the country's attractiveness to foreign investors is increasing and signals optimism about the Indian economy in general. However, the concerns of exporters are rising as their goods become more and more expensive for overseas buyers and rupee appreciation erodes their international competitiveness.

Despite the temporary setback, India's textile exports are poised for a huge growth. Very recent trends have shown that contrary to normal perception that India's share of exports to developed nations have been

usurped by China, Bangladesh and such other Asian countries, exports both in quantity and value show otherwise. India's exports have been significantly improving in recent months and there is every reason to believe that it would continue to do so. With a vast raw material base of diverse quality and cheap labour and high entrepreneurial skills, our exports stand to gain. What is lacking and needs immediate action is improvement in unit value realization from exports. Economy of scales and value addition are two issues that need concerted attention by the sector.



In the cotton textiles segment, Cotton production has been scaling newer heights consistently for the last few years. In the cotton year 2007-08, the production is expected to cross 310 lakh bales. The fibre attributes and cleanliness of Indian growths have improved substantially in recent years. Both the qualitative and quantitative upgradations in Indian cotton are bound to have a positive impact on the cotton textile sector, including its exports as more than 2/3rd of Indian textile exports are cotton based textiles. With the whole world turning to natural, ecofriendly biodegradable materials, the demand for cotton textile products is bound to steadily rise in the years to come. The Indian textile sector therefore needs to expand its scale of operations with all seriousness and urgency to meet the growing needs of consumption-driven both developed and developing nations.

Editorial Committee

**Dr. S. Sreenivasan, Dr. C.D. Ravindran,
Dr. N. Vigneshwaran, Shri V.B. Suryanarayanan
and Shri M. Mohan**

Designing a Test Simulator and Studies on Cleaning Behaviour of Indian Cottons

A set up consisting of an existing opener available in the present blow room line, namely S.R.R.L. opener coupled with an inclined 3-bladed beater was used in the study. The opened cotton from the SRRL opener was taken out by air-suction through an outlet duct and collected for testing the cleanability of cotton. Over 175 samples of cotton varying in fibre properties and trash content were processed through the set up and cleaned cotton samples collected for analysis. The same cotton samples were further passed through the multi-cleaning machines available in the blow room line, and also the carding machine. Samples were collected at each stage for analysis of cleaning performance.

The following observations were made:

- a) In a given set up, either with single or multiple cleaning machines, the lower the trash content, the better is the cleanability.
- b) Up to 5% level of trash content, it is easier to clean the cotton. The cleanability curves flattens around 8% trash level meaning beyond this level, the cleaning machine will hardly have any effect on cleanability factor.
- c) Cleanability is also dependent on the type of cleaning machine.
- d) Cleanability characterizes the influence of cotton on the extent of its cleaning by the machine.

Application of Nanoparticles for Paper Coating

Zinc oxide (ZnO) is a potential material for coating of paper to impart brightness apart from UV-absorbing and antimicrobial properties. Nano-ZnO, due to its extremely small size, gives coating pigment a high covering power. Nano-ZnO was prepared by using a method developed at this Institute. The final product was starch granules embedded with particles of nano-ZnO. These nano-ZnO (as such and in combination with china clay) was coated on the surface of base paper (60 GSM) and their properties studied. Optical microscopy examination showed uniform distribution of zinc oxide on the cellulose fibres while scanning electron microscopy revealed the morphology of coated pigments on the surface of base paper. The brightness, whiteness, smoothness, print density, print uniformity, picking velocity, oil absorbency and tensile index of nano-ZnO coated paper showed significant improvement over the commercial ZnO coated paper. Also, the nano-ZnO coated paper was found to possess excellent antifungal and UV-absorbing properties, which are very much essential to enhance its life.

Banana Pseudostem fibres for Value Added Products

The fibres from banana pseudostem were extracted and spun on the Jute spinning system to tex values matching those of jute. About 20 kg of banana fibres were converted into yarns and then to fabric (plain weave) of 300 GSM. Doubling of banana yarn has improved its breaking load, breaking extension and tenacity by more than 50%. Addition of 20% jute in banana fibres also improved the breaking extension and tenacity of the blended yarn. Paper produced from cut banana fibres obtained from scutcher waste was of good quality although the

paper made from long length textile grade fibres of banana was much better and of currency grade type.

Production of Garments from Blended Yarns of Cotton and Ramie

Under an AP cess fund project in a Networking mode (CRIJAF, CIRCOT, KKV, TNAU and ICAR Research Complex, Goa), decorticated Ramie fibres obtained from CRIJAF, Barrackpore were subjected to an anaerobic degumming process standardized at CIRCOT to produce textile grade fibres. They were blended with Shankar — 6 cotton (70:30) and spun at SITRA, Coimbatore in a modified jute system and woven. Attractive garments were prepared.



Dr. H.S. Sen, Director, CRIJAF, Barrackpore inspecting the ramie-cotton blended fabrics

Technology Transferred

A MoU was signed between CIRCOT and M/s. Renaissance Paper Mill Ltd., Nagaland to transfer the technology of preparing paper from bamboo and other biomass grown in the Northeastern region of India.



MoU was signed between CIRCOT and M/s Renaissance Paper Mill Ltd, Nagaland

Patents Obtained

Indian patents have been obtained for the following during the month of October 2007:

- Hand-cum power operated cotton stalk compacting machine (210671, 8.10.07)
- Miniature spraying system for cotton seed (210684, 8.10.07)
- Machine for compacting cotton stalk using hydraulic system (210718, 8.10.07)
- Microbial system for De-inking of News Paper Waste (210417, 3.10.07)

MEETINGS

Institute Research Council Meeting

The half-yearly IRC meeting of CIRCOT was held on December 27 and 28, 2007. The details about the progress made in different projects pertaining to each of the four core areas during the period from April to December 2007 were discussed.



Discussion during the half-yearly IRC meeting held on December 27 & 28, 2007



QRT visit on 26th October 2007

The following new projects were approved:

Core Area I:

Design and Development of Barcode Technology for Tagging Cotton Bales.

Core Area H:

Fabrication of an Instrument for Measurement of Electrical Properties of Textile Materials.

Core Area III:

Production of Titanium Dioxide Nanoparticles and their Application on Cotton Textiles for Antibacterial and Self-Cleansing Properties.

QRT Meet

The Quinquennial Review Team under the chairmanship of Prof. V. Subramaniam visited various divisions of CIRCOT on 26th October 2007 to review the progress made during the period 2002-07. He was accompanied by the Team members, Dr. S.S. Narayanan, Dr. S.R. Male, Dr.T.K.S. Gowda and Dr. H.V.S. Murthy. Subsequently, the QRT team made a brief



QRT member delivering a lecture on December 11, 2007

presentation of their findings on 11th December 2007 to the staff members of the Institute.

NAIP Launch Workshop

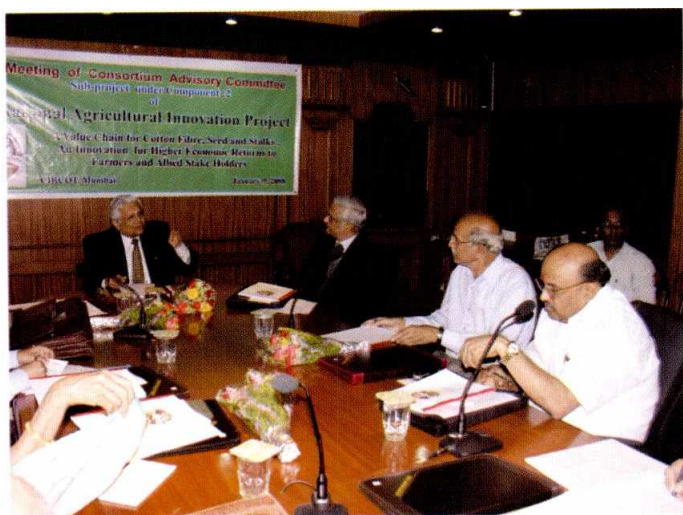
The project on "A Value Chain for Cotton Fibre, Seed and Stalks: An Innovation for Higher Economic Returns to Farmers and Allied Stake Holders" under component 2 of National Agricultural Innovation Project was officially started on 15th December 2007. A launching workshop was held on 9th January 2008. This

workshop was inaugurated by Shri. P.D. Patodia, Chairman, Confederation of Indian Textile Industries (CITI) Mumbai and attended by eminent personalities from Industry, trade and research organizations. Dr. J.P. Mittal, National Coordinator (NAIP) for component 2 introduced NAIP to the audience and Dr. R.P. Nachane, Consortium Principal Investigator of the project, gave a brief account of the work envisaged up to 2011.



NAIP Launch Workshop on 9th January 2008

The first Consortium Advisory Committee (CAC) meeting was held on 9th January 2008 under the chairmanship of Shri Suresh Kotak, President,



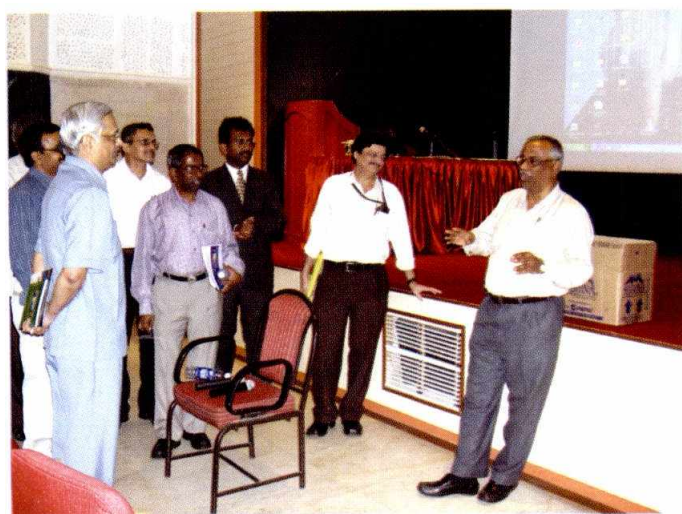
CAC Meeting on 9th January 2008

Kotak & Company. Seven members of CAC and two invitees were present in the meeting. Director, CIRCOT and Dr. R.P. Nachane, CPI of this project briefed all the members about the project.

NAIP Stake Holders Workshop

A two-day workshop was organized to interact with the various stake holders in the proposed NAIP project under component 4 on "Synthesis and Characterization of Nano-Cellulose and its Application in Biodegradable Polymer Composites to Enhance Their Performance" on January 18 and 19, 2008 at the Jubilee Hall of the Institute. The consortium partners from the Tata Institute of Fundamental Research (TIFR) and Mumbai University Institute of Chemical Technology (MUICT) participated in the Stakeholders workshop.

Apart from this proposal, four more proposals from various institutes were also discussed in this forum. Dr. A. Bandyopadhyay, National Coordinator NAIP, component 4, presided over the workshop. On the first day, discussions were carried out with respective experts followed by presentation of proposals by principal investigators on the second day.



Discussion during NAIP Stake Holders Workshop

Vigilance awareness week

The Vigilance Awareness Week was celebrated from November 12 to 16, 2007. Dr. R.H. Balasubramanya, Director-Incharge inaugurated the function on 12th November. Dr. Dhananjay Vanjari (ACP, ATS, Mumbai) delivered a lecture on Corruption and the ways to prevent it. On 13th November, Shri. Vikas Wagh, Police Inspector (ACB) delivered a lecture on Vigilance and Corruption.

On 14th November, Shri. S.P. Singh, DSP (CBI, ACB) gave a lecture on Vigilance and emphasized

that both taking and giving bribe are crime. On the same day, an essay competition was held regarding Vigilance. Staff members were allowed to write in Marathi, Hindi and English. Apart from Scientists, staff members from Technical, Administration and Supporting category participated actively in this competition. On the closing day, Shri. Dhananjay Vanjari (ACP, ATS Mumbai) attended and made closing remarks.

Communal Harmony Week

The communal harmony week was celebrated during 19 to 25, November 2007. On 19th November, all staff members took oath at 11.00 am in the Jubilee Hall. On 23rd November, Shri. Rajnish Sheth IPS (ACP) delivered a lecture on communal harmony.



Vigilance Awareness Week Celebration from November 12-16, 2007



Shri Rajnish Sheth on Communal Harmony

Awareness Meets & Exhibitions

Awareness Meets

- Demonstration of Cotton Stalk Collection and Chipping was arranged at Sirsa on 21-11-2007.
- Clean Cotton Picking and Ginning and demonstration of supply chain

management of cotton stalk at Umri Wagh on 24-11-2007. On Ginning and Utilization of cotton stalks for board making at Guntur on 23-2-2008.



Awareness Meet at Guntur

- On picking of seed cotton, on-farm storage and transportation at Udumalpet near Pollachi on 5-3-2008.
- On clean cotton picking and demonstration to the farmers on uprooting and chipping of cotton stalk at Khadka (Jaipur) in Wardha District on 18-3-2008.

Exhibitions

- Participated in "Krishi 2007" at Nashik, organised by Media Exhibitors and supported by Ministry of Agriculture, Government of India and Government of Maharashtra, from 29.11.2007 to 3.12.2007.
- Participated in "Western Region Krishi Mela 2008" jointly organised by Sardarkrushinagar Dantiwada Agricultural University, Deesa, Gujarat and Deptt. of Agriculture & Cooperation, Ministry of Agriculture, Govt. of India, New Delhi from 15.3.2008 to 18.3.2008.

Review Meeting of Network Project on Ramie

A meeting was held at CIRCOT to review the progress of the network project on Ramie on 25th February 2008 under the chairmanship of Dr. H.S. Sen, Director, CRIJAF, Barrackpore. Apart from CIRCOT, members from other partnering Institutions, ICAR Research complex (Goa), Kokan Krishi Vidhyapeeth (Dapoli) and TNAU (Coimbatore) participated in this meeting. The progress of the project was reviewed in detail at the meeting.



Network Project on Ramie

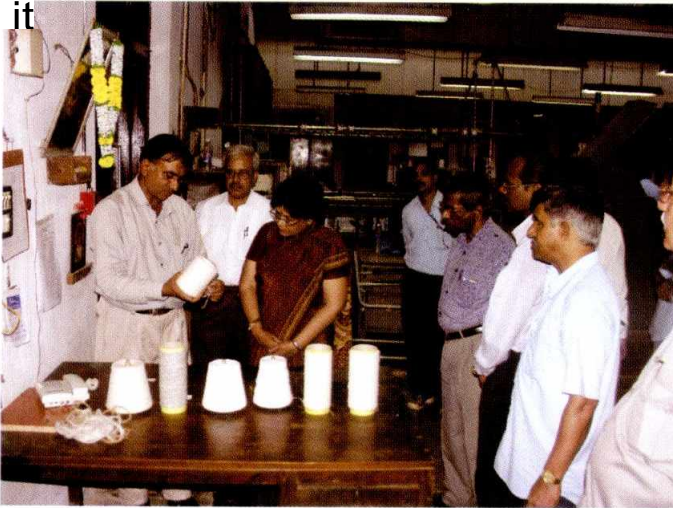
OTHER ACTIVITIES

Dignitaries' Visit

Dr. Rita Sharma, Additional Secretary and Financial Advisor, DARE, ICAR visited the Institute on 5th December 2007. Director, CIRCOT presented the salient achievements of the Institute and also the proposal for XI plan. Dr. Sharma gave a few suggestions and accordingly the document was modified. The dignitary was later taken around various Divisions / Sections to interact with the staff concerned.

Mr. Jafar Mohmood, Secretary, Textile, Govt. of Pakistan paid a visit to the Ginning Training

Centre of CIRCOT at Nagpur as part of his assessment of modernization of Ginning in India under TMC. Dr. (Prof.) G.B. Ayoola, University of Agriculture, Makurdi, Nigeria, a representative from CFC, Netherlands along with a Mid Term Review Team headed by Mr. Sanjeev Vasudev visited GTC Nagpur to review the progress made on the CFC funded project being implemented by CIRCOT.



Dr. Rita Sharma, Additional Secretary and Finance Advisor, DARE, ICAR inspecting the friction spinning system

Shri. K.P. Sharma, Asst. Director, Official Language Implementation Office, visited CIRCOT on 23rd January 2008 to oversee the progress done in implementation of the official language at the Institute. He appreciated the steps undertaken by the Institute for promoting the use of Hindi as Official Language.

ICAR Inter-Institutional Sports Meet

ICAR Inter-Institutional Sports Tournament (Western Zone) was organized at CAZRI, Jodhpur from March 4-8, 2008. A contingent of 40 sports persons participated from the Institute with Shri Chitranayak, Scientist (Senior Scale) as Chief-de-Mission and Shri J.R. Mangle, Senior Clerk as

Manager. The team actively participated in almost all the sports events, such as Volleyball, Kabaddi, Table Tennis, Chess, Carom, and Badminton and in various events of Athletics. The CIRCOT team was awarded the Fair Play Trophy 2008, based on the team's overall behaviour, conduct, maintaining time-schedules, on and off the ground behaviour, etc. The winners from CIRCOT were:

- a. Smt. Smita Paiyala, LDC: 1st in TT Singles, TT Doubles, Badminton Singles & Doubles, and 2nd in Carom & Javelin.
- b. Smt. P.S. Nirhali, T-4: 1st in TT Doubles, Badminton Doubles and 2nd in Badminton Singles
- c. Smt. K.R. Khaire, Tea cum dish cleaner: 1st in Carom.
- d. Smt. Bharati Kherodkar, LDC: 1st in Shot Put
- e. Shri N.V. Kambli, UDC: 2nd in 200 m race
- f. Shri N.V. Kambli, UDC; M.G. Ambare T-3; S.P. Naik SSG-1 & S.S. Surkule SSG-1: 2nd in 4 x100 m Relay
- g. Shri G.S. Deorukhar T-1-3: 2nd in Carom.

The victorious contingent was felicitated on March 17, 2008 in the Jubilee Hall of the Institute.



Felicitation of the sports contingent by Director

Lectures Organized

- "Evaluation of Protective Clothing for Pesticide Applications" by Dr. (Smt.) Sujata Saxena, Senior Scientist in connection with the Training at University of Maryland, USA, on 11th October 2007.
- "Introduction to Weibull Distribution" by Prof. V. Subramaniam, Chairman, QRT on 11th December 2007.
- "Application of Biotechnology in Agriculture" by Dr. T.K. Siddharama Gowda, Director of Instructions (PGS), UAS Bangalore, on 11th December 2007.
- "Role of Technology in Agriculture" by Mr. Chandrasekhar, Hindu Businessline on 28th February 2008 during Science Day celebration.
- "Report on Deputation to Geneva" by Dr. S. Sreenivasan, Director, CIRCOT on 29th January 2008.
- "Glimpses of Cotton Production and Processing Technology in Egypt" by Dr. S.K. Chattopadhyay, Principal Scientist on 11th March 2008 based on Deputation to Egyptian International Centre on Agriculture (EICA), Egypt.
- "Preparation of Particle Board from Cotton Stalk" by Dr. K.M. Paralikar and Shri. R.M. Gurjar, Principal Scientists on 11th March 2008 in connection with their participation in the International Workshop on Ecocoboard at Tagaytay, Philippines.
- Shri Suresh Jain, Hindi Officer, National Industrial Institute of Engineering Technology, Mumbai delivered a lecture on "Hindi Main Kamkaj" on the occasion of Hindi Workshop organized during March 10 and 11, 2008 for the Administrative Staff.

PERSONNEL

- Salve, Asstt. was promoted to AAO w.e.f. 2-7-07
- Smt. Sujata Koshi, Asstt. was promoted to MO w.e.f. 27-11-07
- Shri A.R. Chutule, SSG I was promoted to SSG II w.e.f. 3-12-07
- Shri M.G. Bhndakar SSG I was promoted to SSG II w.e.f. 3-12-07
- Smt. A.A. Kathe, T-6 was promoted to T-7-8 w.e.f. 3-2-05
- Shri K.B Rajagopal T-6 was promoted to T-7-8 w.e.f. 3-2-05
- Shri S. Sekar T-6 was promoted to T-7-8 w.e.f. 3-2-05
- Dr. S.J. Guhagarkar T-6 was promoted to T-7-8 w.e.f. 3-2-05
- Shri D.R. Murthy T-6 was promoted to T-7-8 w.e.f. 3-2-05
- Shri P.K. Mandhyan T-6 was promoted to T-7-8 w.e.f. 3-2-05
- Smt. R. K. Shahani T-6 was promoted to T-7-8 w.e.f. 3-2-05
- Dr. S. Venkatakrishnan T-6 was promoted to T-7-8 w.e.f. 3-2-05
- Shri B.S Ganvir T-7 (retired) was promoted to T-9 w.e.f. 1-7-04
- Shri TKM Das T-7-8 (retired) was promoted to T-9 w.e.f. 1-1-01
- Shri R.M. Modi T-6 was granted one advance increment w.e.f. 1-1-05

Retirement

Shri Gian Singh, T-1 retired on 31st October 2007 and Shri G. Viswanathan, T-7-8 retired on 31st March 2008 on superannuation.

Awards

Dr. (Mrs.) Sudha Tiwari, T-6 received Rajbhasha Shree Puraskar from Ashirwad, a Literary Socio

and Cultural Organization, Mumbai for publication of various research papers in Hindi and receipt of various awards during the years 2002-07 during Rajbhasha Sammelan at Films Division, Mumbai on 11th October 2007.

- Dr. (Mrs.) Sudha Tiwari, T-6 received 2nd Prize for paper entitled "*Apashitya Eavam Akhadya Tel Se Vaiklpik Endhan*" for All India Scientific and Technical Article Competition organized by Kendriya Sachivalay, New Delhi on 26th November 2007.
- Dr. N. Vigneshwaran, Scientist (Senior Scale) was awarded the YOUNG SCIENTIST AWARD - 2007 by the Association of Microbiologists of India during the annual conference of AMI held on 20th December 2007 at IIT Madras, Chennai. This award has been conferred on him in recognition of his contribution in the field of microbial synthesis of nanoparticles and their application onto cotton fabrics.
- Shri. Chitranayak, Scientist (Senior Scale) received 1st prize in Essay Competition and Dr. (Mrs.) Sudha Tiwari, T-6 received 3rd prize in the Hindi Sulekh Competition, organized by Town Official Language Implementation Committee at CIFE, Mumbai on World Hindi Day, 10th Jan 2008

Training Programme Attended by Staff

- Dr. D.N. Makwana and Dr. C.D. Ravindran, Senior Scientists attended the Workshop on Producing Zero Effect through Statistical Techniques organized by Confederation of Indian Industries, at Chennai on 8 and 9, October 2007.
- Shri R.D. Shambarkar, Stenographer G-III attended the Workshop on 13th Hindi Seminar and Workshop at Goa from 24 to 26, October 2007.
- Shri K.W. Khamkar, AAO and Shri S.N. Bandre, LDC attended the Seminar on Purchase Policy & Procedure in Government Department during 21-23 November 2007 at the Centre for Training & Social Research, New Delhi.
- Shri M.B. Khubdikar, AO and Smt. V.V. Desai, Assistant attended the Seminar on EPF Pension

EDLI & other Retirement Benefits during 28-30 November 2007 at Industrial Management Academy, Mumbai.

- Shri R.R. Chhagani, T-5 and Shri R.S. Narkar, T-4 attended the Seminar on TOC Analyser and Microbial Air Suppliers organized by Saksham Enterprises at Mumbai on November 27, 2007.
- Shri Virendra Prasad, Scientist attended the Seminar on Latest Trends in Nanotechnology organized by VPM Polytechnic, Thane in association with NCL, Pune at Mumbai on January 1, 2008.
- Dr. R.P. Nachane, Principal Scientist & Head, QEID and Shri A.K. Bharimalla, Scientist attended the workshop on IPR Policy & Issue organized by the Directorate of Human Resources Management during 18 to 20 February 2008 at KAU, Thrissur.
- Dr. N. Vigneshwaran, Scientist (Senior Scale) attended an International Workshop on Crystallization, Filtration and Drying at UICT, Mumbai from 21 to 23 February 2008.
- Shri R.R. Chhagani, T-5 attended the course on 'Computer colour matching for textile' organized by Computer Spectra Colour Pvt. Ltd., from 27 to 28 February 2008 in Mumbai.
- Shri. V.L. Rangari, T-5 and Shri. R.G. Dhakate, T-5 attended the training programme on Application of PRA Tools in Agriculture Extension from 25-2-08 to 1-3-08 at the Extension Education Institute, Anand

Foreign Deputation

- Dr. K.M. Paralikar and Mr. R.M. Gurjar, Principal Scientists were deputed to attend the Ecocoboard Workshop at Philippines during 1-3 October 2007 to present the research findings on the Utilization of Cotton Plant By-produce for Value Added Products (CFC funded project).
- Dr. S. Sreenivasan, Director, CIRCOT attended the W.T.O. Workshop on Development Aspects on Cotton in Geneva, Switzerland on 22nd November 2007.

PUBLICATIONS

A. Research papers published in journals

- Vigneshwaran, N., Bharimalla, A.K., Virendra Prasad, Kathe, A.A. and Balasubramanya, R.H., "Functional Behaviour of Polyethylene-ZnO Nanocomposites", *Journal of Nanoscience and Nanotechnology*, Vol.8, 1-6, 2008.
- Jadhav, S.B. and Paralikar, K.M., "Optimizing the Frequency of Oscillating Beater in Double Roller Gin", *Indian Journal of Fibre and Textile Research*, Vol. 32(2), 184 – 188, 2007.
- Achchhelal Yadav, Nachane, R.P. and Hussain, G.F.S., "Air Permeability of different Layers of Woven Fabric", *Journal of Polymer Materials*, Vol. 24(2), 113-118, 2007.
- Chitranayak, Yadav, A., Virendra Prasad, Sundramurthy, C., "Kapas Avan Vastra Uddyog Ek Jhalak", *Raj Bhasha Rashmi*, Vol. 2, 2007, 17-19 Hindi Publication of Cotton Corporation of India, CBD Belapur, Navi Mumbai.
- Chitranayak, Yadav, A., Prasad, V., "Bin Bune Vastron Ke Badhte Charan", *Vastra Paridhan*, Vol.63, 2006-07, 22-27, Hindi Publication from Textile Commissioner Office, Ministry of Textiles, Govt. of India.
- Jyoti M. Nath, Shukla, S.K. and Patil, P.G., "Imaging and Soft Computing in Cotton for Online Trash Identification", *Journal of Agricultural Engineering* Vol. 44 (3), 1-7, 2008.
- Arude, V.G., Shukla, S.K. and Paralikar, K.M., "Evaluation of worker exposure to airborne dust in cotton ginneries", *Journal of Agricultural Engineering*, Vol. 44(3), 30-32, 2007.
- Prasad, J., Tarun Kapur, Sandhar, N.S., Majumdar, G., Patil, P.G., Shukla, S.K., Jaiswal, B.N. and Patil, A.B., "Performance evaluation of spindle type picker", *Journal of Agricultural Engineering* Vol. 44(1), 38-42, 2007.

B. Research papers presented in seminars and conferences

Arude, V.G., Shukla, S.K., Manojkumar T.S. and

Paralikar, K.M. "Evaluation of worker exposure to noise and dust pollution in cotton ginneries", Abstracts in International Ergonomic Conference-HWWE 2007, CIAE, Bhopal. Pp-36, Dec. 10-12, 2007.

- Jyoti M. Nath, Shukla, S.K., Patil, P.G. and Paralikar, K.M., "Computer controlled system for operating machines in modern Indian ginneries", Abstracts in International Ergonomic Conference-HWWE 2007. CIAE, Bhopal. Pp-55, Dec. 10-12, 2007

Sujata Saxena, "Preliminary Investigation on the Pesticide Protective Performance of Some Indian Cotton Fabrics", presented in the IUPAC sponsored First International Conference on Agrochemicals Protecting Crop, Health and Natural Environment organized by IARI Society of Pesticide Science and ICAR, at New Delhi from January 8 - 11, 2008.

- Nachane, R.P., "Processing of Banana Pseudostem Fibre on Jute Spinning System", presented at the International Symposium on Jute and Allied Fibres Production, Application and Marketing held at Kolkata from January 10 - 12, 2008.
- Balasubramanya, R.H., "Utilisation of Cotton Plant By-produce for Value Added Products", in 49th Joint Technological Conference (ATIRA, SITRA, NITRA, BTRA) organised by BTRA at Mumbai on February 1 & 2, 2008.
- Arude, V.G., Shukla, S.K., "Performance Evaluation of Different Types of Seed Cotton Distribution Systems used in Modern Ginneries", presented at the 42nd ISAE Convention and Symposium held at Bhopal from February 1 - 3, 2008.
- Arude, V.G., Shukla, S.K., Manojkumar, T.S. and Makwana, D.N., "Evaluation of Cotton Processing Loss in Modernized Indian Roller Ginneries", presented at the 42nd ISAE Convention held at CIAE, Bhopal from February 1 - 3, 2008.
- Balasubramanya, R.H. and Jyoti M. Nath, "Utilization of Low Free Gossypol Containing Cottonseed Meal in Broiler Feeding" presented

at the 42nd ISAE Convention held at CIAE, Bhopal, February 1 to 3, 2008.

- Chitranyak, "Analysis of Electrical Properties of Textile Materials and Nano- Finished Fabrics", presented at the All-India Seminar on Futuristic Textiles organized by the Institution of Engineers (India) at Kanpur during February 9 and 10, 2008.
- Shukla, S.K., Arude, V.G., Jyoti M. Nath and Patil, P.G., "Performance evaluation of cotton loading-unloading machine for heaping",

Abstracts in National conference on farm mechanization, Bhuvanesar, pp.78, February 22-23, 2008

C. Other publications

- Ginning Bulletin, Vol. 7(1): 2-3 CIRCOT, Mumbai.
- CIRCOT ABSTRACTS, Jan-Jun: 2007
- CIRCOT ABSTRACTS, Jul-Dec: 2007
- CIRCOT News (Hindi) Jul-Dec: 2007

HANDBOOK OF METHODS OF TESTS

The following two volumes are published by CIRCOT covering the whole spectrum of test methods from fibre to fabric.

Handbook of Methods of Tests for Cotton Fibres, Yarn and Fabrics

Part I : Ginning Tests, Fibre Tests, Moisture Tests and Structural Tests

Part II: Mechanical Processing, Yarn Tests and Fabric Tests

The cost is Rs. 200/- each + postal charges extra. Please contact the Director, CIRCOT, Mumbai for copies.

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 four samples coded D-2 and E-6 for conventional instruments such as Fibrograph, Micronaire and Stelometer
- The second set consists of six cottons coded as HM-8, HC-3, HD-3, HE-7 and HIm-2.

The net weight of each sample is 200 g and the cost is Rs.750/-. A rebate of Rs. 125/- per sample (excluding Him) is offered for the purchase of 4 or more (same or different cottons including Him) samples at a time. The cost of HIm (Mic only cottons) is Rs.300/- per container.



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