



## A Monthly Insight into the ICAR-CIRCOT

### E - NEWS LETTER

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### Director's Desk...



In 2016/17, world cotton production is projected to increase by 7% to 22.4 million tons, despite a 2% reduction in world acreage under cotton to 29.7 million hectares, owing to the improvement in the world average yield. India will remain the

world's largest cotton producer yet again, with an estimated output of 5.9 million tons followed by China with an estimated production of 4.6 million tons.

The Cotton Advisory Board has estimated the area under cotton production in India at 105 lakh hectares during the cotton season 2016-17, around 11.5 per cent decline over last year. The area under cotton cultivation has declined by 14 percent in Northern Zone, 28 per cent in Southern zone, with a marginal decline in central zone. Despite the decline in the area under cultivation, the overall cotton production for the year is estimated at 351 lakh as a result of improvement in the productivity of Cotton.

In 2016/17, world cotton consumption is expected to remain at 23.8 million tons, despite the widening gap between international cotton prices and polyester prices. Mill use of Cotton is expected to increase in three of the top ten cotton consuming countries – Bangladesh, Vietnam, and the United States. World cotton imports are predicted at 7.5 million tons in 2016/17 with increase in volume of imports by Bangladesh and Vietnam. The world cotton consumption is expected to overshoot the production this year as well.

*P.G. Patil*

# ICAR-CIRCOT, Mumbai

## African Delegates' Visit to the ICAR-CIRCOT

A biotechnology study group from African countries like Ethiopia, Sudan, Kenya, Malawi, Swaziland and Zambia visited the Institute on November 14. The delegation led by Dr. Margaret Kerembu included members of parliament, policymakers, scientists and representatives from trade and industry. Dr. P.G. Patil Director CIRCOT offered a warm welcome and briefed about the achievements of the Institute. The delegation was delighted to see the exhibition of R&D activities, processes and products developed by the Institute in post-harvest technology of cotton as well as learn about the Technical Assistance Programme (TAP) for Africa implemented by the Institute.



African biotechnology delegation at the ICAR-CIRCOT exhibition room on November 14, 2016.



ICAR-CIRCOT Director Dr. P.G. Patil addressing the African delegation on November 14, 2016.



African Delegation with ICAR-CIRCOT staff on November 14, 2016

## Briquettes and Pellets from Cotton Stalks

Briquetting and Pelleting are technologies for densification of cotton stalks to increase their bulk density and lower moisture content for easy handling, transport, storage and uniform burning when used as fuel. Briquettes have high specific density, about 1100-1200 kg/m<sup>3</sup> and bulk density about 600-800 kg/m<sup>3</sup> as compared to loose biomass which have bulk density in the range of 80-200 kg/m<sup>3</sup>. Cotton stalks are uprooted from field using a tractor operated v-type up-rooter, sun dried and shredded using a 2 ton/h capacity tractor operated shredder. Workers are employed for transportation of cotton stalks in mini trucks. The cost of the entire operation including harvesting, collection, chipping and transportation of cotton stalks works out to about Rs. 800 per tonne which are supplied to particle board industries at a price of Rs. 2000 per tonne thus making a profit of Rs. 1200 per tonne generating an additional revenue to farmers.



Cotton Stalk Briquettes



Cotton Stalk Pellets

## Trainings

### Double Roller Ginning Technology and Cotton Grading

One week training program on “Double Roller Ginning Technology and Cotton Grading” was organized at GTC, Nagpur during November 7-11. Three participants representing ginning industries located in Maharashtra attended the program. The training program dealt with fibre quality assessment, cotton grading and marketing, DR ginning technology, cotton export and cotton by-products utilization. The trainees were taken for industrial visits and were also demonstrated the functioning of particle board and scientific cottonseed processing plants.



Training Program “Double Roller Ginning Technology and Cotton Grading” at GTC Nagpur

## Basic Statistical Techniques for Textile Research

A three-day training programme on “Basic Statistical Techniques for Textile Research” was organized at Mumbai during November 15-17. The aim of the training programme was to provide exposure to the basic and advanced tools in statistical computing in the field of textile research. The course included descriptive and inferential statistics, design of experiments, correlation & regression analysis, response surface methodology and statistical tools for quality control in textile process. The training consisted of theory and hands on practical working with MS Excel and SAS software for statistical analysis. There were 11 participants in the training programme comprising of three faculty and eight research scholars.



Training on “Basic Statistical Techniques for Textile Research” during November 15-17



## Absorbent Cotton Technology

A three-day training programme on “Absorbent Cotton Technology” was organized at ICAR-CIRCOT during November 21-23. The programme was inaugurated by Dr. P. G. Patil, Director, ICAR-CIRCOT. The goal of training programme was to acquaint the trainees about basic and advanced chemical & mechanical processes involved in the production of absorbent cotton. The course comprised of the current scenario of absorbent/surgical cotton, raw materials and processes involved in preparation of this product, performance specifications, regulatory and certification issues. Practical demonstrations of the processes involved in absorbent cotton preparation as well as product testing as per prescribed test methods were also given to the participants. Seven budding entrepreneurs from the states of Madhya Pradesh & Maharashtra and three students participated in the training.



Inauguration of “Absorbent Cotton Technology” training programme on November 21



Release of training manual of “Absorbent Cotton Technology”

## Communal Harmony week

National Communal Harmony Week was observed in the Institute from November 19-25, 2016. All the employees of CIRCOT took the pledge to promote and inculcate the sentiments of peaceful-coexistence, mutual respect, amity and brotherhood amongst the diverse segments of our society. The Flag Day was observed on 25<sup>th</sup> November and funds were raised from the CIRCOT employees for the National Foundation for Communal Harmony Fund.



ICAR-CIRCOT staff taking communal harmony oath on November 19, 2016

## Constitution Day

Constitution Day was celebrated in the Institute on November 26, 2016 to commemorate the adoption of Constitution of India and to honour and remember the father of Indian Constitution, Dr. Bhimrao Ramji Ambedkar. The staff of the Institute took pledge on this occasion.



ICAR-CIRCOT staff taking oath on the occasion of Constitution Day on November 26, 2016

## Hindi Workshop

A workshop was organised on November 19, 2016 for noting and drafting in Hindi for Administrative Staff. It was attended by seven staff members. Shri Virendra Kulkarni, Deputy Director, Official Language, Heavy Water Board, Dept. of Atomic Energy, BARC and Shri V.B.S. Chauhan, Hindi Officer, Dept. of Atomic Energy, Nuclear Power Corporation of India Ltd., Mumbai were the guest speakers.



Dr. P.G. Patil Director ICAR-CIRCOT welcoming Shri Virendra Kulkarni, Deputy Director, Official Language, Heavy Water Board, Dept. of Atomic Energy, BARC, Mumbai



Inauguration of Hindi Workshop on Noting and Drafting on November 19, 2016

## Mera Gaon Mera Gaurav

### Kisan Goshti-cum-Demonstration Programme

A day long kisan goshti-cum-demonstration programme for farmers at Shegaon (kund) & Nandori villages in Wardha District was organized under "Mera Gaon Mera Gaurav" scheme initiated at the behest of Government of India on November 8, 2016. The programme began with the interaction of farmers with the experts from ICAR-CIRCOT led by Scientist Dr. P.S. Deshmukh and Agro-Plus Foundation, Nagpur. Methods for achieving substantial increase in cotton productivity, reducing production cost, information on soil health card, utilization of cotton stalks for production of bio-enriched compost, particle board, briquettes & pellets and as substrate for cultivation of oyster mushroom were explained to the farmers in detail. The programme provided an insight to the farmers regarding the on-farm management of cotton stalks and ways to increase their farm income.



Onfield interaction with farmers at Nandori village on November 8, 2016



Kisan Goshti-cum-Demonstration at Nandori, Wardha on November 8, 2016



Mera Gaon Mera Gaurav programme at Shegav (Kund), Wardha on November 8, 2016



## Student Visits

As part of the course curriculum and educational tour, 64 students from the College of Agricultural Engineering, University of Agricultural Sciences, Raichur, Karnataka visited the Institute on November 11, 2016.



Students from College of Agricultural Engineering, Raichur, Karnataka

## Students visit to CAR- CIRCOT Regional unit Coimbatore

Ninety students from "Imayam Institute of Technology, Trichy" and 110 students from "Tamil Nadu Agriculture University (TNAU) Coimbatore" visited CIRCOT regional unit Coimbatore on November 16 and 22, respectively. They were explained about various fibre testing facilities available at the regional unit.



Dr. S. Venkatakrishnan explaining about fibre testing equipment to TNAU students



Shri M. Bhaskar elucidating fibre testing to Imayam Institute of Technology students

## Teachers Visit to GTC, Nagpur

A group consisting of forty faculty members and five Heads of Departments led by Mr. J.F. Agrawal, Principal of Shri SAI Engineering College, Bhadravati, Chandrapur, Maharashtra visited GTC, Nagpur on November 26, 2016. Dr. S.K. Shukla addressed the group and explained about various activities undertaken at GTC, Nagpur.



GTC Nagpur In-charge Dr. Shukla explaining Automatic DR Ginning Facility to Shri SAI Engineering College Faculty on November 26



Faculty of Shri SAI Engineering College, Bhadravati at GTC, Nagpur on November 26, 2016

## Director's visits

- An international conference on “Controlled Atmosphere and Fumigation (CAF)” held during 07-11 November 2016 at New Delhi. Chief Guest Shri Avinash Srivastava, Secretary, Ministry of Food Processing Industries inaugurated the Conference. Dr. K. Alagusundaram, Deputy Director General (Agricultural Engineering), ICAR and Chairman, CAF 2016 Organizing Committee during his welcome address emphasised that the use of chemicals to be reduced and an alternate and chemical free methods of fumigation to be used. About 450 participants across the world participated in the conference and eminent speakers from India and foreign countries delivered the lectures.
- Golden Jubilee Celebration of AICRP and Brain Storming Session on “Fifty Years of Cotton Research – Lessons Learnt and the Way Forward” held on November 9-10, 2016 at ICAR-Central Institute for Cotton Research, Regional Station, Coimbatore. On the occasion he delivered a lecture on cotton quality requirements from industry perspective & issues and road ahead. During the visit, he also visited CIRCOT Quality Evaluation Unit at Coimbatore to monitor the activities and assess the scope for strengthening the unit.
- An interactive workshop on “Administrative and Financial Matters” of the ICAR Institutes located in West Zone held on November 24, 2016 at CIFE, Mumbai.

## Agro-Vision 2016

ICAR-CIRCOT participated in the 8<sup>th</sup> Agro-Vision 2016 held at Reshimbaug ground, Nagpur during November 11-14, 2016. CIRCOT technologies were showcased to the visitors and farmers. Shri Nitin Gadkari, Hon'ble Union Minister of Road Transport and Highways and Shri Devendra Fadnavis, Chief Minister of Maharashtra graced the inaugural function. The program witnessed huge gathering and enthusiasm among the farmers and youngsters.



Shri Nitin Gadkari Ji, Hon'ble Union Minister of Road Transport and Highways addressing the gathering during the Inaugural function of Agro-Vision 2016



ICAR-CIRCOT Stall at the Agro-Vision 2016 at Nagpur



1. CIRCOT Director Dr. P. G. Patil along with scientists Dr. Virendra Prasad, Smt. Sharmila Patil, Smt. Archana Mahapatra, Shri Manoj Kumar and technical officers Shri C. M. More, Dr. Nandita Ashtaputre, and Dr. C. D. Souza attended the International Conference on “Controlled Atmosphere and Fumigation (CAF)” held during 07-11 November 2016 at New Delhi.
2. Dr. Hamid Hasan, Officer In-charge, participated in “Workshop on “Sharing Learning Experience on Innovative Cotton Production Technology” on November 5, 2016 organized by ICAR-Agricultural Technology Application Research Institute, Ludhiana at Sirsa. On this occasion, an exhibition of commonly found contaminants at mill level was also displayed.
3. Dr. S.K. Shukla, Officer In-charge, GTC, Nagpur participated in one day workshop at Nagpur on “Development of Cotton hubs & Textile Park” in Vidarbha on November 14, 2016. The programme was organized by Textile Association of India (Vidarbha region). Dr. S.K. Shukla presented a paper on “Utilization of cotton by-products for value addition”.
4. Dr. V. Mageshwaran, Scientist, GTC, Nagpur participated in 5<sup>th</sup> International Conference on “Sustainable Utilization of Tropical Plant Biomass: Bio-products, Bio-catalysts and Bio-refinery (SutB4)” during November 17-18, 2016 organized by Tamil Nadu Agricultural University, Coimbatore. He presented a paper on “An ecofriendly enzymatic process for preparation of absorbent cotton from short staple cotton”.
5. Dr. V. Mageshwaran delivered a lecture on “Fermentation technology: A viable tool for value addition to lignocellulosic residues for energy and industrial applications” on November 25, 2016 for the participants of ICAR short course on “Ecofriendly renewable energy technologies for sustainable power generation and energy conservation” at PDKV, Akola.



ICAR-CIRCOT staff at the 10<sup>th</sup> CAF Conference at New Delhi during November 07-11, 2016

## MoU Signed

A MoU for novel product development based on blended fabrics was signed with an Incubatee of the ICAR-CIRCOT ABI Centre M/s Grey, Navi Mumbai on November 05, 2016.



MoU between ICAR-CIRCOT and M/s Grey, Navi Mumbai for novel product development based on blended fabrics

## Human Resource Development

One month orientation programme was organized at ICAR-CIRCOT during October 17 - November 16 for the three newly joined scientists- Smt. Sharmila Patil, Smt. Archana Mahapatra, and Shri Manoj Kumar.



## Sport

ICAR-CIRCOT Technical Officer Ms. Tereza D,Souza won "Super Veteran Woman - NAVY - Aircraft Carrier Run" Award at the WNC Indian Navy Half Marathon 2016 held on November 13, 2016.



ICAR-CIRCOT Technical Officer Ms. Tereza D,Souza receiving "Super Veteran Woman - NAVY - Aircraft Carrier Run" Award from Vice Admiral Girish Luthra, Flag Officer Commanding Western Naval Command

## Proposed activities for the year 2016-2017

Seminar/Conference/Industry Academia meet etc.

Name of the programme	Date
One day seminar on Textile finishing	December 17, 2016

## Upcoming Events

Calendar of training cum-skill development programmes for the year 2016-17

S.No.	Title of Training	Period	Fees (Rs) (excluding Service tax)
1	Characterization of Materials Using X-Ray Diffractometer (XRD)	Dec 19-21, 2016	30,000
2	Advances in Microscopy	Jan 16-18, 2017	15,000
3	Advances in Applications of Nanotechnology	Feb 6-10, 2017	25,000
4	Spectroscopic and Chromatographic Techniques for Material Characterization	Feb 21-24, 2017	15,000
5	Instrumental Evaluation of Clothing Comfort	Mar 6-10, 2017	50,000
6	Quality Evaluation of Cotton	Jan 9-13, 2017 Feb 20-24, 2017	10,000
7	Double Roller Ginning Technology & Basics of Cotton Grading, GTC, Nagpur	Dec 19-24, 2016 Jan 16-21, 2017 Feb 20-25, 2017	10,000



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