# Cotton Innovate

A Monthly Newsletter from ICAR-Central Institute for Cotton Research, Nagpur





Rosette flower formation by Pink bollworm (PBW)
Contributed by: Dr. Debashis Paul, Scientist (Seed Technology), ICAR-CICR, Regional Station, Sirsa







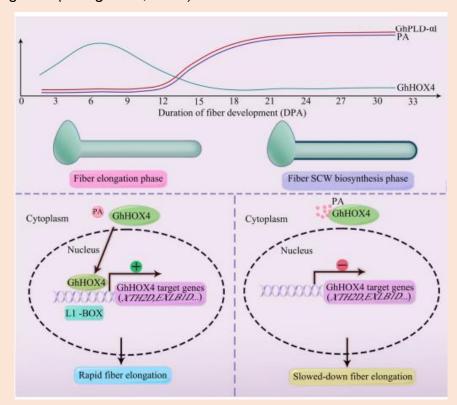
#### **Cotton News and Innovations – September 2023**

#### **Recent Research Advances in Cotton**

#### **Cotton Fibre Elongation is Mediated by GhHOX4**

Dr. J. Annie Sheeba, Sr. Scientist (Plant Physiology), ICAR-CICR, Regional Station, Coimbatore

GhHOX4, a homeodomain –leucine zipper (HD-ZIP) IV transcription factor plays a key role in fiber elongation in cotton. Over expressing *GhHOX4* in cotton resulted in longer fibers, while transgenic cotton with silenced *GhHOX4* produced shorter fibers when compared to wild type. *GhEXLB1D and GhXTH2D*, the two target genes are directly activated by GhHOX4 thus promoting fiber elongation whereas Phosphatidic acid (PA), interacts with GhHOX4 to hamper fiber elongation. PA functions in the transition phase from fibre elongation to secondary cell wall development (SCW) by negatively modulating GhHOX4 in cotton. RT-qPCR analysis revealed that *GhHOX4* expression is confined to elongating fibers. The expression of *GhHOX4* was detected in three Days Post Anthesis (DPA) ovules and fibers and then reached higher levels in 6–12 DPA fibers, peaked in 6 DPA fibers. The expression of *GhHOX4* sharply declined in 15 DPA fibers, suggesting the role of GhHOX4 in rapidly elongating fibers. When PA content declines in elongating fibers, the nuclear GhHOX4 transcription factor recognizes and binds to L1-box in the promoters of downstream target genes *GhXTH2D* and GhEXLB1D, activating their expressions to promote rapid fiber elongation (*Wang et al.*, 2024)



A proposed model showing PA-mediated GhHOX4 function in fiber elongation of cotton (Image Source: Wang et al., 2024)

#### Reference

Wang, N.-N., Ni, P., Wei, Y.-L., Hu, R., Li, Y., Li, X.-B. and Zheng, Y. (2024), Phosphatidic acid interacts with an HD-ZIP transcription factor GhHOX4 to influence its function in fiber elongation of cotton (Gossypium hirsutum). Plant J. https://doi.org/10.1111/tpj.16616

#### **CICR Happenings**

#### Workshop on HDPS Cotton cultivation at Virudhunagar District.

Pre-season consultation workshop on HDPS Cotton cultivation was conducted at Muthuramalingapuram Village, Thiruchuli block, Aruppukkottai, Virudhunagar district, Tamil Nadu on 5<sup>th</sup> September 2023 under CICR - CCI Pilot Project on "Awareness and Extension Services on Best Farm Practices for Cotton Farmers to Improve Quality, Yield and Sustainability".

Dr S. Usha Rani, Pl, CCI-CICR Pilot Project gave introductory remarks. Shri. Neeraj Kumar Bhatt, AGM, Kumaran, S CCI, Coimbatore, Shri. Asst. Director of Agriculture, Smt. Gayathri, Sr. Agrl. Officer (Soil Testing), Shri. R Vignesh, Agrl. Officer, Thiruchuli block delivered special address. Technical lectures on HDPS were delivered by Dr M. Sabesh, Dr K. Rameash and Dr A. Sampathkumar from ICAR-CICR RS CBE. Field demonstration was performed on HDPS sowing in farmer's field. Seeds were distributed with soil health card for selected 20 farmers. Approximately 90 farmers participated and got benefited.

Pre-season consultation workshop on HDPS Cotton cultivation was conducted at Muthuramalingapuram Village, Thiruchuli block, Aruppukkottai, Virudhunagar district, Tamil Nadu on 5<sup>th</sup> September 2023 under CICR - CCI Pilot Project on "Awareness and Extension Services on Best Farm Practices for Cotton Farmers to Improve Quality, Yield and Sustainability".



Dr S. Usha Rani, PI, CCI-CICR Pilot Project gave introductory remarks. Shri. Neeraj Kumar Bhatt, AGM, CCI, Coimbatore, Shri. S Kumaran, Asst. Director of Agriculture, Smt. Gayathri, Sr. Agrl. Officer (Soil Testing), Shri. R Vignesh, Agrl. Officer, Thiruchuli block delivered special address.





Technical lectures on HDPS were delivered by Dr M. Sabesh, Dr K. Rameash and Dr A. Sampathkumar from ICAR-CICR RS CBE. Field demonstration was performed on HDPS sowing in farmer's field. Seeds were distributed with soil health card for selected 20 farmers. Approximately 90 farmers participated and got benefited.

#### Farmers Field School on ELS cotton Cultivation at CICR Regional Station, Coimbatore

A Farmers Field School (FFS - Technical Session - I) on ELS cotton Cultivation was conducted at ICAR-CICR Regional Station, Coimbatore on 15<sup>th</sup> September, 2023 under CICR - CCI Pilot Project on "Awareness and Extension Services on Best Farm Practices for Cotton Farmers to Improve Quality, Yield and Sustainability".



Dr A H Prakash, Head, delivered the inaugural address. Dr K. Rathinavel, Principal Scientist and Shri Neeraj Kumar Bhatt, AGM, CCI, Coimbatore delivered Special address. Dr S. Usha Rani, PS and PI explained about the technologies in FFS demonstration field. Dr Manickam, PS (Plant Breeding), explained about the varieties and hybrids suitable for ELS cotton cultivation. Dr Nalayini, PS (Agronomy) spoke about agronomic practices for ELS cotton. Dr A. Sampathkumar, briefed about the management of cotton diseases. Twenty project farmers from Kinathukadavu area of Coimbatore district participated and benefited.





#### Third Project Implementation Committee meeting- CICR-CCI Pilot Project

ICAR-CICR and CCI pilot project on "Awareness and Extension Services on Best Farm Practices for Cotton Farmers to Improve Yield, Quality and Sustainability" being implemented in all the 11 cotton growing states of India. Third Project Implementation Committee meeting was held virtually under the chairmanship of Director, ICAR-CICR, and Nagpur on 12th September 2023.



Twenty Scientists from different coordinating centres comprising of North, Central and South Zones had presented their progress report through power point presentations. Shri. Vishal Kumar Sinha, General Manager (Sustainability) and Member Secretary, Project Implementation Committee (PIC) along with Shri. Sanjay Kumar Panigrahi, Chief General Manager (Marketing), CCI, Mumbai and Member, PIC welcomed the gatherings and provided introductory remarks. Dr YG Prasad, Director, ICAR-CICR and Chairman of Project Implementation Committee delivered special address and critically reviewed the presentations and suggested for further technical improvement and smooth implementation. Project partners from different SAU and ICAR institutes, officials from CCI were participated. Dr S. Usha Rani, PI of the project proposed vote of thanks





#### Monitoring of farmer's field under special Project on Cotton

Dr. K. Baghyalakshmi visited to KVK Garikapadu and Guntur KVK under the NFSM Project to monitor the farmers' field from 4th to 8th September 2023. Visits were made to Chandala, Badava, Rudravaram, Kottumangalapuram, Deeplanagar, Peddaaanda, Venkatatanda villages of the Krishna district. Around 81 farmers' fields belonging to 7 different villages were monitored. On 7th and 8th September 2023 from Guntur KVK, the team visited to the villages namely Lingapuram, Vitukuru, Grandhisiri, Pedapalem, Kornepadu, Prathpadu, Boyapelam along with the Head and Subject Matter Specialist belonging to Crop Production and Protection. Around 52 farmers' field were monitored.



#### Monitoring visit to Krishna and Guntur Districts of AP under NFSM project

Dr Sabesh visited Nagarkurnool district of Telangana during 19<sup>th</sup> to 21<sup>st</sup> September 2023 along with Dr T. Prabhakar Reddy, Head, KVK, Palem for monitoring of the HDPS trials being implemented in the district under Special Project on Cotton.



Dr. P. Valarmathi, Nodal officer (ICAR-KVK, Anantapur), CICR, Coimbatore, Dr. S.N. Malleshwari- Head (ICAR-KVK, Anantapur), Mr. Siva Kumar & Mr. Sai Kumar, YP's, KVK. Staffs of rasi seeds- Mr. Srinu Reddy & Mr. Venkateswara Reddy, Staff of Crystal crop hybrids: Mr. Sudharsan Reddy and Mr. Purushottama Reddy monitored thirty farmers' fields of Anantapur- Peddavaduguru and Gooty mandal on 26th and 27th September 2023. Villages covered during the field visit include Kandlaguduru, Kottalapalli, Veeranapalli, Avulampalli, Peddavaduguru, Lakshumpalli, Pogururu, Gajarampalli belonging to Peddavaduguru mandal. Under Gooty mandal, villages covered were Anigaridoodi and Pedoddi.



Monitoring and interaction with farmers of Peddavaduguru mandal of Anantapur district, Andhra Pradesh under NFSM special project on cotton

#### Students Visit ICAR-CICR, RS, Coimbatore

Sixty-two students from the Department of Biochemistry, Vivekananda Art and Science College for Women, Sankagiri, and Tamil Nadu visited CICR, Regional Station on 21st September, 2023 to learn about the technologies adopted in the cotton field and cotton biochemistry. Dr. J. Annie Sheeba, Senior Scientist (Plant Physiology) explained the research activities pertaining to the Crop Production Division of the station. The students got exposure to the physiology and biochemistry of cotton crop.



#### **Happenings of AICRP Centres**

#### Farmers training on Desi cotton seed production at CCS HAU, Hisar

**Hisar**: A comprehensive farmers' training program on *desi* cotton seed production was conducted on 13.09.2023 by the Cotton Section, CCS HAU, Hisar at SNIATTE, a training centre of the university. The objective was to equip farmers with the knowledge and skills required to produce *desi* cotton hybrid seeds. The hands-on training was led by Director of Research, Dr. J.R. Sharma. It empowered the farmers to become self-sufficient in hybrid seed production, thereby enhancing their income and reducing dependency on market.



#### Farmers training for technology dissemination at KVK, Mandkola

A farmers' training was organized on 16.09.2023 at KVK, Mandkola, with the primary goal of disseminating scientific information to remote KVKs within the state. During this training, farmers were instructed in the techniques of creating *desi* cotton hybrids through male sterility procedures. Additionally, farmers gained insights into recognizing nutrient deficiency symptoms, implementing improved agronomic practices, and managing insect pests effectively.



#### Scientists' Corner:

- Dr. Rishi Kumar, Head (i/c) & Principal Scientist (Entomology) attended Workshop on Cotton Technology organized by 'Shaktiman Company' on September 01, 2023 as Chief Guest and delivered lectures on 'General Cotton scenario' and 'IPM in cotton'. Around 500 farmers attended and got benefited from the programme
- Dr YG Prasad, Director, ICAR-CICR attended one day dialogue on "Identification and utilization of Novel genes of value and relevance for improvement of crop varieties suiting future challenges to Indian agriculture and as a speaker-Novel genes of value accessed from unrelated bisources and utilized for protection of crop plants against polyphagus insect pests with special reference to bollworm complex of cotton and fruit borer tolerance in solanaceae crops on 2 nd September, 2023 organized by IBT, PJTSAU, Hyderabad. Nominated scientists from CICR participated in the Dialogue.
- Dr YG Prasad, Director, ICAR-CICR monited HDPS demonstrations in farmers' field at Siddipet, Telangana along with Dr G. I. Ramakrushna, Senior Scientist and KVK Medak team under special project on cotton on 5 <sup>th</sup> September, 2023.
- Dr. Rishi Kumar, Head (i/c) & Principal Scientist (Entomology), Dr. Debashis Paul, Scientist (Seed Technology) and Dr. Subhash Chandra, Scientist (SS), Plant Breeding, ICAR-CICR, Regional Station, Sirsa in collaboration with State Dept. of Agriculture, Govt. of Haryana organized training programme on 'Hands on practices for hybrid seed production with special emphasis on *desi* cotton' on September 05, 2023 at research farm of ICAR-CICR, Regional Station, Sirsa. A total of 50 farmers participated in the training programme.



- Dr. Rishi Kumar, Head (i/c) & Principal Scientist (Entomology) attended workshop on 'Crop Residue Management & Krishi Yantra Sathi' mobile app on September 06, 2023 and delivered a lecture on Crop Residue Management in Cotton through virtual mode.
- Dr YG Prasad, Director, ICAR-CICR and Dr. MV Venugopalan, Principal Scientist (Agronomy) and i/c PME Cell participated and presented in the Maharashtra Cotton Conference 2023 organized by Maharashtra Cotton Broker's Association, Akola on 10 th September, 2023
- Dr. Rishi Kumar, Head (i/c) & Principal Scientist (Entomology) attended a field day as chief guest on "Awareness Regarding PBW in Cotton" nominated by Director ICAR-CICR, Nagpur at village Khabra Kalan, on September 11, 2023 organized by Rallis India Ltd. Around 250 farmers attended the programme.
- Dr YG Prasad, Director, ICAR-CICR, Nagpur and Dr Arjun Tayade, Head Division of Crop Production and CNO of the Special Project on Cotton conducted a One-day training program on cotton with High-Density Planting System (HDPS) technology at Dehspande Wada, Sonegaon Lodhi village, Nagpur on 12<sup>th</sup> September, 2023. A total of 65 farmers participated in this training program.
- Dr YG Prasad attended the meeting of the Organizing Committee of 81<sup>st</sup> plenary meeting of the ICAC under the Chairpersonship of Smt. RoopRashi, Textile Commissioner, Ministry of Textiles, Gol, held on 16 <sup>th</sup> September 2023.

- Dr YG Prasad Director, ICAR-CICR and Dr Ganesh Behere, Head Division of Crop Protection, ICAR-CICR participated in Crop Weather Watch Group Meeting on 18 <sup>th</sup> September 2023 organized by Crop Forecast Coordination Centre (CFCC), Krishi Bhawan, New Delhi.
- Dr K. Shankarganesh, Senior Scientist (Agrl. Entomology), ICAR-CICR, RS Coimbatore attended the "2<sup>nd</sup> International conference on Prospects and challenges of environment and biological sciences in food production system for livelihood security of farmers" (ICFPLS-2023) from 18<sup>th</sup> to 20<sup>th</sup> September, 2023 at ICAR-CIARI, Port Blair, Andaman & Nicobar Islands, India and made a presentation on "Cotton Stem Weevil- A persistent threat to cotton cultivation in southern districts of Tamil Nadu" in the third technical session and received the best oral presentation award.



- Dr YG Prasad, Director, ICAR-CICR chaired the Institute Bio safety Committee (IBSC) meeting held on 22 nd September 2023 along with all the Committee members of IBSC & amp; External members including Dr Ashish Das, DBT Nominee, ICAR-CCIR, Nagpur, Dr B D Deshmukh, MO, Datta Clinic Nagpur and Dr Amit Bafana, Outside Member, CSIR-NEERI, Nagpur participated through virtual mode.
- Dr. YG Prasad, Director, ICAR-CICR participated in the meeting to review the Special Project on Cotton of ICAR-CICR on 21 st September 2023 in Hybrid Mode under the Chairpersonship of Director (Crops), DAF&,W and MoA & FW, New Delhi.
- Dr YG Prasad, Director, ICAR-CICR Nagpur along with Honourable Joint Secretary (Fibre) Ministry of Agriculture, GoI monitored the demonstration plots of HDPS under a Special Project on Cotton in Yavatmal, Akola and Amravati Districts and Pilot Project of CCI in Nagpur District of Maharashtra on 23
   rd September, 2023.



- Dr YG Prasad, Director, ICAR-CICR, Nagpur organised an insightful workshop dedicated to high-density cotton planting and closer spacing techniques under Special Project on Cotton of ICAR- CICR, Nagpur on 25 <sup>th</sup> September 2023 in hybrid mode. The workshop attracted a diverse audience, including 100 cotton farmers from Nagpur district (Katol, Kalmeshwar, Umred, Hingna, Nagpur (Rural), Bhiwapur, Narkhed and Saoner Taluka) & CITI CDRA Staff, ATARI-Pune, Hyderabad and Bangalore, who participated virtually.
- Dr. Rishi Kumar, Head (i/c) & Principal Scientist (Entomology) and Dr. S. K. Sain, Principal Scientist (Plant pathology) undertook monitoring of AICRP *Bt* & non Bt trials, and experimental fields in North Zone at Bathinda, Faridkot, Abohar, Sriganganagar, Sirsa and Hisar during September 25-28, 2023.



- Dr YG Prasad, Director, ICAR-CICR Nagpur conducted the IRC Meeting regarding ICAR-CICR Project Based Budgeting (PBB) on 26 th September, 2023. All the scientists participated in the meeting.
- Dr YG Prasad, ICAR-CICR, Nagpur inaugurated the Season Long Training Programme (SLTP) on Cotton crop as a Special Guest on 27 th September 2023 at Civil Lines, Nagpur organised by RAMETI, Ministry of Agriculture and Farmers Welfare, Gol.
- Dr YG Prasad, Director ICAR-CICR participated in the inauguration of Shivar Ferry and Live Crop Demonstrations programme as a Guest of Honour on 29 th September 2023 at Dr PDKV, Akola, Maharashtra.
- Dr. S. K. Sain, Principal Scientist (Plant pathology) conducted a 'Training Programme on Best Farm Practices for Cotton Farmers to Improve Yield' under CCCI -CICR pilot project at Village Gudia Kheda on September 22, 2023 where a total of 75 farmers were trained.

#### **Publications**

- 1. Sain SK, Dewasi, S and Singh AP. 2023. Combined application of effective *Trichoderma*, *Pseudomonas* and Arbuscular Mycorrhiza spp. reduced soil-borne diseases and boosted growth in cotton. Egyptian Journal of Biological Pest Control. 33:94 (NAAS:8.06) https://doi.org/10.1186/s41938-023-00739-3.
- 2. S K Sain, Judith K Brown and Monga D (2023). Global statuses of cotton leaf curl disease An ongoing threat to cotton production. D Pathak, S. Singh, H Kumar, G Grover, N Kaur (Eds) Cotton: Some Insights. The Crop Improvement Society of India, Ludhiana, India. pp.92-134. ISBN 978-93-5891-141-1

#### Cotton Trade Scenario during the month of September '2023

#### Dr. Isabella Agarwal, Principal Scientist, Agricultural Economics, CICR, RS, Coimbatore

World cotton production is forecasted at 112.6 million bales in 2023-24, 3.2 percent below the previous year as the global yield is projected to decrease. This year's production decline is largely attributed to China, the United States, India, and Australia with offsets from Brazil and Pakistan. World cotton trade is projected to rise 17 percent in 2023-24, supporting the expected 4.4-percent increase in global cotton mill use to 115.8 million bales. Indian spot prices (Shankar-6 quality) decreased from 95 to 90 cents/lb. In domestic terms, values fell from 62,000 to 59,000 INR/candy.

Indian cotton arrivals during the months of October 2022 to September 2023 are estimated at 237.67 lakh bales of 170 kgs each (equivalent to 311.46 lakh running bales of 162 kgs each). Punjab had recorded arrival of 2.11 lakh pressed cotton bales during the season from Oct'2022 to Sep' 2023 year.

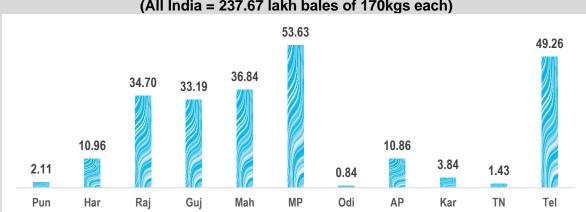


FIG I COTTON ARRIVALS FROM OCT '2022 TO SEP '2023 (lakh bales) (All India = 237.67 lakh bales of 170kgs each)

Highest arrival was from Madhya Pradesh (53.63 lakh bales) followed by Telangana (49.26 lakh bales), around 33 to 36 lakh bales from Rajasthan, Gujarat and Maharashtra, 11 lakh bales from Haryana and Andhra Pradesh as given in Fig I. Tamil Nadu had the least arrival to the tune of 1.43 lakh bales apart from Odisha (0.84 lakh bales).

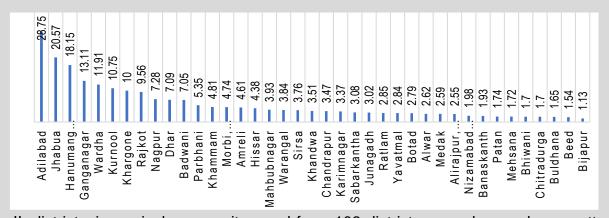


Fig II. District wise cotton arrivals during Oct' 2022 to Sep' 2023 (lakh bales of 170kgs each)

As per Fig II, district wise arrivals were witnessed from 106 districts spread over eleven cotton growing States of India during the marketing season Oct' 2022 to Sep' 2023. Adilabad recorded the highest arrivals (28.75 lakh bales) followed by Jhabua (20.57 lakh bales) and Hanumangarh (18.15 lakh bales) accounting for 30 per cent of total cotton arrivals. Another majority of 30 per cent of the arrivals were recorded from seven districts viz., Ganganagar, Wardha, Kurnool, Khargone, Rajkot, Nagpur and Dhar.

The minimum price during the season ranged from Rs. 5600 to Rs. 7700 per qtl and maximum price from Rs.7000 to Rs.8300 per qtl.

### Project to be launched for development of cotton markers'

A project for development of cotton markers in order to promote DNA testing of to promote DNA testing of cotton in the country will be initiated in collaboration with the Council of Scientific and Industrial Research-National Botanical Research Institute (CSIR-NBRI), said Union Minister for Textiles, Commerce and Industry and Consumer Affairs and Food and Public Distribution Piyush Goyal here on Thursday. Thursday.



Addressing the Textile Advisory Group on Cotton, he said the project aims to

develop genetic markers for precise discrimination of both, inter-and intraspecies cotton varieties, and to establish protocol for extraction of DNA from the different stages of cotton textiles i.e., short and long staple fibre, yarn, gray fabric, unbleached fabric, bleached fabric, printed fabric, finished dyed fabric, etc.

Progress assessed
According to an official
press release, the Minister
also assessed the progress
of the project on traceabil-

ity, certification and branding of Kasturi Cotton India.

The Cotton Textiles Export Promotion Council, which is the implementing partner for the project, has finalised the branding strategy for Kasturi Cotton and it will be launched internationally.

Operational area of 9,327 hectares has been covered under a special project to enhance cotton productivity. The Minister said the impact of the project should be studied so that it can be scaled up in next cotton season.

#### M Staff Reporter

ICAR-Central Institute for Cotton Research (CICR) held a training programme on Integrated Cotton Production Technology at Malegaon village of Saoner tehsil. The oneday programme aimed to provide farmers with guidance on scientifically managing their 50 to 60-day old cotton crop during the current season, considering the prevailing weather conditions.

Dr A Manikandan, Sr Scientist (Soil Science) highlighted the importance of balanced fertiliser application for a healthy crop and discussed hormone (Alpha Naphthyl Acetic Acid 4.5% SL of Na salt) spraying technique to prevent shedding of squares, flowers and small bolls. Dr Dipak Nagrale, Sr. Scientist (Plant Pathology) offered insights on managing emerging diseases through cultural practices and



The participants at CICR's training camp held at Malegaon village.

appropriate fungicides for boll rot management. Dr Rachna Pande, Sr. Scientist (Agricultural Entomology) explained effective pest management strategies such as using pheromone traps and yellow sticky traps with microbial volatiles for major pests like pink bollworms and sucking pests, along with suitable pesticide application.

Dr R Jaya Kumaravaradan, Scientist (Agricultural Economics) elaborated on the

economic benefits of the High-Density Planting System (HDPS) in cotton cultivation. Each participant received a bulletin titled 'Density Planting System in Cotton'. Practical demonstrations were assisted by Young Professionals Amol Bagadkar and Nagesh Navghare.

During the session, attendees had the opportunity to visit a nearby HDPS demonstration cotton field, where scientists demonstrated the

importance of soil type, spacing, Mepiquat Chloride to control excessive vegetative growth for doubling cotton production in rain fed areas. They also explained the advantages of legume inter cropping in HDPS for efficient land utilisation. The event saw a total of 80 participants, including 50 farmers and 30 students from Prakash High School, Malegaon. The initiative was supported by the Cotton Corporation of India, Akola.

#### The Hitvada, 2 September, 2023

### 'Make farmers aware about BIS, they will bring clean, contamination-free cotton'

Previously, the Cotton Corporation of India was buying cotton with moisture up to 12%, but after deduction of additional moisture, beyond 8%. So, if a farmer was getting ₹ 10,000 for one quintat, then ₹400 was deducted for 4% moisture. We don't know what policy CCI will follow this year

Times of India, 3 September, 2023



A group of students and farmers during one-day training session on integrated cotton production technology held at Malegaon.

## ICAR-CICR holds session on cotton production technology

ICAR-Central Institute for Cotton Research (CICR) organised a training programme on integrated cotton production technology at Malegaon village, Saoner taluka recently. The 1-day programme focused on providing farmers with guidance on scientifically managing their 50-60 day old cotton crop during the current season, considering the current weather conditions.

Senior scientist Dr A Manikandan elaborated on the importance of balanced fertiliser application for a healthy crop and discussed hormone spraying techniques to prevent shedding of flowers and small balls. Dr Dipak T Nagrale offered insights on managing emerging diseases through cultural practices and appropriate fungicides for boll rot management.

A total of 80 participants including 50 farmers and 30 students from Prakash High School, Malegaon, took part in the event. Cotton Corporation Of India, Akola supported the event.

# 'Integrated control of pink bollworm necessary to prevent financial loss'

## Workshop on cotton pest managemnt held

LOKMAT NEWS NETWORK

The quality and productivity of cotton deteriorates due to the attack of pink bollworm (Pectinophora gossypiela) and farmers have to bear heavy financial losses.

In order to avoid this loss, the farmers should take up management of pink bollworm at the right time, asserted entomologist of Panjabrao Deshmukh Krishi Vidyapeeth (PDKV) Pradeep Dawane.

He was speaking at 'Pink Bollworm Integrated Control and Cotton Productivity Enhancement' workshop organised at Sawargaon in Narkhed.

President of Satchidananda Sushikshit Berojgar



Sahkari Sanstha Tukaram Patil was the chief guest, circle agriculture officer Purushottam Hirudkar, Chaudhary, Ranjit Khalatkar, Amardeep Gajbhiye, Yogesh Madankar were present as special guests.

Dr Pradeep Dawane spoke on integrated pest management management of cotton and proper use of other agricultural inputs. Tukaram Badade Patil

shed light on the changes in the agriculture sector.

Chaudhary informed the

farmers about various agricultural schemes of the government while Dr Jambhale gave information about lumpy and other diseases in cattle as well as drug treatment and preventive measures.

Purushottam Hirudkar called for the use of modern technology in agriculture. Directed by Ritesh Hirudkar. On this occasion pheromone were distributed to the farmers.

The programme was attended by more than 500 farmers.

Lokmat Times, 4 September, 2023

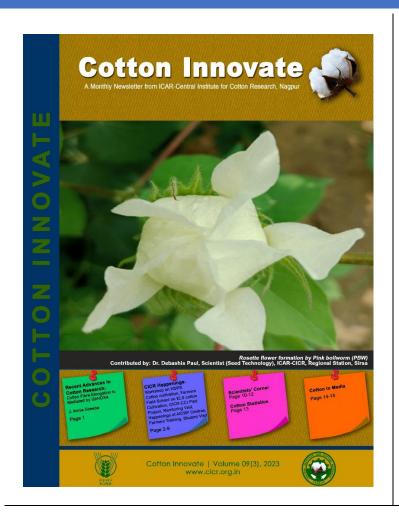
Lokmat Times, 4 September, 23

# कपास को बचाएं गुलाबी इल्ली से

■ नागपुर, व्यापार प्रतिनिधि. गुलाबी बोंड इल्ली पर नियंत्रण के लिए साउथ एशिया बॉयोटेक्नोलॉजी सेंटर एवं कॉन्फेडरेशन ऑफ इंडियन टेक्सटाइल इंडस्ट्री सिटी (सीडीआरए) ने मिलकर जिले के पारशिवनी तहसील के पालासावली गांव में पिबीनॉट बंधन प्रकल्प के तहत 65 एकड़ क्षेत्र में मुआयना किया. किसानों को पिबीनॉट बंधन के बारे में जानकारी भी दी. इसके बाद कार्यशाला में

गांव के सरपंच राजेंद्र ठाकुर, एसएबीसी के संचालक डॉ. भागीरथ चौधरी, सीआईसीआर के कृषिशास्त्रज्ञ शिवाजी ठूबे, सुभाष थेटे ने कपास का रोपण एवं गुलाबी इल्ली पर नियंत्रण पर मार्गदर्शन किया.

Navbharat, 4 September,



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