COTTON INNOVATE

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

Earwig (*Labiduria riparia*) (Male)

Labiduria riparia (Female)

Predator of lepitopteran eggs

Contributed by Dr. K. Shankarganesh, Senior Scientist, Agricultural Entomology, ICAR-CICR, RS, Coimbatore

Research Notes Clipping

Alarm phothosynthetic pathway in cotton

Pooja Verma 1, Ramakrushna GI2M.4, Amutha. M.5, Valarmathi, P6 and Wasnik SM7

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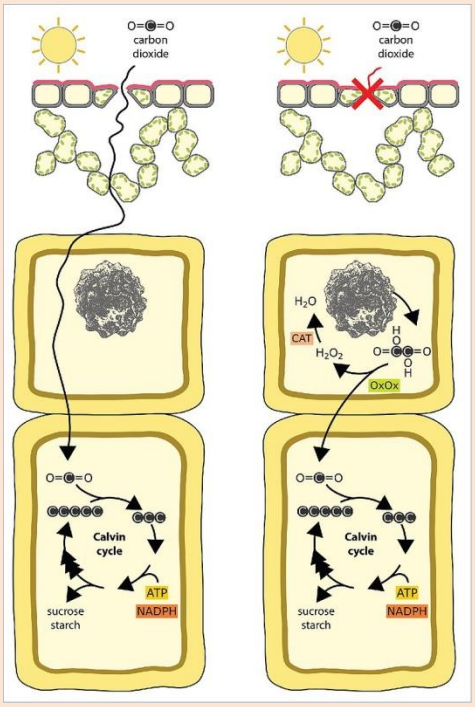
During Alarm Photosynthesis, stomatal closure under drought conditions or exogenous application of abscisic acid accompanies calcium oxalate crystal decomposition and increased activity of oxalate oxidase that converts oxalate into CO2. This was observed under drought stress conditions in Dianthus chinensis, Pelargonium peltatum, and Portulacaria afra. Also, calcium oxalate crystals in leaves acts as a biochemical reservoir that collects nonatmospheric carbon, mainly during the night. During the day, calcium oxalate crystals degrade leaving subsidiary carbon for photosynthesis, under drought conditions. This pathway helps plants to save water, limits carbon losses to the atmosphere, and reduces photoinhibition (Tooulakou et al., 2016 a). Hence the existence of such pathway was explored in cotton to identify plants/germplasm lines exhibiting drought tolerance.

Expression analysis (qRT-PCR) and In-gel activity of oxalate oxidase (GLP1) of all the four cultivated cotton spp. as well as in different tissues confirmed the presence of alarm photosynthetic pathway in cotton. Diurnal dynamics revealed significant day night variation in oxalate content and oxalate oxidase (OxO) activity in cotton leaves, validating this pathway in cotton. Functional role of oxalate crystals in cotton was proved and higher expression of OXO in leaves under drought validates that CaOx crystals can be metabolically and osmotically active. Among the species, arboreums had higher OxO expression and activity.



Alarm Photosynthetic Pathway: **Image Source** : *Tooulakou et al., 2016 b*

References

Tooulakou G, Giannopoulos A, Nikolopoulos D, Bresta P, Dotsika E, Orkoula MG, Kontoyannis CG, Fasseas C, Liakopoulos G, Klapa MI, Karabourniotis G. Alarm Photosynthesis: Calcium Oxalate Crystals as an Internal CO2 Source in Plants. Plant Physiol. 2016a Aug;171(4):2577-85. doi: 10.1104/pp.16.00111. Epub 2016 Jun 3. PMID: 27261065; PMCID: PMC4972262.

Tooulakou G, Giannopoulos A, Nikolopoulos D, Bresta P, Dotsika E, Orkoula MG, Kontoyannis CG, Fasseas C, Liakopoulos G, Klapa MI, Karabourniotis G. Reevaluation of the plant "gemstones": Calcium oxalate crystals sustain photosynthesis under drought conditions. Plant Signal Behav. 2016 Sep;11(9):e1215793. doi: 10.1080/15592324.2016.1215793.

CICR Happenings

Field Demonstration of Mechanical Cotton Picker at ICAR-CICR, RS, Coimbatore

Seed to seed mechanization in cotton cultivation is the need of the hour for achieving timely sowing, intercultural and plant protection operations and harvesting. This will also help in shifting cotton cultivation from a high labour-intensive one to a less intensive one and help cotton farmers to tide over the issues of non-availability of labour in time and increasing labour cost and in turn reduce the cost of cultivation. Through mechanization, sowing, spraying and intercultural operations are happening in the recent past. Harvesting of cotton using Mechanical Cotton Harvester was the missing link in complete mechanization. So far, cotton harvesting in our country is entirely dependent on manual picking and contributes towards major chunk of cost of production. In order to improve cotton productivity and complete mechanization of cotton cultivation practices, ICAR-Central Institute for Cotton Research has developed, standardised and demonstrated 'High Density Planting Systems' (HDPS) technology package amenable for machine picking.

For demonstrating the seed to seed mechanization in cotton cultivation during kharif 2022, ICAR-CICR, Regional Station, Coimbatore has raised cotton variety Suraksha under HDPS system (90 x 10 cm spacing) in one-hectare plot (100 m length x 100 m width) in which all the operations were carried out using machines viz., laser levelling, precision planting with pneumatic planter, drip irrigation, spraying with boom sprayer and drone sprayer for agrochemical application and tractor based intercultural operations. For machine harvesting, defoliants developed by ICAR-CICR were sprayed when the crop was 140 days old and desired level of boll opening and defoliation was achieved.

The 150 day old cotton crop was harvested on February 17, 2023 using Shaktiman Cotton Master 1437 Spindle type two row picker. Cotton harvesting using Shaktiman harvester was witnessed by Dr. V. Geethalakshmi, Hon'ble Vice-Chancellor, Tamil Nadu Agricultural University, Coimbatore, Dr. G. Hemaprabha, Director, ICAR- Sugarcane Breeding Institute, Dr. A.H. Prakash, Project Coordinator & Head, ICAR-CICR RS, Coimbatore, Dr. K. Rathinavel, ICAR-CICR RS, Coimbatore, Er. G. Majumdar, ICAR-CICR, Nagpur, Sh. Kishor Wagh & Team from Shaktiman and host of other dignitaries including Professors of TNAU, Scientists of ICAR-CICR and ICAR-CIAE RS, Coimbatore and stakeholders from Seed and Textile Industry. Dr. R. Raja, Principal Scientist as a Convener, coordinated the demonstration programme.

Farmers training and input distribution

One day “Farmers training cum Input Distribution” was organized under SSR activity of DST SERB CRG Project has been at Thozhampalayam village, MGMG karamadai block, Coimbatore district on February 21, 2023. Scientists from ICAR CICR, Regional Station Dr K. Rathinavel, Dr P.Nalayini, Dr K.Sankaranarayanan, Dr K.Shankarganesh and Dr A. Manivannan participated and delivered lectures on various aspects of improving ELS cotton production. Inputs for irrigated summer cotton for ELS varieties were distributed to the farmers.

Cotton Farmers Training

A training programme for forty cotton farmers from Vikravandi Block, Villupram distict under SSEPERS-ATMA scheme of Tamil Nadu was conducted during February 22-23, 2022. Dr. A.H. Prakash, PC and Head acted as the convener, and Dr. A. Manivannan, Senior Scientist (Genetics and Plant Breeding) and Dr. K. Baghyalakshmi, Scientist (Genetics and Plant Breeding) acted as co-conveners. The training programme was conducted at ICAR, CICR, Regional Station, Coimbatore, where all the scientists from various disciplines delivered lectures to the farmers. Field visits were also organized during the programme.

Students visit ICAR- CICR- RS, Coimbatore

Six students of final year B.sc (Agri) from PDM University, Haryana, undergoing RAWE programme in ICAR- KVK, Coimbatore, visited the Central Institute of Cotton Research, Coimbatore to learn the activities and research programs on February 7, 2023. The students had interaction with Dr K. Rameash, Principal Scientist (Entomology), Dr. R Raja Principal Scientist (Agronomy), Dr. N. Chandrashekar, Scientist (Biotechnology) and learned about important research activities carried out in the station.

Fifty five B.Sc. (Ag) students from BIHER - SOA, Tambaram, TamilNadu visited ICAR, CICR, Regional Station on February 7, 2023. The students interacted with Dr. A. Manivannan, Senior Scientist (Genetics and Plant Breeding), and got exposure to the cotton crop and research ongoing in the institute.

Scientists' Corner:

- Dr. SK. Sain, Principal Scientist (Plant pathology) participated in the IPS Platinum Jubilee Conference on Plant and Soil Health Management: Issues and Innovations held during February 2-4, 2023 at University of Mysore, Mysuru, Karnataka and presented the paper "Selection of potential entomo-pathogenic fungal strains to control Bemisia tabaci in upland cotton" also received IPS Fellow Award 2021 of Indian Phytopathology Society, New Delhi.
- Dr. Rishi Kumar, Principal Scientist (Entomology) attended a Stakeholders Consultative meeting with Association & Research institution related to cotton on Kharif Price policy for marketing season 2023-24 organized by Commission for Agriculture & Price (CACP) at New Delhi on February 07, 2023
- Dr YG Prasad, Director, ICAR-CICR delivered a lecture in the "Kisan Vartalap" - Improving yield and Creating Market Linkages - Integrating farmers into Modern Value Chain on 08 February, 2023 at Banyan Hall Chitnavis Center, Nagpur organized by Dy. General Manager, NABARD, Maharashtra Regional Office Pune.
- First quarterly meeting of the 'Official Language Implementation Committee' for the year - 2023 under the chairmanship of Dr. YG Prasad, Director, CICR, Nagpur at Central Institute for Cotton Research, Nagpur on February 09, 2023.
- Dr. Rishi Kumar, Principal Scientist (Entomology) and Dr. S. K. Sain, Principal Scientist (Plant pathology) attended a meeting organized by Indian Society for Cotton Improvement on February 09, 2023. The meeting was held to revive the Nagpur Chapter of Society.
- Dr YG Prasad, Director, ICAR-CICR, Nagpur attended and delivered a lecture on 'Rendezvous Transgenic Cotton in India' on 10.02.2023 in the training programme NAHEP-CAAST 'Genomics Assisted Insect Pest Management' scheduled from 7-17th February, 2023 at the Discovery Centre, ICAR-IARI, New Delhi.
- The Institute Technology Management Committee (ITMC) meeting was held in hybrid mode under the chairmanship of Director, ICAR-CICR, Nagpur on 15.02.2023. Dr AH Prakash, Dr Blaise Desouza, Dr VN Waghmare and Dr Nandini Gokte, Heads of regional Station/various divisions had attended the meeting.
- Dr K Baghyalakshmi, Scientist (Genetics and Plant Breeding) gave a lecture on "Bt Cotton varieties and Hybrids". In: Training Programme on "Integrated Crop management (ICM) in Cotton" during February 15-17, 2023 for the farmers of Perambalur and Sivagangai districts of Tamil Nadu under SSEPERS/ATMA scheme on February 15, 2023.
- Dr Rishi Kumar, Principal Scientist (Entomology) attended a meeting of Institute Technology Management Committee (ITMC) organized by ICAR-CICR, Nagpur on February 15, 2023 through virtual mode.
- Dr Amarpreet Singh, Scientist (ss), (Agronomy) and Dr. Debashis Paul, Scientist (Seed Technology) attended International Conference on Climate Resilient Agriculture for Food Security and Sustainability during 17-19, February, 2023 at CCS-HAU, Hisar. Dr. Debashis Paul presented a work on 'Prediction of Seed Cotton Yield of Cotton accessions (G. hirsutum) using Machine learning and Deep learning methods' and received Best Oral presentation award during the conference.
- Dr YG Prasad, Director, ICAR-CICR attended the 4th Monitoring Committee Meeting of Cotton Phase II Project, at ICAR-IIVR, Varanasi on 20th February, 2023 organized by Technology Management, Directorate Council of Scientific & Industrial Research, Ministry of Science & Technology, New Delhi.
- Dr Rishi Kumar, Principal Scientist (Entomology) attended a meeting with Dr. Y.G. Prasad Director, ICAR-CICR Nagpur and DR. V.N.Waghmare, Head, DCI, ICAR-CICR, Nagpur on "Next generation insect-pest resistant cotton" in mission mode meeting at ICAR-IIVR, Varanasi organized by CSIR-NBARI, Lucknow on February 20, 2023.
- Dr YG Prasad, Director, ICAR-CICR attended the interactive meeting with Textile Advisory Group under the chairmanship of Ho'nble Union Minister of Textiles, Government of India Shri Piyush Goyal on 21st February, 2023 at Vanijya Bhawan, New Delhi organized by Office of the Textile Commissioner, Mumbai.
- Dr YG Prasad, Director, ICAR-CICR attended the third meeting of Subgroup II on 22nd February 2023 in virtual mode to discuss the updates on the pilot project, development of the web portal, and market linkages for buyback of the cotton under the chairmanship of Shri T Rajkumar, Chairman-CITI & Chairman of Sub- Group.
- Dr K Baghyalakshmi, Scientist (Genetics and Plant Breeding) gave a lecture on "Bt varieties for cotton yield improvement in India" during the International conference on Innovative approaches in Cotton

Improvement for sustainable Agriculture conducted by JSA College of Agriculture and Technology, Cuddalore on February 23, 2023

- Dr Amarpreet Singh, Scientist (ss), (Agronomy) participated in the Meeting of DLEC in the office of Deputy Commissioner, Sirsa regarding the “Scheme for providing implements & machinery on subsidy to the group of SC category farmers” during the year 2022-23 on February 24, 2023.

- Dr YG Prasad, Director ICAR-CICR, attended National Workshop on 'Enabling Technological and Policy Interventions to Increase Cotton Productivity and Stimulate Industrial Growth' and delivered a lecture on 'Innovation Breeding Approaches for Cotton Genetic Improvement' in Session I: Advances in Cotton Breeding and Biotechnology on 25.02.2023 at NASC Complex, New Delhi organized by TAAS, ICAR and NAAS, New Delhi.

- Dr. M Saravanan, Senior Scientist, Plant Breeding and Genetics, participated in the National Conference on "Innovation in S & T for future Sustainability" on 25th February 2023 jointly organized by ICAR-CICR, Nagpur & Dr. Ambedkar College, Deekshaboomi, Nagpur, and awarded best oral presentation for the topic "Conservation of landraces, perennials and traditional varieties of desi cotton collected from different agro-ecological regions of India".

- Dr YG Prasad, Director, ICAR-CICR along with CAO, FAO and all section in charges participated in the meeting to review the procurement made through GeM and related matters on 28.02.2023 in virtual mode organized by DARE/ICAR.

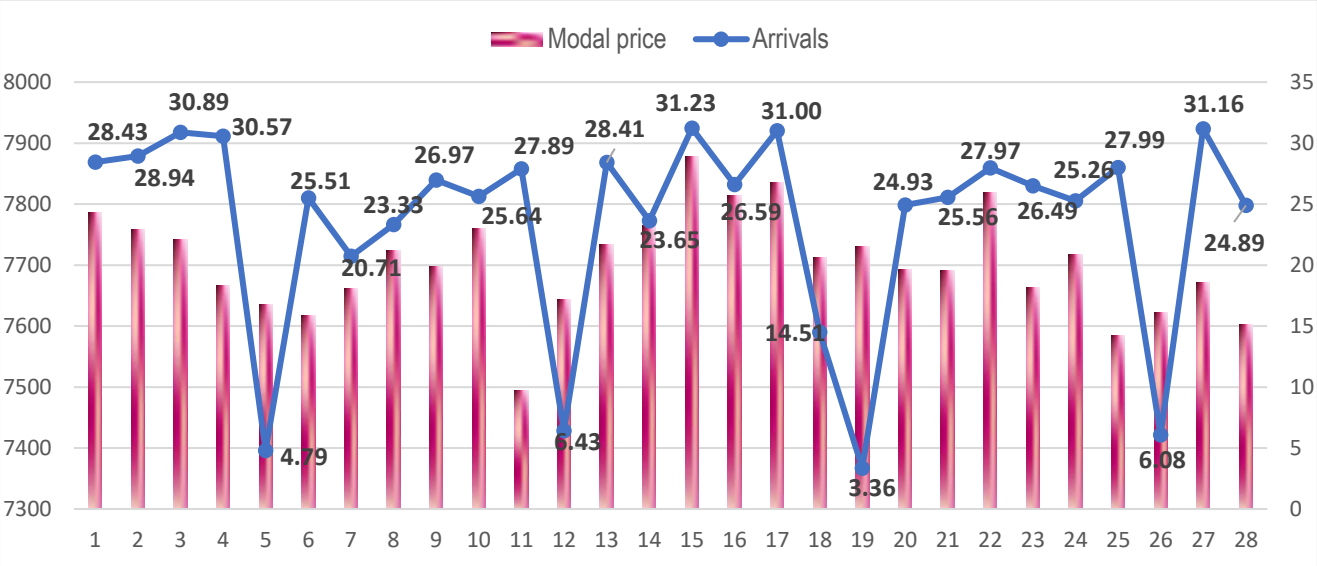
- Director ICAR-CICR, CAO, FAO and Sh. Sanjay Kushwaha, CTO participated in the virtual meeting regarding implementation of eHRMS Software under the Chairmanship of Addl. Secretary, DARE and Secretary, ICAR on 28.02.2023 in virtual mode.

Cotton market scenario during February 2023

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

The global 2022/23 cotton supply and demand forecasts this month include lower consumption and trade, and higher production and stocks. World cotton consumption in 2022/23 is 555,000 bales lower this month with reductions in Turkey, Pakistan, Indonesia, and Bangladesh. Projected imports are lower for each of these countries – and for China – while exports are lower for Brazil, India, and Argentina, with world trade totalling 785,000 bales lower. Production is more than 700,000 bales higher as larger expected crops in China, Australia, and Uzbekistan more than offset reduced prospects for India. At 91.1 million bales, 2022/23 world ending stocks are projected 2.1 million higher than a month earlier and 5.0 million higher than in 2021/22.

Daily cotton arrivals ('000 ton) and modal price (Rs./qtl) during Feb '2023



The daily cotton arrivals in a total of markets from 11 cotton producing States hovered around 20 to 30 '000 tonnes. During Sundays also the arivals around four to six thousand tonnes have been recorded in few markets. The modal price during the same period were around Rs. 7500 to Rs. 7800 per quintal.

Trading in the newly launched, more representative Cotton Futures Contract has commenced from 13th February '2023. This has begun with the collaborative approach of Government of India, MCX, trade and industry. Centre in its press note said that contract specification and quality standards have been modified and new cotton future contract has been launched at MCX on 31st January '2023 to make the futures prices more representative and not speculative. The government believes that this will help in real price discovery and also will provide a platform for the industry to hedge their risk from future adverse price volatility. Further, farmers would also be benefitted and will have reference price while taking a decision to sell their produce in the market.

கரூர்/பெரம்பலூர்/அரியலூர்

2 தினமணி திருச்சி ★

வெள்ளிக்கிழமை, 3 பிப்ரவரி 2023

பருத்தி விவசாயிகளுக்கு இடுபொருள்கள் விநியோகம்

பெரம்பலூர், பிப். 2: பெரம்பலூர் அருகேயுள்ள வேளாண் அறிவியல் மையத்தில் பருத்தி விவசாயிகளுக்கான தொழில்நுட்ப கருத்தரங்கு மற்றும் இடுபொருள்கள் வழங்கும் நிகழ்ச்சி வியாழக்கிழமை நடைபெற்றது.

இந்திய வேளாண் ஆராய்ச்சிக் கழகத்தின் கீழ் இயங்கும் மத்திய பருத்தி ஆராய்ச்சி நிறுவனத்தின் கோயம்புத்தூர் மண்டல நிலையம் சார்பில், பருத்தி சாகுபடி செய்யும் ஆதிதிராவிட விவசாயிகளின் வாழ்வாதாரத்தை மேம்படுத்த மத்திய அரசின் திட்டத்தின் கீழ் இந்நிகழ்ச்சி நடைபெற்றது.

மத்திய பருத்தி ஆராய்ச்சி நிலையத் தலைவரும், திட்ட ஒருங்கிணைப்பாளருமான பிரகாஷ் தலைமை வகித்தார். வேளாண் அறிவியல் மையத்தின் தலைவர் நேதாஜி வே.ஏ. மாரியப்பன் முன்னிலை வகித்தார்.

வேளாண் இணை இயக்குநர் கருணாநிதி, தமிழக அரசின் விவசாயிகளுக்கான வேறுபட்ட திட்டங்கள் குறித்தும், முதன்மை விஞ்ஞானி ச. மாணிக்கம், மிக நீண்ட இழை பருத்தி மகசூலை அதிகரிக்க பயிர் இனப்பெருக்கத்தின் தொழில் நுட்பங்கள் குறித்தும், பூச்சியியல் துறை முதன்மை விஞ்ஞானி கு. ரமேஷ், நீண்ட இழை பருத்தி சாகுபடியில் பூச்சி மேலாண்மை குறித்தும், மூத்த விஞ்ஞானி அ. சம்பத்குமார், நீண்ட இழை பருத்தியில் நோய் மேலாண்மை குறித்தும், மு. புனிதாவதி பருத்தியில் ஒருங்கிணைந்த ஊட்டச்சத்து மேலாண்மை குறித்தும், தொழில்நுட்ப வல்லுநர் தோமினிக் மனோஜ் பருத்தியில் பூச்சிக் கொல்லி தேர்வு மற்றும் பயன்படுத்தும் முறைகள் குறித்தும் விவசாயிகளுக்கு பயிற்சி அளித்தனர்.

வேளாண் அறிவியல் மையத்தில் வியாழக்கிழமை பயிற்சியில் பங்கேற்ற பெண் விவசாயிக்கு இடுபொருள்கள் அளித்த மத்திய பருத்தி ஆராய்ச்சி நிலையத் தலைவரும், திட்ட ஒருங்கிணைப்பாளருமான பிரகாஷ்.

தொடர்ந்து, பயிற்சியில் பங்கேற்ற 50-க்கும் மேற்பட்ட விவசாயிகளுக்கு பருத்தி சாகுபடி செய்வதற்கான இடுபொருள்கள் வழங்கப்பட்டன.

நிறைவாக, முதன்மை ஆராய்ச்சியாளரும், முதுநிலை விஞ்ஞானியுமான கு. சங்கர் கணேஷ் நன்றி கூறினார்.

Training programme on soil testing held

■ Staff Reporter

A TRAINING programme titled 'Need for soil testing and fertiliser management' was organised recently to create awareness among tribal farmers. Sixty tribal farmers participated in the training programme that was conducted at Krishi Vigyan Kendra (KVK), Central Institute for Cotton Research (ICAR), Nagpur.

Speaking at the occasion, Dr Blaise Desouza, Director, (ICAR) mentioned the training programme will help farmers manage their crop in the upcoming seasons. A session on the importance of millets was also held on the lines of 'International Year of Millets 2023', and millets food was distributed.

The three-day training programme discussed the importance of soil health, soil fertility, soil health card and demonstrated the method of soil collection for effective soil testing.

Also present during the three day programme were Dr S N Rokade, Dr Vinita Gotmare, Dr V Chinna Babu Naik, Dr Manikandan, Dr Deepak Nagrale, Dr S S Patil, Dr U V Galkate, Dr U N Nadankar, Sunita Chouhan, Dr Deepa Lal, Dr P B Deolkar, M R Meshram and KVK staff members.

Tribal farmers seen during the soil testing training programme organised at Krishi Vigyan Kendra.

The Hitavada, 8 February, 2023

Sakal AgroOne 20/2/23

रंगीत कापसाच्या दर्जेदार वाणासंबंधी होणार संशोधन

'सिरकॉट'सोबत 'वनामकृवि'चा सामंजस्य करार

अॅग्रोवन वृत्तसेवा

परभणी : भारतीय कृषी संशोधन परिषद (आयसीएआर) अंतर्गत मुंबई येथील केंद्रीय कापूस तंत्रज्ञान संशोधन संस्था (सेंट्रल इन्स्टिट्यूट फॉरे रिसर्च ऑन कॉटन टेक्नॉलॉजी : सिरकॉट) आणि वसंतराव नाईक मराठवाडा कृषी विद्यापीठ यांच्यात गुरुवारी (ता.१७) सामंजस्य करार करण्यात आला. या करारानुसार नैसर्गिक रंगीत कापसाचे दर्जेदार वाण विकसित करण्यासह कापसाच्या सरळ वाणात बीटी तंत्रज्ञानाचा अंतर्भाव, कापसातील यांत्रिकीकरण, मूल्यवर्धन यावर संशोधन केले जाईल.

कुलगुरू डॉ. इंद्र मणी, संशोधन संचालक डॉ. दत्तप्रसाद वासकर, केंद्रीय कापूस तंत्रज्ञान संशोधन संस्थेचे वरिष्ठ शास्त्रज्ञ डॉ. अशोककुमार भारीमल्ला, शास्त्रज्ञ डॉ. मनोजकुमार माहावार, शास्त्रज्ञ डॉ. ज्योती ढाकणे लाड, पैदासकार डॉ. खिजर बेग यांनी करारावर स्वाक्षरी केल्या. या वेळी कुलसचिव डॉ. धीरजकुमार कदम, विद्यापीठ नियंत्रक दीपाराणी देवतराज, प्राचार्य डॉ. उदय खोडके, डॉ. व्ही. एन. नारखेडे, डॉ. स्मिता सोळंकी, डॉ. विजयकुमार चिंचाणे, डॉ. प्रवीण कापसे आदी उपस्थिती होती.

डॉ. मणी म्हणाले, ''या करारामुळे दोन्ही संस्थेच्या कापूस पिकातील संशोधनास चालना मिळेल. कापसाच्या उत्पादन वाढीस मदत होईल.''डॉ. वासकर म्हणाले,''नैसर्गिक रंगीत कापूस वाण निर्मिती व कापसाच्या सरळ वाणात 'बीटी'चा अंतर्भाव यावर संशोधन करण्यात येईल.''

डॉ. बेग म्हणाले, ''कापड निर्मितीसाठी उच्च दर्जा आणि अधिक उत्पादन देणाऱ्या रंगीत कापसाचे वाण विकसित केले जातील. या करारामुळे दोन्ही संस्था एकवितरीत्या कापूस पिकांवर अत्याधुनिक संशोधन प्रकल्प राबविणार आहेत. त्यात कापूस पिकांतील यांत्रिकीकरण, मूल्यवर्धन, काढणीपश्चात प्रक्रिया, कृत्रिम बुद्धिमत्तेचा वापर, पीक उत्पादन आणि संरक्षण तंत्रज्ञान विकसित करणे, नॅनो तंत्रज्ञान, जैवतंत्रज्ञान आदी क्षेत्रात दीर्घकालीन संशोधनास चालना मिळेल. विद्यापीठातील शास्त्रज्ञ, पदव्युत्तर विद्यार्थी आणि शेतकरी यांच्या करिता प्रशिक्षण घेण्यात येईल. दोन्ही संस्थांच्या कापूस पिकांबाबतची माहिती, ज्ञान व कौशल्य यांची देवाणघेवाण करण्यास मदत होईल. कापूस तंत्रज्ञान संशोधन संस्थेतील अत्याधुनिक प्रयोगशाळांतील धागा चाचणी प्रयोगशाळेची विद्यापीठाच्या संशोधनास मदत होईल.

Dainik Bhaskar 20 /2/ 2023

कपास की पैदावार तबाह; जीन्स, डायपर और बैंडेज के मूल्य बढ़े

कारोबार

जलवायु परिवर्तन का कुछ चीजों पर व्यापक असर

कोरल डेवनपोर्ट

जलवायु परिवर्तन का असर कई क्षेत्रों में महसूस किया जा रहा है। कुछ फसलों की पैदावार कम होने से कई चीजों के मूल्य बढ़े हैं। अमेरिकी कृषि विभाग ने पिछले माह विश्लेषण किया तो नतीजे चौंकाने वाले थे। टेक्सास में अपलैंड कॉटन की फसल नष्ट हो गई है। कपास की यह किस्म दुनिया में 90 प्रतिशत लगाई जाती है। टैक्सास के कपास से बने सेनेटरी पैड (टैम्पोन्स), डायपर, गाज बैंडेज , डेनिम जीन्स सहित कई प्रोडक्ट दुनियाभर में निर्यात किए जाते हैं। टैक्सास के किसानों ने गर्मी और सूखी जमीन के कारण लगभग 60 लाख एकड़ में लगी अपनी 74% फसल छोड़ दी है।

कपास की फसल खराब होने से अमेरिका में सेनेटरी पैड के मूल्य 13 प्रतिशत बढ़े हैं। डायपरों की कीमत में 21 फीसदी इजाफा हुआ है। कॉटल बॉल्स 9 और गाज बैंडेज 8 प्रतिशत महंगी हुई हैं। मार्केट रिसर्च कंपनी नीलसन आईक्यू के अनुसार ये कीमतें देश की महंगाई दर 6.5 प्रतिशत से अधिक है। अमेरिका विश्व का तीसरा सबसे बड़ा और कपास फाइबर का सबसे बड़ा निर्यातक है। देश में सबसे अधिक कपास पश्चिम टेक्सास में होती है। अर्थशास्त्रियों का कहना है, टेक्सास में कपास की फसल कमजोर होने का प्रभाव विश्व में महसूस किया जाएगा। नीलसन आईक्यू के वाइस प्रेसीडेंट निकोल कॉर्बेट का कहना है, जलवायु परिवर्तन की वजह से महंगाई बढ़ रही है। विश्व के छठवें बड़े कपास उत्पादक पाकिस्तान में कपास की फसल बाढ़ से तबाह हो चुकी है। 2021 में अमेरिका ने चीन के प्रमुख कपास उत्पादक क्षेत्र सिनजियांग से कपास के आयात पर प्रतिबंध लगा रखा है।

स्वयंसेवी समूह फोरम फॉर फ्यूचर के मुताबिक 2040 तक दुनिया में कपास उत्पादक आधे इलाके सूखा, बाढ़ और जंगलों की आग जैसे खतरों से प्रभावित होंगे। वैज्ञानिकों का अनुमान है, जलवायु परिवर्तन के कारण गर्मी और सूखे से अमेरिका के दक्षिण पश्चिम में पैदावार कम होगी। कई जरूरी चीजों की कीमतें बढ़ेंगी। अपलैंड कॉटन का इस्तेमाल सस्ते कपड़ों और सफाई के प्रोडक्ट बनाने में होता है। टोयो कॉटन कंपनी के सैम क्ले कहते हैं, कपास से बने प्रोडक्ट महंगे हो गए हैं।

कपास से बने प्रोडक्ट महंगे हुए

रेंगलर और ली जीन्स की हर जोड़ी में 50 फीसदी डेनिम अमेरिका में पैदा हुए कपास का रहता है। दोनों ब्रांड की मालिक कंपनी कोंटूर ब्रांड्स के वाइस प्रेसीडेंट जेफ फ्राई बताते हैं, जीन्स में आधी लागत कपास की रहती है। डेनिम कारोबार से जुड़े फ्राई और अन्य लोगों का कहना है, शिनजियांग कपास के आयात पर पाबंदी, महंगा ईंधन, माल सप्लाई में मुश्किल जैसे अन्य कारण भी मूल्यवृद्धि के लिए जिम्मेदार हैं। सफाई से जुड़े कई प्रोडक्ट प्रभावित हुए हैं। अमेरिका में प्रॉक्टर एंड गैम्बल कंपनी के सेनेटरी पैड टेम्पैक्स के मूल्य पिछले साल बढ़ना शुरू हुए हैं। कंपनी हर साल विश्व में सेनेटरी पैड के चार अरब पचास करोड़ बॉक्स बेचती है।

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Cotton arrival declines by 55% this season

Cotton production has come down by 45%

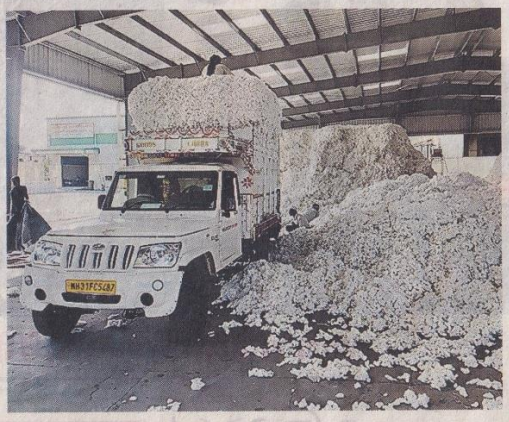
sLokmat News Network
NAGPUR

As compared to last year, the arrival of cotton in the market has decreased by 55 per cent this year while production of cotton has come down by 45 per cent.

Naturally, ginning operations in Nagpur district have come down.

In the meantime, farmers have stopped selling cotton in anticipation of better price for cotton. In Saoner tehsil there has been less arrival of cotton by 1,11,301 quintals of cotton in the market this year as compared to that in the last year.

From October 1, 2021 to February 9, 2022, near about 4, 37,643 37 quintals of cotton had entered the market. This year, according owners of ginning-pressing mills 3, 26, 000 342 quintals of cotton arrived in the market from October 1 2022 to February 9 2023. The decline was predicted earlier.



Less arrival of cotton at cotton and ginning factory in Saoner.

Number of public carriers comes down

Owners of ginning and pressing mills, last year cotton was brought the market in 41 to 125 public and private carriers while this year due to low arrival cotton is being brought into market on board 10 to 55 public and private careers.

Cost of production up

Although the area under cotton has increased in Saoner tehsil this year, cotton production has declined by at least 45 percent due to continuous heavy and very heavy rains and adverse weather conditions.

However, the cost of production has increased. Farmers awaiting hike in market prices are selling cotton as per requirement. Farmers fearing decline in cotton production had demanded import duty to cut imports.

Cotton prices under pressure

- Last year, average price of cotton was ₹ 11,000 per quintal.
- Cotton prices have come under pressure since the beginning of this season due to central government intervention.
- At present, cotton is fetching from ₹ 7,500 to ₹ 7,900 per quintal, and many cotton producers expressed hope that the price should be at least ₹10,000 per quintal. That is why farmers have stopped selling cotton, he said.

Lokmat times, 13 February, 2023

Sakal AgroOne 20/2/2023

तणनाशक सहनशील कापूस बीटी वाणांची तपासणी व्हावी

डॉ. व्यंकट मायंदे; 'वाणांची गुणवत्ता आणि कापूस उत्पादक शेतकऱ्यांचे हित महत्त्वाचे'

चंद्रकांत जाधव : ॲग्रोवन वृत्तसेवा

जळगाव : ''शासनाने जनुकिय सुधारित व तणनाशक सहनशील कापूस बीटी वाणांच्या प्रसाराबाबत घाईने निर्णय घेऊ नये. सर्व कसोट्यांवर तपासणी, संशोधन शासनाच्या प्रयोगशाळा, प्रक्षेत्रात व्हायला हवे. कुणी कंपनी सांगते यासाठी कापसातील नवे बियाणे आणणे योग्य नाही'', असे परखड मत पंजाबराव देशमुख कृषी विद्यापीठाचे माजी कुलगुरू डॉ. व्यंकट मायंदे यांनी 'ॲग्रोवन'शी बोलताना व्यक्त केले.

जळगाव शहरानजीक जैन हिल्स येथे आयोजित राष्ट्रीय कांदा व लसूण चर्चासत्र कार्यक्रमानिमित्त डॉ. मायंदे आले होते. या वेळी त्यांनी 'ॲग्रोवन'शी संवाद साधला.

डॉ. मायंदे म्हणाले, '' कापसासंबंधी उत्पादकतेत घसरण व इतर समस्या आल्या आहेत. नैसर्गिक समस्यांसह गुलाबी बोंड अळीचा प्रकोप यामुळे उत्पादकता घटत आहे. परंतु कापसाच्या बोलगार्ड (बीटी) आवृत्तीमधील विकास, जनुकिय सुधारित वाणांसह तणनाशक सहनशील वाणांची मागणीही पुढे येत आहे. या संशोधनामुळे पुढेही गुलाबी बोंड अळी येणार नाही, याची खात्री देता येणार नाही. तणांची समस्या आहे, यासाठी तणनाशक सहनशील कापसाचा बीटी वाण आणावा, हा उपाय नाही. कापूस उत्पादक शेतकऱ्यांचे हित हा मुद्दा महत्त्वाचा आहे.

कापूस बियाण्यातील जनुकिय सुधारित वाण, बोलगार्डमधील तिसरी किंवा इतर नवी आवृत्ती आणण्यासंबंधी शासनाने आपल्या प्रयोगशाळा, तंत्रज्ञ, शास्त्रज्ञ यांची मदत घेऊन त्याबाबत संशोधन करावे. ते किती उपयोगाचे आहे, हे लक्षात घ्यावे.''

''सध्या जे बोलगार्ड तंत्रज्ञान कापूस पिकाच्या वाणांबाबत बाजारात आहे. त्याची कार्यक्षमता कमी झाली आहे, हे निश्चित. कापूस बियाण्याच्या वाणांची गुणवत्ता महत्त्वाची आहे. कुणी कंपनी सांगते म्हणून आपल्या शेतकऱ्यांसाठी कुठलेही वाण आणणे गैर आहे,'' असेही मायंदे म्हणाले.

'कापूस वेचणी यंत्रणेसाठी गुंतवणूक हवी'

''कापूस वेचणीसाठी यंत्र, यंत्रणेची मागणी आहे. कारण आपला उत्पादन खर्च कापूस वेचणी व इतर बाबींमध्ये वाढला आहे. ही यंत्रणा विकसित करण्यासंबंधी पंजाबराव देशमुख कृषी विद्यापीठाने सातत्याने काम केले. त्यासंबंधी आम्ही काही बड्या उद्योगातील मंडळींची भेट घेतली. सुरवातीलाच त्यात एक कोटी रुपयांपेक्षा अधिक गुंतवणूक हवी आहे. यासंबंधी धोरणात्मक कार्यक्रम हवा आहे. ही गुंतवणूक थेट विद्यापीठ करू शकत नाही. त्यासाठी उद्योगांनी पुढे यावे. शासन, उद्योजक, तंत्रज्ञ यांच्यात समन्वय असायला हवा. त्यासाठी सर्वस्तरातून प्रयत्न होणे आवश्यक आहे. कापसासह कांदा पिकातही यंत्रणा आवश्यक आहे,'' असेही डॉ. मायंदे म्हणाले.

'कांद्यात देश पुढे, पण उत्पादकतेचा प्रश्न'

डॉ. मायंदे म्हणाले, ''कांदा पिकात देश पुढे आहे. उत्पादनात चीनच्या बरोबरीने किंवा इतर देशांपेक्षा पुढे आपला देश आहे. परंतु उत्पादकता कमी आहे. ही उत्पादकता आपल्याकडे प्रतिहेक्टर १४, १६ ते १७ टन अशी आहे. त्यात वाढ होण्यासाठी नवे तंत्रज्ञान, लागवडीसंबंधीची तंत्रशुद्ध कार्यवाही आवश्यक आहे. देशात कांद्याची उत्पादकता खरिपातील अतिपाऊस व प्रतिकूल वातावरण यामुळेदेखील कमी झाली आहे.''

'We take help of local bhajan groups for Krishi Kirtan'

▶ Continued from P 1

Babasaheb B Fand and Shailesh P Gawande have held five programmes of Krishi Kirtan at Mozari in Amravati district, Girad in Wardha district, CICR campus off Wardha Road at Nagpur, Agrovision exhibition at Reshimbagh, and at the Krishi Vigyan Kendra in Aurangabad.

"Kirtan is being widely used since historical times for narrating, reciting, telling an idea or story. Kirtan has the ability to quieten the minds of listeners, if heard with seriousness. Maharashtra has a great tradition of kirtan. Saints and social reformers like Saint Dnyaneshwar, Eknath, Tukaram, Gadge Baba, Tukadoji Maharaj extensively used kirtan as an effective means of spreading the message of humanity and equality, creating awareness among people and ridding them of social evils, superstitions, dowry etc," said Fand.

EASY TO LEARN

Gawande said the scientific information on integrated pest management (IPM) strategies for pink bollworm, other insect pests, and diseases of cotton crop were formulated in the form of songs, poems, bharuda and abhanga. These are to be performed in the farmers' awareness programmes in villages. "With the help of local bhajan groups, we performed Krishi Kirtan in a musical concert of harmonium, tabla and khanjiri, along with a visual presentation of scientific information on IPM and IDM through power point presentations," he said.

Fand said farmers and other stakeholders who attended their kirtan found it simple yet powerful way to educate farmers about pest and disease management in their crops.

"We were able to pass on the message of IPM to farmers in an easily understandable language through poems and songs along with chanting of the name of God. The idea we put forth has worked well in attracting and retaining audience of the event," Fand said.

Times of India, 13 February, 2023

CICR scientists use kirtan, bhajans to educate farmers on crop protection

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Nagpur: Pink bollworm, pheromone traps or economic threshold, and the names of deities, saints and their teachings belong to two completely diverse fields of study – science and spirituality. However, in the agrarian world, these terms have been seamlessly entwined by two scientists of Nagpur headquartered Central Institute of Cotton Research (CICR). They are educating farmers about integrated pest and disease management (IPM/IDM) and crop protection through kirtans and bhajans in villages and various forums.

Babasaheb Fand and Shailesh Gawande convey information to the farmers in the form of songs, poems, bharuda and abhanga

Developed and implemented by Babasaheb B Fand, senior scientist (agricultural entomology), and Shailesh P Gawande, senior scientist (plant pathology), the novel concept of agro-technology transfer to farmers called 'Krishi Kirtan' is a big draw.

YG Prasad, director, CICR, said farmers are enjoying the concept while different departments, NGOs, private extensions, cotton foundations etc are inviting the CICR scientists to perform. "We have to reach out to farmers by speaking in their own language and methods. Science communication is all about the end user being able to understand it. Along with kisan melas and farmers' workshops, scientists are engaging farmers to push the science in best practices," he said.

▶ Local bhajan groups, P 4

'Nursery technique better for tur, cotton cultivation'

ICAR-CICR has developed new method for farmers

LOKMAT NEWS NETWORK
NAGPUR

Sanjay Sinha, Kiran Gokhale, Kapil Sahoo, Chandan Mutha, Om Jajodia, Ravindra Manohare, Prakash Chand Mutha, Chandrakant Thakre, Dr Raghav Paralkar, Dr Sunil Mahajan, Gajanan Bhoyar and Pramod Meshram during a workshop on cultivation technique of tur and cotton in nursery organised by VIA-Agro Rural Development Forum.

Vidarbha in general and Chandrapur belt in particular had been popular for cash crops like tur (pigeon pea) and cotton, however the changing climatic conditions and late arrival of monsoon had been a huge concern to cotton growers in this area.

In this connection, the new technique developed by ICAR-CICR Nagpur will immensely help the farming community, said deputy director of Agriculture, Chandrapur, Ravindra Manohare while delivering a key note address of the workshop 'Cultivation of Tur and Cotton by Nursery Techniques' The workshop was organised by VIA Agro and Rural Development Forum at Chandrapur.

The seedlings are allowed to grow in the nursery until they are ready to be transplanted. The seedlings are transplanted in the main field using a regular farm crowbar, he informed. Chairman VIA Agro Forum Om Jajodia while demonstrating the technique said based on actual data available from farmers, there is a savings potential to the tune of ₹ 2000 acre during sowing and enhanced yield of around 40 per cent through this new technology.

The new technique has advantage of higher bolls per square area and early blooming, he opined.

Agricultural expert, Dr Raghav Paralkar demonstrated the technique for tur using media mixture (Soil, sand, vermicompost, in 1:1:1 ratio) and added that the seedlings can be raised in any plastic tub, in trays or regular paper cups of required size. Those who were present at the workshop included Prakash Chand Mutha, Chandan Mutha, NGOs like Better Cotton and Yuva Pariwartan. The programme was conducted by Kiran Gokhale and Kapil Charan Sahoo, while Sanjay Sinha proposed a vote of thanks.

Advantages of nursery method

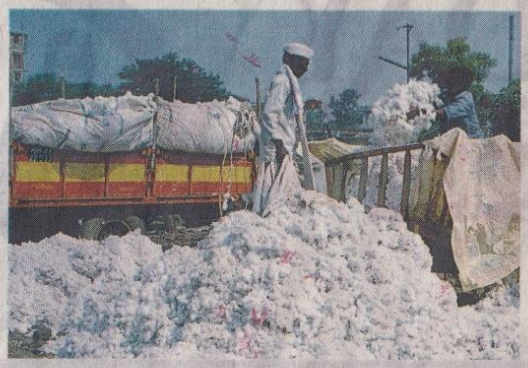
- The new technique has advantage of higher bolls per square area and early blooming,
- Transplantation has several advantages over direct seeding as sowing can be done at the precise time in the nursery by adjusting soil temperature and humidity; saplings can be used for gap filling of same age seedling as direct sown plant, said principal scientist CICR Dr Sunil Mahajan.
- Cost of cultivation is reduced to ₹ 2000 per acre

Lokmat times, 20 February, 2023

Ryots predict 35-40% decline in yield of cotton

Production will be in range of 290 lakh bales instead of 375 lakh bales

SUNIL CHARPE



Nagpur: Although the area under cotton cultivation in the country has increased, the production has decreased by at least 35 to 40 percent due to adverse weather conditions. CAI has also claimed that the cotton production this year would be around 375 lakh bales, but market sources have said cotton yield would be restricted to 290 to 300 lakh bales.

Since speculation is rife that the cotton yield would be much less this year as compared to that in the last year and prices are also hovering around ₹8,000 per quintal, the farmers are stocking the cotton in anticipation of price hike.

As compared to the previous year, the cotton sowing area has increased by 10 lakh hectares in the country in 2022-23, hence textile lobby is creating the impression that cotton production too would rise.

However, in the major cotton producing states of Maharashtra, Madhya Pradesh, Andhra Pradesh and Karnataka, cotton yield has declined due to heavy rains and adverse weather conditions. Similarly, in the small cotton producing states of Punjab, Haryana, Rajasthan, the loss is to the extent of 35 per cent due to pink bollworm.

Farmers and market experts said that the cotton production in Gujarat, Tamil Nadu and Odisha is satisfactory and the productivity has increased.

CAI revises estimate

Cotton Association of India (CAI) has predicted that 375 lakh bales of cotton will be produced in the country in 2022-23. Keeping in mind the declining arrival of cotton in the market, CAI has revised its cotton production estimate from 375 to 365 lakh bales from 365 to 344 lakh bales and from 344 to 339 lakh bales. On February 13, it revised its estimate to 321.50 lakh bales.

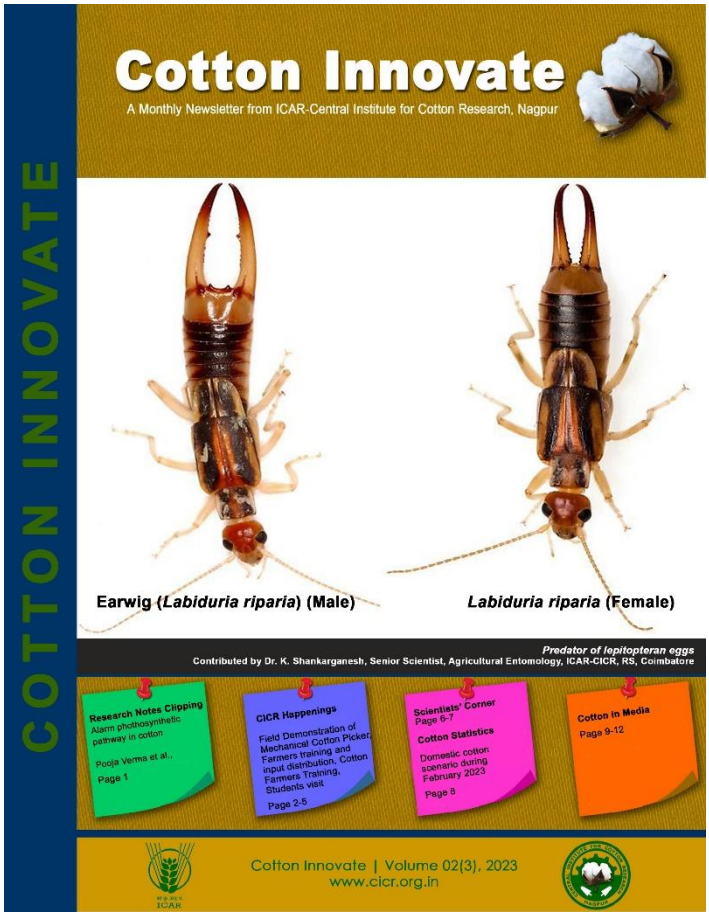
Revenue decreased by 25 per cent

- In the first four months of 2022-23, arrival of cotton in the market decreased by 25 percent. Similarly, from October 1 to November 22 this year, cotton production decreased by 10 to 15 per cent as compared to the corresponding period last year.
- During 2022, cotton imports had decreased by 10.15 percent. Till Jan 2, 2023, the decline was 19.58 per cent, till Feb 3, the decrease was 24.90 per cent again till February 15, it declined by 25.65 percent.

24.30 lakh bales of cotton imported

- In 2021-22, cotton production was 307.60 lakh bales and consumption was 318 lakh bales.
- During this period, 43 lakh bales of cotton was exported and 14 lakh bales of cotton was imported. Demand and consumption of cotton will be at least 300 lakh bales. From October 2022 to January 2023, 30 lakh bales of cotton were exported and 12 lakh bales of cotton were imported, CAI informed.
- Actually from October 2021 to September 2022 24.30 lakh bales of cotton and additionally large quantity of yarn were imported, so cotton prices are under constant pressure.

Lokmat times, 20 February, 2023



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