

COTTON Innovate



Weekly Newsletter from Central Institute for Cotton Research, Nagpur

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Issue : 5, Volume :10, October 27 to November 2, 2013

Research Round-Up

Effective seed treatments in cotton

Dr. K. Rathinavel, Principal Scientist (Seed Technology), CICR,RS,Coimbatore



In the light of vulnerable biotic and abiotic stress occurring during cotton sowing, pre sowing seed treatments to mitigate them have gained importance in the modern method of cultivation. Seed treatment is the oldest practice in management of planting seed quality. The planting seeds of cotton are replaced every season and it is maximum of 100% in case of hybrids and 36% in conventional varieties. The high level of seed replacement rate in cotton encourages seed industry for undertaking uniform treatments to seeds before it is being sent to market. Singulation of fuzzy cotton seeds with cow dung, Delinting for removal of seed borne pathogens were the earliest seed treatments. Seed treatments can be broadly classified as physical, biological or chemical. Regardless of type, successful seed treatment practices must satisfy the following biological requirements as consistently effective; safe to operators during handling and planting, compatible with other materials used on seeds and should not produce harmful residues on plant or soil. Keeping this in mind, investigations at CICR, Regional station, Coimbatore revealed that seed hydropriming with CaCl_2 @ 2%, GA_3 @100 ppm KNO_3 @ 0.5%, Succinic acid @0.2%, KCl @ 1.0%, Ascorbic acid @ 300 mg/lit, Salicylic acid @ 300 mg/lit for six hours proved efficacious in enhancing the planting quality and seedling vigour. Priming with plant leaf extracts such as *Prosopis* @1%, *Neem* @ 1%, *Glyricidia* @ 1%, *Vitex* @ 0.5% were found effective. Among chemicals dry dressing of Thiram @ 2g/kg and Bavistin @ 2g/kg was effective. Seed coating using water soluble polymer with biocontrol agents such as *Trichoderma* @10g/kg, *Azospirillum* @50g/kg *Rhizobium* @ 50g/kg, *Pseudomonas* @ 15g/kg, *Phosphobacterium* @100g/kg were effective in seed quality enhancement.

Training Programme on “Applied Cotton Biotechnology” at CICR, Nagpur

A two month (Oct. 21 to 21st Dec, 2013) Technical Assistance Programme (TAP) on cotton for six African Countries - Benin, Burkina Faso, Chad, Malawi, Nigeria, and Uganda is being conducted at Central Institute for Cotton Research (CICR), Nagpur. The training programme was inaugurated on 30th Oct, 2013 by Dr. C. D. Mayee, Former Chairman, ASRB, Govt. of India in the presence of Dr. R.G. Dani, Vice Chancellor, Dr. PDKV, and Akola. Dr. Sandhya Kranthi, Head, Crop Protection Division, CICR welcomed the delegates. Dr. K. R. Kranthi, Director, CICR in his introductory remarks informed that the training has been planned in such a way to infuse basic and applied knowledge on cotton biotechnology keeping in view of the needs of the African countries. Dr. Blaise, Head, Crop Production and Nodal Officer, TAP on cotton gave an overview of the TAP Fellowship on Cotton Biotechnology and informed that this is the third training programme in the series under TAP for Africa conducted by CICR. Dr. Sandhya Kranthi, Head, Crop Protection Division conducted the inaugural programme while Dr. Suman Bala. Singh, Head, Crop Improvement Division proposed the vote of thanks. Dr. S. B. Nandeshwar, Dr. G. Balasubramani, Dr. J. Amudha, and Dr. K. P. Raghavendra are coordinating the training.



30/10/2013 12:19

CICR Scientists visited field trials in Yeotmal

A team of five CICR scientists consists of Dr. A. R. Raju, Principal Scientist, Agronomy, Dr. Vishlesh Nagrare, Sr. Scientist, and Ag. Entomology, Dr. J.H. Meshram, Scientist, Plant Physiology, Dr. V. Chinna Babu Naik, Scientist, Ag. Entomology and Dr. J. Annie Sheeba, Scientist, Plant Physiology visited the cotton field trials on built in refuge, roundup ready simulation and application of growth regulators conducted by Monsanto at farmers' fields in Yeotmal district on 29th October, 2013. Seven members from Mahyco-Monsanto also accompanied the CICR team.



CICR Scientists train farmers in Wardha

Dr. A. R. Raju, Principal Scientist, Agronomy, Dr. Vinita Gotmare, Principal Scientist, Genetics and Plant Breeding, Dr. Vishlesh Nagrare Sr. Scientist, Ag. Entomology and Dr. V. Chinna Babu Naik, Scientist, Ag. Entomology participated in farmers' training program on group farming organized by State agriculture department on 30th October 2013 at Talegaon, Taluka- Ashti, Dist- Wardha. A farmers' training was organized under Vidarbha development program 2012-13 with focus on HDPS implemented in Wardha District. The CICR scientists interacted with the farmers and answered their queries on cotton production and protection aspects. About 175 farmers participated in the training program.



Dr VS Nagrare answering queries of farmers



Farmers gathering



Mr Barhate SDAO expressing progress of HDPS



Display of 4 varieties under HDPS

Joint Director Agriculture (Cotton), Haryana visited the High Density Planting System, CICR, RS, Sirsa.

The Joint Director of Agriculture (Cotton), Govt. of Haryana, Dr. R. C. Poonia visited the High density Planting System Demonstration laid out at CICR, RS, Sirsa experimental area on October 31, 2013. The demonstration on *G. hirsutum* culture F-2383 was sown on 5th May, 2013 with a planting geometry of 67.5 x 10 cm. He was also apprised of the HDPS demonstrations on *G. arboreum* cultures CSA -310 and CSA-614. Dr. Poonia appreciated the demonstrations and also cautioned about the apprehensions of bollworm attack in future in case of large scale adoption and the need for proper monitoring and management mechanisms to rebuild the trust of farmers regarding cultivation of non-Bt cotton varieties.



Monitoring of AICCIP trials

Dr. S. Manickam, Principal Scientist
(Plant Breeding)

Monitoring of AICCIP trials and ICAR Bt trials were undertaken in the States of Gujarat, Madhya Pradesh and Banswara region in Rajasthan State under the chairmanship of Dr. S. Manickam Principal Investigator – AICCIP (Breeding) along with Dr. K. Sankaranarayanan (Member - Agronomy) and Dr. K. B. Pawar (Member - Pathology). The monitoring was done during October 25-30, 2013 in the above Centres. On 25-10-2013, the AICCIP trials were monitored at Regional Cotton Research Station, Navsari Agricultural University, Bharuch. On 26-10-2013, the AICCIP and ICAR Bt trials were monitored at Main Cotton Research Station, Navsari Agricultural University, Surat. On 27-10-2013, the AICCIP trials were monitored at Cotton Research Station, Junagadh Agricultural University, Junagadh. On 29-10-2013, the AICCIP trials were monitored at Agricultural Research Station, Borwat Farm, Banswara. The demonstration plots of HDPS under IRM project in the state of Rajasthan were also visited. The crops were in boll formation stage and a good boll load of 8-15 bolls were noticed in the closely planted Suraj variety. The farmers expressed satisfaction over the trials. On 30-10-2013, the AICCIP trials and ICAR Bt trials were monitored at Agricultural Research Station, Khandwa. The monitoring team will submit the report to Project coordinator.



Superannuation: Shri C. Sundarajan, (T5 - Technical Officer) has retired from service on superannuation on 31st October, 2013 after put in 32 years of ICAR service. He joined his service on 01-06-1981 as driver at office of the Zonal Coordinator LLP, National Dairy Research Institute, Bangalore and he joined CICR (RS), Coimbatore on 21-06-1985.

Vigilance week was celebrated from 28-10-2013 to 4-11-2013. The Project Coordinator & Head, CICR (RS), Coimbatore administered the pledge to all the scientists, technical, Administrative, TSL and SRF and PA's of the centre on 28th October 2013 to commemorate the vigilance week.

Farewell Meeting

CICR Staff Welfare Club bid farewell to Shri D. J. Mathe on Oct. 31, 2013.



CICR in Press

CICR organises 2- month training programme

LOKMAT NEWS NETWORK
NAGPUR, NOV. 1

A two month training programme on 'Applied Cotton Biotechnology' under technical assistance programme (TAP) on cotton for six African countries-Benin, Burkina Faso, Chad, Malawi, Nigeria and Uganda was inaugurated at Central Institute for Cotton Research (CICR) recently.

The chief guest for the occasion former chairman of ASRB government of India Dr CD Mayee in his inaugural address trusted that participant would gain expertise in cotton biotechnology from the lectures, practical, discussions and deliberation held during the programme. He encouraged the delegates to visit cotton farms and seed production units in Maharashtra to gain firsthand experience of cotton seed production and processing in the country. He stressed the importance of connecting the expertise gained in India into research or products of use to the farmers back in Africa. The guest of honour vice chancellor Dr RG Dani, Dr PDKV, Akola in his speech stressed about the importance of capacity building and invited all the delegates to visit their lab and cotton breeding facility



The dignitaries during the two month training programme on applied cotton biotechnology,

at PDKV, Akola. Earlier the head of Corp Protection Division, CICR Dr Sandhya Kranthi welcomed the delegates. In his introductory remarks he stated that the training has been planned in such a way to infuse basic and applied knowledge on cotton biotechnology keeping in view of the needs of the American countries. The head of Crop Production and Nodal officer Dr Blaise gave an overview of the TAP fellowship on cotton biotechnology and informed that this is

the third training programme in the series under TAP for Africa conducted by CICR. The head of Crop Improvement Division Dr Suman Bala proposed the vote of thanks. Dr SB Nandeshwar, Dr G Balasubramani, Dr J Amudha and Dr KP Raghavendra coordinated the training. The training programme encompasses modules on general techniques in biotechnology, techniques in isolation and cloning of genes, transgenic cotton development and

their molecular characterization, molecular cotton breeding and bio safety issues and IPR. This programme is being implemented under the aegis of second India-Africa forum summit and funded by ministry of external affairs (MEA) and ministry of commerce and industry (MoC), government of India. This training programme intends to provide hands on training to the researchers on the basic and applied aspects of cotton biotechnology.

Training programme for African researchers gets underway at CICR

■ Staff Reporter

CENTRAL Institute for Cotton Research (CICR) is holding a two-month training course on 'Applied Cotton Biotechnology' under Technical Assistance Programme (TAP) on Cotton for six African Countries. Agriculture officers from Benin, Burkina Faso, Chad, Malawi, Nigeria, and Uganda are attending the training that was inaugurated today.

Dr. C D Mayee, ex-Chairman, ASRB, Government of India, in his inaugural address trusted that participants would gain expertise in cotton biotechnology from the lectures, practical, discussions and deliberations to be held during the programme. He encouraged the delegates to visit cotton farms and seed production units in Maharashtra to gain firsthand experience of cotton seed production and processing in the country. He stressed the importance of connecting the expertise gained in India into research or products of use to the farmers back in Africa. Guest of honour, Dr. R G Dani, Vice Chancellor, Dr. Pankaj Deshpande, Kirti Vajpeyee (Dr PDKV), Akola, stressed about the importance of capacity building. Earlier, Dr. Sandhya Kranthi, Head, Crop Production Division,



Dr C D Mayee speaking after inauguration of two months training programme for researchers from African countries at CICR.

Balasubramani, Dr. J Amudha, and Dr. K P Raghavendra are co-ordinating the training.

The training programme encompasses modules on general techniques in biotechnology, techniques in isolation and cloning of genes, transgenic cotton development and their molecular characterization, molecular cotton breeding, and bio safety issues and IPR. This programme is being implemented under the aegis of 2nd India-Africa Forum Summit. This training programme intends to provide hands on training to the researchers on the basic and applied aspects of cotton biotechnology.

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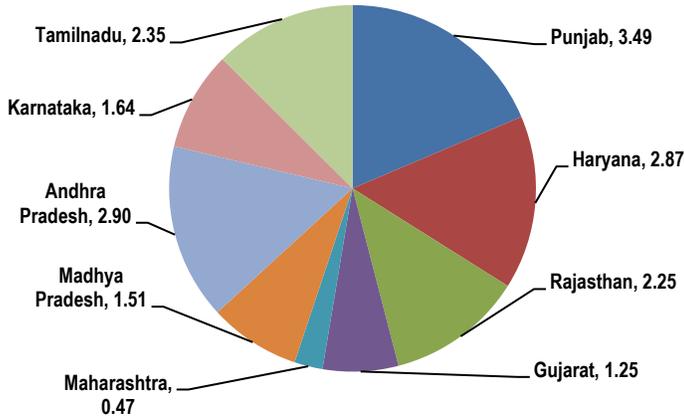
The Hitawada, Nagpur, October 31, 2013



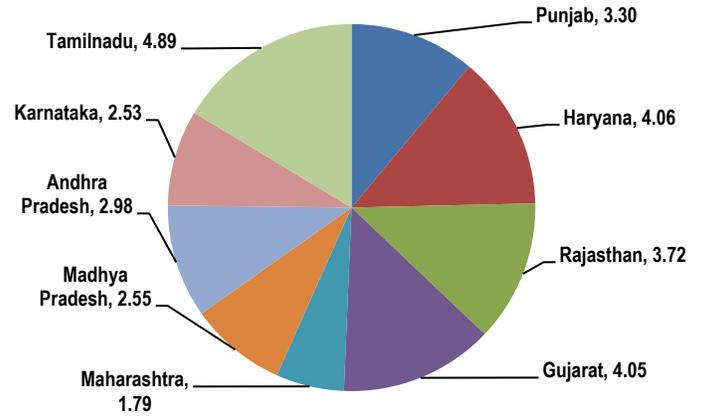
by M. Sabesh, Scientist-Computer Applications

Cotton Production Trend in Major Cotton Growing States (bales/ha)

1991-92



2011-12



Among the major cotton growing states,

- Cotton production in terms of bales per hectare in Gujarat on an average increased to 4.05 in 2011-12 from 1.25 in 1991-92. This was achieved by bringing more area under cotton and substantial cotton area under irrigation coupled with overall enhancement in Gujarat cotton productivity.
- Similarly, in Maharashtra the cotton production in 2011-12 increased to 1.79 bales per hectare from less than half bale per hectare in 1991-92.
- Though Andhra Pradesh is the third largest producer of cotton in the country, the productivity level was at par in both years and the enhancement in production level due to large scale adoption of cotton.

Metadata: Data source: Cotton Advisory Board.
Scale: bales of 170 kg per hectare

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