



CENTRAL INSTITUTE FOR COTTON RESEARCH, NAGPUR

NEWSLETTER

RESEARCH ADVISORY COMMITTEE MEETING HELD AT CICR, NAGPUR



Dr. S.N.Puri, Chairman, RAC addressing members

Research Advisory Committee (RAC) meeting was held at CICR, Nagpur on May 26, 2006. Dr. S.N.Puri, Vice-Chancellor, Central Agricultural University, Imphal and Chairman of RAC presided over the meeting. Members of the RAC namely Shri Nanabhau Embadwar, Ex. Minister, Govt. of Maharashtra, Shri Ankushrao Tope, Ex. Member of Parliament, Dr. S.Sreenivasan, Director, CIRCOT, Mumbai, Dr. N. K. Singh, Principal Scientist, IARI, New Delhi, Dr. S. K. Ghosh, Principal Scientist, CRIJAF, Barrackpur and Dr. P.P.Tarhalkar, Retd. Principal Scientist, CICR, Nagpur, Dr. B.M.Khadi, Director, CICR, Dr. N. K. Taneja, Member Secretary, all the Head of Divisions of the institute and regional Stations participated in the meeting.

Dr. S. N. Puri in his inaugural address emphasized on the changing scenario of Bt cotton hybrid in North India and expressed his concern on non-availability of public sector Bt hybrid. He emphasized on the need to increase cotton productivity especially in Maharashtra. Dr. Khadi, Director, CICR presented the highlight of research contributions made by the institute during 2005-06. Dr. Khadi added that fibre quality

was one of the parameters being addressed by the breeders. Research achievements in detail were presented by the Head of Divisions and CICR, Regional stations. The Chairman and members of the RAC recommended that public sector Bt and mechanical harvester/planter should be developed and feasibility of drip irrigation in farmer's fields be studied.

The meeting ended with a vote of thanks proposed by Dr. N. K. Taneja.

TMC-MMI Annual Review Workshop held at CICR, Nagpur

The Annual Review Workshop 2005-06 of TMC-MMI was held on August 24 & 25, 2006 at CICR, Nagpur. The workshop was graced by the presence of Dr. K. C. Jain, Assistant Director General (CC), ICAR, Dr. S. Sreenivasan, Director, CIRCOT, Mumbai, Dr B. M. Khadi, Director, CICR, Nagpur & Member Secretary, ICAR Standing Committee for TMC-MMI and Dr T. S. Raveendran, Director, School of Genetics, TNAU, Coimbatore. All the project PIs, Head of CICR Regional Stations and Heads of Divisions, CICR, Nagpur and the CCPs and RAs based at CICR, Nagpur participated in the Workshop. The Workshop was organized mainly to discuss the findings of 2005-06 and also the deliverable technologies that could be taken up for large scale demonstrations.

Dr. Khadi, Director, CICR in his introductory remarks, pointed out that alongwith increase in cotton production during the last few years, cotton productivity also has increased from 320 to 440 kg lint/ha. He also presented an overview of the achievements of TMC MMI under various

projects since its inception in 2001. The production of extra- long staple quality cotton is very low in India. It was brought to the notice of the House that even the Bt Cotton falls under superior medium to long staple category and does not meet the requirement of industry for quality cotton. The need of the hour is to improve *barbadense* cotton comparable to Giza or Pima cotton of USA. Dr. S. Sreenivasan lauded the progress made under TMC MM 1 and expressed that the increased production and productivity of cotton during the last few years has come as a silent revolution through TMC MM 1 and this has to be made visible through concise reports and publications. Impact assessment of the technology developed also needs to be conducted.

Dr. K.C. Jain also stressed on the aspect that proper documentation of the salient results is necessary for a better understanding of the impact of TMC MMI. DCH 32 and Varalaxmi, known for quality, were developed long ago. However, not much progress has been made thereafter in connection with development of quality cotton. He suggested for development of ELS quality hybrids and varieties and also good quality cotton varieties and hybrids for North Zone.

The major recommendations that emerged out of two day deliberations are:

- ◆ Promotion of identified long staple and fine quality *G. arboreum* and *G. hirsutum* genotypes on large scale.
- ◆ Successful wild X cultivated crosses should be exploited on large scale to generate additional genetic variability.
- ◆ DNA fingerprinting of released varieties and hybrids should be completed on priority
- ◆ Site specific nutrient management was found to be better than the traditional blanket fertilizer recommendation and can be taken up for popularization after its validation in farmer's fields. The effect of the new bio-inoculant consortium (a single mixture of Azospirillum, Phosphate Solubilizing bacterium and PPFM) on fiber and seed may be studied. It is suggested to work out ginning per cent and also to compute the economics.
- ◆ A project proposal on validation of regional level yield prediction may be formulated and submitted to NAIP Component IV as a strategic research for financial support to expand the prediction for rest of the districts/ states.
- ◆ Implements developed at various centres

need to be evaluated at one place.

- ◆ Development of unified recommendation for cotton pest management in general, and for Bt cotton in particular needs to be done.
- ◆ Diagnostic tools developed for pathogens under MM 3.2 and the mass production of promising bio agents under MM 3.3 need to be commercialized.
- ◆ Implementable and useful technologies need to be brought out in a booklet form.

The Workshop ended with a vote of thanks proposed by Scientist-in-charge, TMC-Cell, CICR, Nagpur.

CICR Launched Dissemination of IRM Project on Cotton in 111 Villages of Nagpur District

CICR Nagpur has recently launched a programme on dissemination of Cotton Technology through Insecticide Resistance Management (IRM) under Mini-Mission II of Technology Mission on Cotton in 111 villages of Nagpur District. The novel programme, the first of its kind, is being implemented in six Tehsils of Nagpur district focusing on transfer of cotton production and protection technologies, particularly IRM, directly from scientists to farmers with the view of farmer's participatory approach. The institute has already identified 111 villages in seven Tehsils of Nagpur district viz. Narkhed (25), Saoner(20), Kalmeshwar(17), Katol(19), Nagpur(14) and Hingana (15). About 100 field workers have been engaged in those villages and 3 days orientation training for field workers was organized for training in IRM technology. The field workers would be in daily touch with the cotton growers in the selected villages and the technology would be disseminated to the farmers under direct supervision of CICR Scientists.

During orientation training for Field Workers, Dr. B. M. Khadi, Director, CICR in his address high-lighted importance of the project and its success in 28 districts already running all over country. He expressed hope that in Nagpur district also the programme will certainly make a dent in creating awareness about cotton technologies and provide technical guidance to poor and needy farmers. Dr. K. R. Kranthi, Head, Crop Protection Division spoke on strategies to be adopted for insecticide resistance management against cotton Bollworm *Helicoverpa armigera*. Dr. Sandhya Kranthi, Sr. Scientist (Entomology), Dr. M.K. Meshram, Principal Scientist (Plant Pathology), Dr. A.R.Raju, Scientist (Agronomy) and Dr. G.Balasubramani, Sr. Scientist (Biotechnology), also guided the field workers. Dr. S.

M. Wasnik, Sr. Scientist (Extension) & Coordinator Programme Implementation, Nagpur District asked village field workers to popularize the benefits of IRM to reduce cost of cultivation. All KVK officials,

Dr. P.B.Deulkar, Dr. U.V.Galkate, Sh. S.M.Patil, Sh. Gulbir Singh and Mrs. Sunita Chauhan are associate members in project implementation.

KVK Round-Up

Trainings Organised:

Forty nine short duration (1 to 30 days) training courses were conducted in different disciplines for 817 practicing farmers, 391 rural youths and 98 extension functionaries. In all 1306 participants attended the courses.

Disciplines	No. of courses	Participating Farmers	Rural Youth	Extension functionaries	Total
Crop Production	10	256	26	28	310
Horticulture	12	171	68	17	256
Plant Protection	9	138	95	-	233
Veterinary Science	8	26	119	25	170
Home Science	5	94	83	-	177
Extension	5	132	-	28	160
Total	49	817	391	98	1306

Fruit plant plantation day:

KVK, CICR organized Fruit plant plantation day on July 19, 2006 to popularize dry land fruits such as guava, aonla, custard apple, sapota, etc. Twenty three farmers from villages Sukali and Panjari Lodhi participated in the programme. The techniques of developing the fruit saplings were demonstrated to the farmers. Seedlings of tomato were also distributed to the farmers

Animal vaccination and treatment camps:

Three animal vaccination and treatment camps were organized in villages Sukali and Banwadi wherein 200 goats were vaccinated against enterotoxaemia and 8 bullocks, 11 cows, 36 goats and 2 calves were treated.

ANNUAL SRC MEETINGS HELD

Annual Staff Research Council (SRC) meeting of C.I.C.R., Nagpur was held on June 16-19, 2006 under the Chairmanship of Dr. B.M.Khadi, Director, CICR Nagpur. Dr. Khadi in his opening address presented present scenario of cotton cultivation in India. Regarding Bt cotton, he mentioned that production technology with respect to seed rate, early setting of bolls and physiological changes for Bt cotton need to be looked into. He further added that protection technology for Bt cotton especially for sucking pests and resistance management need to be addressed. Dr. Khadi also informed scientists about major RAC recommendations. These recommendations namely initiation of molecular

breeding program, use of inducible promoters for drought gene, work on phenotype of drought tolerance, need for low cost cultivation technology for shallow soil, identification of gene for low water requirement, standardization of screening methodology for insect pests and diseases, elucidation of reasons for low adoption rate of these methodologies have to be considered while formulation of research programme. Economic evaluation of Bt is required to be done. Chairman's address was followed by presentations of research findings for each project. Results of work done in 2005-06 for each project was presented and technical programme for 2006-07 was approved after deliberations and discussions.

SRC Meeting held at CICR RS Sirsa:

The SRC meeting was held on May 11, 2006 under the chairmanship of Director, Dr. B.M.Khadi. All the scientists presented results for each project and proposed the technical programme for the ensuing season. The chairman reviewed all the projects and the technical program were modified accordingly.

During his visit, Dr. B.M. Khadi also inaugurated the Museum displaying the technologies developed by the station and also released the package of practices for cotton production in north India.

SRC 2006 held at CICR,Regional Station, COIMBATORE

The SRC meeting of CICR, Regional Station, Coimbatore was held under the chairmanship of Dr.

B.M. Khadi, Director, CICR, Nagpur on July 17-18, 2006.

In his Introductory remarks, Shri K.N. Gururajan, Project Coordinator and Head I/C, CICR, RS, Coimbatore highlighted the research achievements including weather and pest scenario that prevailed in the regional station during the last year.

In his opening remarks, Dr. B. M. Khadi, Director, CICR, Nagpur congratulated the scientists of CICR, RS, Coimbatore for their commendable achievements in cotton research. Keeping in view the rapid spread of Bt cotton, he stressed on the need of better genotypes / Bt hybrids for moisture stress condition for realizing higher yields. He specifically mentioned about the requirement of extra long staple (ELS) cotton to bridge the short fall in the country. He observed that for development of ELS cotton, a minimum of 35 mm fibre length, 3.5-3.8 micronaire and 30 g/tex of strength should be taken as a base line. Other key issues viz., resistance development in Bt cotton cultivation, problem in use of specific pesticides and pest resurgence that need attention were also mentioned.

All the 19 Scientists of the regional station participated and presented their research findings in the SRC meeting. Director, CICR, Nagpur reviewed 35 on-going/current research projects including 11 TMC projects and four new projects and gave his valuable comments and suggestions. In the concluding remarks, Director, CICR, Nagpur reiterated the above pertinent points. He specially suggested scientists to have a focus on development and production of ELS cotton, suitable Bt cotton hybrids, profitability of cotton as an farm commodity, effective male sterility system for seed production and proper IRM/IPM modules for sustainable cotton production.

TMC GROUP MEETINGS HELD



Use of Pheromone Traps for insect management at Sirsa

- ◆ Annual workshop meeting of TMC MMI 1.2 entitled "Development of tetraploid cotton cultivars with high fibre quality and resistance to

drought and biotic stress" was held on June 5-6, 2006 at CICR, Nagpur. Technical programme was discussed for the coming year 2006-07 and results of 2005-06 were presented.

- ◆ A group meeting of the project TMC MMI 1.3 entitled "Genetic improvement of cotton seed oil" was held at CICR, Regional Station, Sirsa on July 14, 2006. All the centers of this project participated in this meeting. Dr. D.K. Agarwal, P.I. of this project highlighted the achievement of this project and discussed the work done in the year 2005-06. The technical programme for the 2006-07 was finalized.
- ◆ A group meeting of project TMC MM 1.5 entitled "Maintenance breeding, seed production, enhancement of seed viability and studies on marker based purity evaluation" was held at CICR, Regional Station, Sirsa, on July 26, 2006 under Chairmanship of Dr. B. S. Chhillar, Director of Research, CCSHAU, Hisar. Sh. V. Umashankar, IAS, DC, Sirsa was chief guest at this occasion. All the investigators from different Centers of this project participated in the meeting and discussed the work done in previous year and technical programme for 2006-07 was finalized.

RESEARCH HIGHLIGHTS

Hybrid CSHH 238 and variety CISA 310 identified for Release from CICR RS Sirsa

CISA 310- A New Cotton Variety for cultivation in north zone

CISA 310 identified for release from CICR RS Sirsa is a *G. arboreum* variety, with early maturity (145-150 days), synchronous opening and fits well in cotton wheat rotation. The variety CISA 310 was tested in the North Zone States of Punjab, Haryana, and Rajasthan from 2000-01 to 2004-05 and has recorded an overall mean seed cotton yield of 21.71 q/ha as against 19.71 q/ha of RG 8 (ZC) and 19.33 q/ha of local checks. The increase in seed cotton yield of the new variety CISA 310 over RG 8 (ZC) was 11 per cent. The variety CISA 310 has remained in the t

op of the group in 21 out of 32 trials as against 11 out of 32 of RG 8 (ZC). The newly developed *G. arboreum* variety CISA 310 represents medium to superior medium staple group (20.2 mm), with micronaire value of 7.1, uniformity ratio of 51.7 % and fibre strength of 15.9 g/tex. The ginning outturn of 36.5 % recorded by this variety was found to be better than that of Zonal check varieties RG 8 (35.2 %). Quality wise it was found to be better than RG 8. Boll damage was also less than the check. On account of its superiority in terms of seed cotton yield and consistent better fibre quality characters over the

check variety, the variety CISA 310 was identified for cultivation for the states of Haryana, Punjab and Rajasthan by the All India Cotton Improvement Project Workshop held at UAS Dharwad from April 7-9, 2006. Its proposal for notification and release has been submitted to Central Sub-Committee on Crop Standards, Notification and release of varieties of Agricultural Crops, Krishi Bhavan, New Delhi.

CSHH 238- A new intra-*hirsutum* hybrid for north zone

Hybrid CSHH 238 is an intra-*hirsutum* hybrid, with medium maturity (160-165), synchronous opening and fits well in cotton wheat rotation. The hybrid CSHH 238 was tested in the North Zone States of Punjab, Haryana, and Rajasthan from 2001-04 and has recorded an overall mean seed cotton yield of 21.34 q/ha as against 17.54 q/ha of LHH 144 (cc) and 17.24 q/ha of local checks. The hybrid CSHH 238 represents medium to superior medium staple group (27.2 mm), with micronaire value of 4.4, uniformity ratio of 47.6 % and fibre strength of 22.6 g/tex, which is at par with LHH 144 (CC) and superior than other check hybrids. In the full spinning test this hybrid has given the satisfactory CSP value (2248) at 40s counts and had shown the better strength/length ratio as compared to the other check hybrids. The ginning outturn of 33.7 % recorded by this hybrid was found to be better than that of check hybrids LHH 144 (32.1%) and Om Shankar (33.2 %). In lint yield also the hybrid CSHH 198 has recorded an increase of 25.5 % over LHH 144 (CC) and 19.9% over local check Om Shankar (LC). The percent increase in seed cotton yield of the new hybrid CSHH 238 over LHH 144 (CC) was 22 and over the local checks was 24. Hybrid CSHH 238 has remained at the top of the group in 24 out of 36 trials as against 7 out of 36 LHH 144 (CC). The hybrid CSHH 238 has shown resistance to CiCuV disease under field and screen house conditions. On account of its superiority in terms of seed cotton yield and consistent better fibre quality characters over the check hybrids, the hybrid CSHH 238 was identified for cultivation for the states of Haryana, Punjab and Rajasthan by the All India Cotton Improvement Project Workshop held at UAS Dharwad from April 7-9,2006. Its proposal for notification and release has been submitted to Central Sub-Committee on Crop Standards, Notification and release of varieties of Agricultural Crops, Krishi Bhavan, New Delhi.

KOORCHALOMA- A NEW FUNGUS RECORD ON COTTON

During July, 2005, Field affected disease cotyledonary leaves were collected at Panjari Farm of the CICR, Nagpur. The necrotic cotyledonary leaves were subjected to laboratory isolations for the presence of pathogenic infections. Isolation of

affected cotyledonary leaves of the *G.arboreum* cultivar AKH-4 revealed the association of yet to be recorded new fungus on cotton. Identity of the fungus was established and it was observed to be *Koorchaloma madreeya* Subram. The fungus as appearing on host tissues and nutritional media (PDA) when examined under the stereobinocular microscope, showed sporodochia of the fungus having salmon to orange colour, separate, setose, superficial and saucer shaped with variable outline upto 1mm broad . The orange coloured sporodochial masses when examined under the compound microscope in a drop of water, revealed presence of 1 celled hyaline (colourless) conidia. The conidia were fusiform, smooth-walled and measured 8-19.2 x3.2-4 μ (mostly 16x3.2 μ). Each conidium had brush like apical appendage and the appendage measured 4.8-9.6x2.4-9.6 μ .

For ascertaining pathogenicity of the fungus, one month old seedlings of AKH-4 were raised in earthen pots in glasshouse which were spray inoculated with fungus culture grown on potato dextrose agar (PDA). The test seedlings along with uninoculated control were covered with polythene bags 24 hrs prior to and after the inoculations, so as to maintain humidity. Ten days after fungus inoculation, yellow to light brown in colour, circular in shape and 1 to 2mm in size spots appeared on AKH-4 leaves which later turned necrotic. Isolations were made from such necrotic tissues on PDA and the pathogenicity was established. Review of literature indicates that the occurrence of *Koorchaloma madreeya* appears to be a first record on cotton.

P.M. Mukewar, M.K.Meshram,

V.S.Tajane & D.L.Wasule

SUSTAINABILITY OF COTTON IN PROBLEMATIC SOILS

Cotton is the most important commercial crop contributing up to 75 % of total raw material needs of the textile industry with exports amounting to half-a-lac crore of rupees and thereby accounting for one-third of total foreign exchange earnings of India. With more than 60 million people involved in cotton related trade directly or indirectly, the seed cotton production has reached to 245 lac bales from 88.73 lac hectares with a productivity of 469 kg only (Estimates by EICA dated 27.07.2006).

Due to multiplicity of hybrids/varieties, input related constraints and problems of instability, cotton productivity in India is still rated as low. Improvement in quality and productivity of cotton can further be accelerated with quality crop nutrition especially in large tracts of problematic soils where low nutrient efficiency is again complemented with loss of soil organic materials either by erosion and high temperature (especially in semi arid and arid soils). In

addition, calcareous cotton soils with high EC cause problem in nutrient availability and its uptake. Thus, judicious and balanced use of nutrients has always been a key for improving physical, chemical and biological properties of the soil on a sustainable basis.

Field experiments tried on a calcareous (8.70 pH) clay loam soils of Coimbatore under SOUTHERN HILLS AND PLATEAU REGION with medium fertility (low in OC & avail. N, medium in P & high in K) with poor quality irrigation water (EC of 3.52 dsm⁻¹ and total salt concentration of 0.23 %) revealed that consistently higher yield was obtained with integrated nutrient (INM) practices i.e., 30:13:25 kg as N,P & K/ha plus 5 t FYM/ha leading to an increase in yield by 11.9% over control the years. The treatment also out yielded over other NPK combinations including RDF and suppressed the adverse effect of salinity also. Imbalanced application of plant nutrients viz., N, NP, NK or higher levels of nutrients could not produce desirable responses as evident from decline in the yield levels and quality of the fibre.

Moreover, both organic based INM options and higher NPK levels (150 % RDF) could restore the fertility status of the soil especially P by maintaining higher nutrient balances in the soil. RDF, INM and manure could maintain the positive P balances. However, the supply of FYM in large amounts resulted in build up of available P and K in the soil. There was also reduction in N availability (and consequently lower yields) following K supply especially in absence of P in this K-enriched montmorillonite clay soil. Thus, a minimum maintenance K has to be applied in these soils.

On sustainability front, both SYI (sustainability yield index based on variability in productivity i.r.t. maximum yield over the years) and PE (productivity efficiency) for cotton were significantly higher under the above balanced nutrient level. Thus, organics based INM option could be a long-term viable alternative as it sustains the performance of both crop and soils. On the contrary, although regular annual application of organics in bulk quantities (15 t/ha) enabled maximum output of cotton with all its beneficial effects yet it was not feasible/ economical under the existing agro-bio-physical condition.

C.S. Praharaj and K. Sankaranarayanan

AWARDS

CICR bags Outstanding Team Research Award of ICAR

CICR, Nagpur has been awarded the ICAR award of Rs.1 lakh and a citation for “Outstanding multidisciplinary team research in agriculture and allied sciences”.The award was presented to the institute at a function in New Delhi at the hands of Shri Akhilesh Pratap Singh, and Shri Kantilal Bhuria,

Union Ministers of State for Agriculture & Consumer Affairs, Food and Public Distribution, in the presence of Dr Mangala Rai, Director General, ICAR.

The award, which is given away to a team of scientists once in two years, was bagged by the team led by Dr. K. R. Kranthi, Head, Crop Protection Division, CICR, Nagpur. The team comprised of Dr. B. M. Khadi, Director, CICR; Dr. Sheo Raj, Ex-Head, Crop Protection Division, CICR; Dr. D. Monga, Head CICR, Sirsa; Dr. Anupam Barik, Director, Directorate of Cotton Development, Mumbai; Dr. A. M. Narula, Principal Scientist, ICAR, and Dr. A. K. Dhawan, Professor, Punjab Agricultural University, Ludhiana. After receiving the award, Dr. Kranthi acknowledged the support of Dr. C. D. Mayee, Chairman, ASRB, New Delhi, under whose guidance the entire project was implemented. Dr. Derek Russell, Principal Scientist, NRI, UK; Dr. M. S. Kairon, Former Director, CICR; Dr. S. K. Banerjee, Former Principal Scientist; Shri Atul Sharma, Project Officer, Pipri, Wardha, and Dr. Sandhya Kranthi, Senior Scientist CICR, were active members of the team who contributed immensely to the project, but, whose names could not be included for the award due to the restriction of maximum eight members per team.

The award was given to CICR for the IRM (Insecticide Resistance Management) strategies that were disseminated all over the country over the past five years thereby leading to a significant reduction in insecticide use on cotton and contributing to a high yield. The Insecticide Resistance Management strategies were developed in a six-year project funded by the DFID (Department for International Development, UK) and the ICAR, and subsequently implemented all over the country. The project which is currently funded (Rs 875 lakh for five years) by the Ministry of Agriculture has 60,000 farmers as direct beneficiaries and was implemented in 875 villages covering 1,50,000 hectares in 28 districts of 10 cotton growing states. The direct benefits from the project implementation are estimated to be more than Rs 120 crore on account of insecticide reduction and enhanced yields.

Best poster paper

Paper titled “Entomopathogenic nematode bacterial symbiont- a new option for management of aphids” by Gokte-Narkhedkar *et. al.* was awarded as best poster paper in 'National Symposium on Biological control of sucking pests in India' held at PDBC, Bangalore on May 26-27, 2006.

Joined

Dr. K.R.Kranthi joined as Head, Crop Protection Division at CICR, Nagpur

Dr. K.R.Kranthi who was Senior Scientist (Entomology) at CICR, took over as Head, Crop Protection Division at CICR, Nagpur on July 19, 2006

on selection by ASRB, New Delhi. Dr. K.R.Kranthi has gained acclaim for his work on insecticide resistance management strategies which were developed in a six-year project funded by the DFID (Department for International Development, UK) and the ICAR, and subsequently implemented all over the country.

Dr. L.A.Deshpande joined as Head, Crop Improvement Division at CICR, Nagpur

Dr. L.A.Deshpande took over as Head, Crop Improvement Division at CICR, Nagpur on August 17, 2006. He was working as Chief Scientist (Cotton) at Nanded station of MAU, Parbhani.

Dr. N. Gopalakrishnan takes over as Project Coordinator AICCIP

Dr. N. Gopalakrishnan, who was Principal Scientist (Bio - Chemistry) at CICR, Regional Station, Coimbatore took over as Project Coordinator of All India Coordinated Cotton Improvement Project (AICCIP) and Head, CICR, Regional Station, Coimbatore on July 17, 2006. Nation wide spread of cotton research and development in twenty one centres, mainly in the State Agricultural Universities of ten states are under AICCIP.

Dr. D. Monga joined as Regular Head of the Sirsa Station:

Dr. D. Monga who joined ARS in Dec., 1985, was selected as Head of the Station by ASRB, New Delhi. He joined the post on July 25, 2006. Before his joining as regular head he was holding the charge as I/C Head of the station.

MEETINGS ATTENDED

- ◆ Dr. B.M.Khadi, Director, CICR participated in the first meeting of sub committee on Bt cotton and related issues on May 10, 2006; in meeting of GEAC at Ministry of Env. & Forests on May 22 and RCGM meetings on May 23 and June 27-28, 2006 at New Delhi.
- ◆ Dr. Khadi, Director, CICR, attended first meeting of subgroup on Crop Science for XI five year plan at New Delhi on July 9, 2006; participated in the round table on the "Fabric of cotton seeds, farmers & textiles" under the chairmanship of Dr. M.S.Swaminathan at New Delhi on July 10, 2006; attended RCGM meetings on July 31 & Aug. 29, 2006 and participated in sensitization programme on NAIP organized at CIRCOT Mumbai on Aug. 26, 2006.

SEMINAR / SYMPOSIA/ WORKSHOPS ATTENDED:

- ◆ Dr. Nandini Gokte-Narkhedkar, Sr. Scientist (Nematology) and Dr. S.Vennila, Sr. Scientist (Entomology) participated in 'National Symposium on Biological control of sucking pests

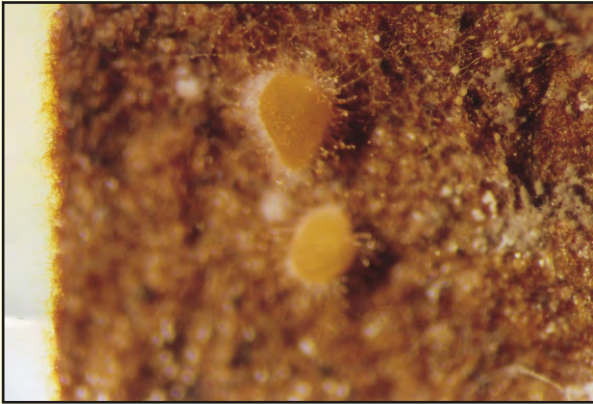
in India' at PDBC, Bangalore on May 26-27, 2006 and presented papers titled "Entomopathogenic nematode bacterial symbiont- a new option for management of aphids" and "Coccinellids and chrysopids as native predators of sucking pests in relation to rainfed cotton production system" respectively.

- ◆ Dr. S.N. Rokde, Senior Scientist, KVK, CICR, Nagpur participated in workshop on 'Writing of Strategic Research and Extension Plan' held at VANAMTI, Nagpur from June 26, to 30, 2006.
- ◆ Dr. B. Dharajothi, Sr.Scientist, Dr. S. Manickam, Scientist (Sr.Scale) and Mrs. K.S. UshaRani, Scientist attended the Regional Training workshops for State Agricultural Universities on Biosafety during August 2-3, 2006 at TNAU, Coimbatore.
- ◆ Dr.Ulhas Galkate, SMS (Vet.Sci) and Dr. P. B. Deulkar, Programme Assistant KVK, CICR, Nagpur participated in a seminar on "Poultry nutrition and management" organized by American Soybean Association and Vidarbha Poultry farmers Association held at Nagpur on 7th August, 2006.
- ◆ Dr. V.V.Singh, Dr. A.B.Dongre & Dr. M.K.Meshram Principal Scientists and Senior Scientists namely Dr. Nandini Gokte-Narkhedkar, Dr. S. Vennila, Dr. Sandhya Kranthi, Dr. Punit Mohan, Mrs. M.Chakravarty, Dr. V.N.Waghmare, Dr. S.B.Nandeshwar, Dr. G.Balasubramani, Dr. Vinita Gotmare, Dr. K.B.Hebbar, Dr.D.Blaise and Dr. A.R.Raju, Scientist participated in one day IPR training at office of Patent Information System at Nagpur on August 31, 2006.

कपास संस्थान में हिन्दी कार्यशाला

केन्द्रीय कपास अनुसंधान संस्थान, नागपुर में दि. 03 जून, 2006 को हिन्दी कार्यशाला का आयोजन किया गया। यह कार्यशाला विशेष रूप से सभी प्रशासनिक वर्ग के अधिकारियों/कर्मचारियों के लिए रखी गई, जिससे सरकारी कामकाज में हिन्दी का प्रयोग करते समय आने वाली समस्याओं का समाधान हो सके और हिन्दी में कार्य करने के अभ्यास में सहजता बढ़े। संस्थान के सभी प्रतिभागियों ने इसमें उत्साहपूर्वक भाग लिया। इस कार्यशाला में 'हिन्दी और अंग्रेजी वाक्य-संरचना का तुलनात्मक विवरण' व 'कार्यालयीन टिप्पण-प्रारूपण' विषय पर श्री प्रदीप शर्मा, प्राध्यापक, हिन्दी शिक्षण योजना, राजभाषा विभाग, गृह मंत्रालय, नागपुर ने ज्ञानवर्धक व्याख्यान दिया। कार्यशाला में संस्थान के प्रभारी निदेशक डा. फुन्दन सिंह ने प्रतिभागियों को संबोधित किया। कार्यशाला का संयोजन संस्थान के निदेशक डा. बी.एम. खादी के मार्गदर्शन में श्री कुमार राजेश, प्रशासनिक अधिकारी और डा. कुमुदिनी नौटियाल, सहायक निदेशक (राजभाषा) ने

CICR ACTIVITIES



Orange colour sporodochial masses of the fungus *Koorchaloma madreya* on AKH-4 leaf



Dr. K.C.Jain addressing participants of TMC MMI Annual Review Workshop



Director, CICR addressing participants of Training Program on IRM



Museum Inauguration by Director, CICR, Nagpur at Sirsa



NALMOT Team visit to IRM and FLD programmes at Sirsa.



Dr. K.R. Kranthi receiving ICAR award at the hands of Shri Akhilesh Pratap Singh Union Minister of State for Agric. in the Presence of Dr. Mangala Rai, DG, ICAR

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