

CICR

News letter



CENTRAL INSTITUTE FOR COTTON RESEARCH, NAGPUR

VOL. 26, NO. 1

JAN. - MAR, 2010

Dr. Ayyappan takes over as DG, ICAR and Secretary, DARE

Dr. S. Ayyappan, Dy. Director General (Fisheries), ICAR, New Delhi took over as Director General of ICAR and Secretary, Department of Agricultural Research and Education (DARE), Government of India on January 1, 2010. Dr. Ayyappan took over the charge from Dr. Mangala Rai, who superannuated from service on December 31, 2009. Dr. Ayyappan is a rare combination of extraordinary academic brilliance and research manager with a human touch holding prestigious positions in different institutions and organizations. Dr. Ayyappan can be credited for bringing the fisheries to the mainstream of research in the country. His selection as DG, ICAR is an apt recognition of his outstanding contributions to Agricultural Sciences. Dr. Ayyappan has held various important positions as Director of the Central Institute of Fisheries Education, Mumbai and the Central Institute of Freshwater Aquaculture, Bhubaneswar. He was also the Founder Chief Executive of National Fisheries Development Board, Hyderabad.

Apart from glorious academic and professional record, Dr. Ayyappan is endowed with down to earth simplicity and ability to positively manage emerging challenges. With his rich experience and dynamic leadership, ICAR is sure to get direction and impetus to scale new heights of excellence. CICR family welcomes Dr. Ayyappan as New Director General and wishes him all success in future.



Dr. K. R. Kranthi takes charge as Director of CICR, Nagpur



Dr. K.R. Kranthi took charge as Director of Central Institute for Cotton Research, Nagpur on Feb. 15, 2010. A gold medalist in Ph.D. from Indian Agricultural Research Institute, New Delhi, Dr. Kranthi joined Agricultural Research Service in 1991 and has been working at the institute since 1992. He was selected as Head, Crop Protection Division, CICR, Nagpur in 2006 and later assumed charge as acting Director from May, 2008.

Dr. Kranthi was recently conferred the 'International Cotton Researcher of the Year Award 2009' by the International Cotton Advisory Committee, Washington. He was presented cash award, medal and citation in Cape Town, South Africa in September 2009. Dr. Kranthi was also elected as the fellow of National Academy of Agricultural Sciences, New Delhi in 2009. He was the team leader of the ICAR Award for Outstanding Team Research 2006 and is also the recipient of Maharashtra Krishi Gaurav Puraskar in 2010, Vasantao Naik Smruti Pratishan Sanman, 2004 and Hexamer /ISCI award in 1999.

Dr. Kranthi was pioneer in development of stochastic models and insect resistance management strategies (IRM) for India. He spearheaded a research group on 'Insect resistance to insecticides and BT-toxins' and disseminated the IRM strategies in more than 1000 villages in about 100,000 ha. covering about 50,000 farmers, over the past 7-8 years. Implementation of the technologies resulted in sensitizing farmers against the misuse of insecticides and thus 10-15 per cent progressive reduction in the overall usage of insecticides every year was achieved. He developed several diagnostic kits to detect BT- cotton, insecticides resistant insects and sub-standard insecticides. He also developed farmer's usable field kits to detect BT-crop.

IN THIS ISSUE

Standing Committee for TMC MM-I Meeting	2
ZTM-BPD Meeting cum Workshop	2
Trainings Organized	3
KVK Round Up	5
Research Highlights	5
Publications	7
Recognitions and Awards	7
Human Resource Development	8
Personnel	8

These Kits were commercialized and directly contributed to reduction in spurious Bt-cotton seed in India. All the seed testing laboratories in the country have been using these kits for quality control.

He has handled 17 externally funded projects as principal Investigator and is credited with two Indian patents and three international patents. All the scientists and staff of CICR, Nagpur and its regional stations at Sirsa and Coimbatore felicitated Dr. Kranthi and assured him of their support and cooperation.

EIGHTH MEETING OF THE STANDING COMMITTEE FOR TMC MM-1

The Eighth Meeting of ICAR Standing Committee for Technology Mission on Cotton Mini Mission I (TMC MM-I) was held under the Chairmanship of Dr. S. Ayyappan, Secretary, DARE and DG, ICAR to review the Annual Progress of TMC MM-I programme. The meeting was attended by Dr. Swapan K. Datta, Deputy Director General (CS), ICAR, New Delhi, Dr. A. K. Singh, Deputy Director General (NRM), ICAR, New Delhi, Dr. M. M. Pande, Deputy Director General (Engg.), ICAR, New Delhi, Shri Suresh Kotak, Chairman, Kotak & Co Ltd., Mumbai 400 001, Dr. K. C. Jain, Assistant Director General, (CC), ICAR, New Delhi, Dr. S. Mauria, Assistant Director General (Seeds), ICAR, New Delhi and other members of the committee. The meeting started with the welcome address of Dr. K. C. Jain ADG (CC). In his address Dr. K. C. Jain briefly introduced the TMC Mini Mission-I and its importance. In the introductory remarks Dr. Swapan K. Dutta, DDG (CS) mentioned problems faced by the cotton sector. Dr. K. R. Kranthi, Member Secretary, TMC MM-I and Director, CICR, Nagpur presented the 'Action Taken Report' on the recommendations of seventh Standing Committee meeting, 'research achievements' and 'financial and technical report' of TMC MM-I research projects and the 'work plan for 2010-11'.



Dr. Ayyappan, Secretary DARE & DG, ICAR chairing eighth meeting of the Standing Committee for TMC MM-I



Dr. Kranthi, Director, CICR presenting at Standing Committee Meeting

The committee made necessary recommendations and approved the action taken report on the recommendations of seventh standing committee meeting and work plan for 2010-11. The meeting concluded with the vote of thanks by Member Secretary.

ZONAL TECHNOLOGY MANAGEMENT AND BUSINESS PLANNING DEVELOPMENT MEETING CUM WORKSHOP HELD

A Zonal Technology Management and Business Planning Development (ZTM-BPD) meeting cum workshop was organized by CIRCOT, Mumbai and hosted by CICR, Nagpur on March 5-6, 2010 wherein the concerned scientists representing various ICAR institutes located in the west zone participated. Total number of participants was 94, including 50 ITMU members from 17 institutes. Representatives from two new institutes namely, NIASM, Baramati and ZPD Zone VII, ICAR, Jabalpur, were also present.



Dr. Ninawe, VC, MAFSU, Nagpur, Dr. Sreenivasan, Director, CIRCOT, Dr. Kranthi, Director CICR, Dr. Kochar & Dr. Nachne at Inaugural session of ZTM-BPD meeting

The Chief guest of the Inaugural session was Dr. Ninawe, Vice Chancellor, MAFSU, Nagpur. Other important dignitaries who graced the occasion were Dr. S.Sreenivasan, Director, CIRCOT, Mumbai, Dr. K.R.Kranthi, Director, CICR, Nagpur, Dr. Sudhir Kochar and Dr. Sanjeev Saxena, Scientists IPR cell, ICAR.

Dr. P. Nachne Member Secretary, ZTMC, West Zone, CIRCOT, Mumbai briefed about the roles played by ITMU & ZTMC, in promoting the concept of IPR. The main focus of IPR was generation of technology, Protection of Technology and Commercialization of Technology. All the dignitaries gave their views on IPR perspectives in ICAR.

Dr. K.R. Kranthi, Diector, CICR, Nagpur, welcomed the participants with special thanks for Dr. S. Ninawe, Vice Chancellor, MAFSU, Nagpur and Dr. A. Srinivasan, Director, CIRCOT, Mumbai for gracing this occasion. He specially appreciated the enormous efforts of Dr. Maurya, ADG, IPR, ICAR, New Delhi, Dr. Sudhir Kochar and Dr. Sanjeev Saxena who have created a significant difference in the

functioning of IPR cell in the Council.

The valedictory session was conducted under the chairmanship of Dr. C. D. Mayee, Chairman, A.S.R.B. in which Dr. M. M. Pandey, DDG., Engg., as guest of honor gave special remarks about technology commercialization in ICAR. This session was marked by a special invited presentation by Dr. C. D. Mayee, Chairman ASRB. He laid emphasis on the new approaches to research priorities especially catering to small farmers, stakeholders, public private partnership and R & D incubation centers. He advocated the need for a clear policy document by DAC & DARE specifying products and delivery system

Major Recommendations which emerged are as follows:

- Institute Technology Management Units (ITMU) and Institute Technology Management Committees (ITMC) are in place in almost all the Institutes. But some lapses exist which have to be corrected as per ICAR Guidelines in formulating ITMU and ITMC.
- More efforts are required to be taken for IPR sensitization at individual scientists level.
- All IPR issues in the institute should be first attended to by the respective ITMUs under the guidelines of ITMUCs. In case of difficulties, ZTMC and ZITMC may be consulted.
- ITMU should decide about patentability and commercial potential of any technology generated in the institute.
- ITMU should ask the inventors to submit details of the technology generated in the format given to them as Application form for Patentable technology which can then be evaluated.
- ZTMC to collect technology information from all ITMCs and compile it to be translated to the Central IPR Unit.
- ITMU should identify at least one commercialisable technology from the institute and pass on the same to ZTM-BPD unit for further action.
- ZTMC to develop model agreement based on the copies of MoAs and MoUs received.

Dr. KASTURIRANGAN VISITS CICR, NAGPUR

Dr. K.Kasturirangan, Member (Science) Planning Commission visited CICR, Nagpur during his visit to Maharashtra Animal and Fishery Sciences University (MAFSU), Nagpur. During his visit to CICR, Dr.Kasturirangan interacted with scientists and evinced keen interest in research projects of CICR especially progress related to



Dr. Kasturirangan addressing scientists at CICR, Nagpur



Dr. Kasturirangan and other dignitaries visiting research laboratories and experimental fields.

the development of bollworm resistant and leaf curl virus resistant GM cotton. He visited the wild species garden and was taken to some of the laboratories of the institute. While at CICR, Nagpur, Dr.Kasturirangan also addressed the scientists and expressed his happiness with the progress of CICR. He particularly appreciated work on DNA finger printing, introgression of genes from wild species, development of molecular kits, immunodiagnostic kits, linkage mapping and RNA interference for pest and disease control. He expressed his happiness that the institute was utilizing modern science to solve pertinent problems of cotton farmers. Dr.Kasturirangan later visited the Krishi Vigyan Kendra of CICR and discussed issues related to farmers. Dr. V.V. Sadamate, Advisor (Agri). Planning Commission, Dr. Vandana Dwivedi, Joint Advisor(Agri), Planning Commission, Dr. Dipak Sarkar Director, NBSS and LUP, Nagpur and Dr.More, Director of Research, MAU, Parbhani were also presented during the visit.

TRAININGS ORGANISED

National Training on “Varietal Purity-Testing of Specified Traits” held

A National Training on “Varietal Purity-Testing of Specified Traits” was organized on February 15-24, 2010 wherein 30 candidates participated from seed Testing, Seed Certification and Seed Production Departments. Course Coordinators were Dr. P. R. Vijaya Kumari and Dr. R. K. Deshmukh while Dr. V. Santhy was the organizing Secretary. A Manual on “Varietal Purity Testing of Specified Traits” by Dr. P. R. Vijaykumari, Dr. V. Santhy, Kum. Sheba Rani, Kum. Sonali V. Virkhede and Kum. Manjusha Lanjewar was brought out and given to the participants.



Dr. M. Bhaskaran, Director NSRTC, Varanasi at inaugural session of National Training on 'Varietal Purity'



Dr. Malvika Dadlani, Head, Division of Seed Science and Technol. IARI addressing participants of National Training Programme at Valedictory function



Participants and Resource Persons of Training Programme with Dr. Kranthi, Director, CICR, Nagpur

National Level Trainers Training Programme

National level Trainers Training Programme on “Nutrient and water management in cotton with special reference to ELS and Desi cotton” was organised at CICR RS Coimbatore on March 18-19, 2010. Thirty extension officials from Tripura, West Bengal, Madhya Pradesh, Orissa, Karnataka, Gujarat, Haryana, and Tamil Nadu participated in it. The training programme was sponsored by Directorate of Cotton Development, Government of India, Ministry of Agriculture, Mumbai. Extension officials were trained on various aspects of *in situ* soil moisture conservation, integrated nutrient management, sustainable water management and potential of growing *G. herbaceum* in coastal region. Field visit was organised to irrigation cafeteria, TNAU, Coimbatore and micro irrigation plots of Jain Irrigation (P) Ltd, Coimbatore. Dr. Barik, Director, DOCD, Mumbai, Dr.N.Gopalakrishnan, PC & Head, CICR, RS, Coimbatore and Shri.Kandaswamy, JDA, Coimbatore delivered special lectures, while Dr.K.Sankaranarayanan, Dr.S.Manickam, Dr.P. Nalayini and Dr.S. Usha Rani, Scientists of CICR, RS, Coimbatore made presentations on various aspects of Cotton R&D efforts.

Training Programme on “Integrated Cotton Production” under NAIP-Cotton Value Chain

Training programme entitled, “Integrated Cotton Production” was

organized for NAIP project farmers from March 17-22, 2010 at CICR, RS, Coimbatore. Field visit was made to farm of M/s Jain Irrigation at Udumulpet and Santhosh Farm (model organic farm), Kottur Malayadipatnam. A visit to textile Mill (Statex mills) was also organised. Farmers were trained on latest technologies of irrigation and e-extension at irrigation cafeteria and technological park of TNAU Coimbatore, respectively. The training also provided an opportunity to Cotton farmers to know newly released varieties, hybrids, Bt hybrids, ELS hybrids, *in situ* soil moisture conservation and nutrient management strategies. The demonstration of poly mulch techniques, multi tier system and low cost drip system were explained to trainees. Recent advances in management of sucking pests and stem weevil, IPM in Bt cotton hybrids besides Clean cotton picking and post harvest handling for effective Value Chain approach were all explained.



Dr. Gopalakrishnan, PC and Head, CICR RS Coimbatore with participants of Training Programme

Interactive Workshop between Cotton farmers and Cotton scientists at CICR, Regional Station, Coimbatore

CICR RS, Coimbatore conducted an interactive workshop of Farmers and Scientists on “Innovations for Higher Economic Return to Cotton Farmers” on March 5, 2010 in collaboration with the “Pothigai” Tamil Channel, Doordharshan Kendra, Coimbatore. Cultivators' queries on Bt cotton, management of emerging pests like Mealy bugs and mirid bugs, intercropping in cotton, drip irrigation in cotton and clean cotton picking were clarified during the day in which more than one hundred farmers from Vadapudur, Allapalayam, Kanjapalli, Senthampalayam, Vakkampalayam, Vazhukkuparai in Coimbatore district and other areas participated. Dr. N. Gopalakrishnan, Project Coordinator (Cotton) and Head, who also moderated the session, focused on improved cotton varieties and hybrids, advanced agronomical practices, effective plant protection measures and clean cotton picking. Scientists of CICR RS, Coimbatore clarified the doubts of cotton growers of Coimbatore district with regard to cultivation aspects of cotton.



Participants of Interactive Workshop between Cotton Farmers and Scientists



Dr. Gopalaakrishnan with Participants and Resource Persons of Interactive Workshop between Cotton Farmers and Scientists

IPM.

Participation In Exhibitions

KVK CICR Nagpur participated in Rashtriya Mela Exhibition at NRCC, Nagpur during Feb. 21-22, 2010. Large number of farmers visited the stall and sought information on various technologies developed by CICR.

RESEARCH HIGHLIGHTS

Notification for *arboreum* variety CISA - 310



The workshop was coordinated by Dr (Mrs) S. Usha Rani, Scientist (Agrl. Extension).

KVK ROUND-UP

Training Achievements:

Nineteen *on campus* and *off campus* training courses were conducted in different disciplines for 274 practicing farmers, 133 rural youths and 134 extension functionaries. In all 541 participants benefited from courses.

Group Discussions Organised

KVK, CICR Nagpur organized a Group Discussion on IPM in chickpea on January 20, 2010 at Manori village. 30 chickpea growers of Manori & nearby villages participated in discussion. Dr. R.R. Gupta, SMS (plant protection) discussed the tools of IPM. Sh. M.K. Meshram, Programme Coordinator also addressed the farmers on this occasion.

Kisan Mela Organized

KVK, CICR, Nagpur organized a Kisan Mela at village Manori on January 12, 2010. About 190 cotton & vegetable growers participated in the Mela. Dr. V. Nagrale Sr. Scientist CICR Nagpur was chief guest and Sh. M.K. Meshram Programme Coordinator chaired the function. Dr. R.R. Gupta, SMS (Plant protection) and Dr. U. V. Galkate answered the queries of farmers on IPM and animal health management. Dr. A.S. Tayde SMS (Agronomy) coordinated the programme.

KVK, CICR, Nagpur organized a Kisan Mela at village Pipra on February 11, 2010. Around 200 cotton & vegetable growers participated in the Mela. Dr. A.B. Dongre Principal Scientist and In charge Director CICR Nagpur was chief guest for this function and Sh. M.K. Meshram programme Coordinator was the chair person. Dr. R.R. Gupta, SMS (Plant protection) and Sh. S.S. Patil (SMS Extn) answered the queries of farmers on cotton pest management and

The variety **CISA 310 of *Gossypium arboreum*** developed by the scientists of CICR, Regional Station, Sirsa, has been notified vide Gazette of India No.171 dated January, 2010 for cultivation due to its overall superiority in both seed cotton and lint yield, better fibre quality than the check and less boll damage under irrigated conditions of entire north zone. This variety was tested in North zone States of Punjab, Haryana and Rajasthan under AICCIP trials for the last five years (2000 to 2004) and has recorded overall mean seed cotton yield of 21.7 Q/ha as against 19.7 Q/ha of RG 8 (zonal check). It has constantly out yielded the zonal check and the maximum increase was up to 40.1% in irrigated conditions of north zone with mean increase of 10.1%. This is an early maturing variety (160-170 days) with boll weight up to 2.6 gm and boll per plant up to 40-50. The variety CISA 310 recorded a mean ginning outturn of 36.5 per cent and was higher than zonal check and qualifying varieties. The mean lint yield was 755 kg/ha which was significantly higher than zonal check and qualifying varieties. Less damage by diseases and pests was recorded in this variety (The mean incidence of *Fusarium* wilt was 33.5% in CISA 310 as compared to 54.2% in RG 8, zonal check). This variety was comparatively superior for fibre technology characteristics as compared to zonal check and qualifying varieties.

Notification of Variety CISA 614

The variety CISA 614 was tested in 32 locations in the North Zone (Punjab, Haryana and Rajasthan) during 2004-2007 and has recorded an overall mean seed cotton yield of 2204 kg/ha as against 1834 kg/ha of HD 123 (zonal check) and 1990 kg/ha of local checks. The increase in seed cotton yield of the new variety CISA 614 over the common (Zonal check) check was of the order 20.17 per cent. The variety CISA 614 has consistently remained in the group of top five, 25 times out of 32 trials. In agronomy trial the proposed variety CISA 614 recorded the highest seed cotton yield of 3792 kg/ha respectively at 67.5 x 30cm spacing whereas at 67.5 x 45cm, the yield of 3148kg/ha was recorded.

The proposed variety CISA 614 recorded slightly superior fibre technology characteristics in comparison to zonal, local check varieties and qualifying varieties. It has been identified by Variety Identification Committee Meeting (AICCIP) and notified vide Gazette of India No.608 dated April 1, 2010.



NISC 40



MSH - 53



NISC 43



MSH - 53



NISC 44



MSH - 53

Introgressed Derivatives

A unique Dark Brown linted multispecies derivative MSH-53 was also developed by introgression breeding. The plant has open canopy while leaves with long pedicel allow direct penetration of sunlight resulting in minimizing bollworm susceptibility. Also three Jassid tolerant compact cultures, viz NISC 40, NISC 43 NISC 44 amenable to high density plantation have been identified. These homozygous genotypes are highly tolerant to Jassid attack by virtue of being derivatives of wild species namely *G.raimondii* and *G.thurberi*.

Vinita Gotmare



Jassid Tolerant NISC lines



Susceptible LRA5166

Cotton transgenics for resistance against cotton leaf curl virus

Cotton leaf Curl Virus Disease is one of the major threats for cotton production in North India. Cotton transgenics resistant to cotton leaf curl virus disease (CLCuD) in elite genotypes H777, HS 6, F 846 were developed using binary vector carrying the antisense *rep* (replicase protein), sense coat protein, antisense coat protein gene along with the *npt II* (neomycin phospho transferase) gene as selection marker which are driven by CaMV-35S promoter and NOS (nopaline synthase) terminator via *Agrobacterium* mediated transformation. The transformed shoots were grown on Murashige and Skoog selection medium containing kanamycin 50 µg/ml. The putative transformants were subcultured on shoot elongation medium containing BAP and kinetin 1mg/l. The shoots were then transferred to rooting medium containing IBA 1mg/l and the established plants were hardened on pots containing peat, soil and sand in 1:1:1 ratio. The confirmation of the specific genes and *npt II* genes in the transgenic plants were done with specific primers by PCR. Molecular confirmation of the presence of the respective genes in the transformed plants was carried by Southern blot analysis.

The confirmed events of HS 6, H777, F 846 with Antisense Coat protein, Sense Coat Protein and Antisense replicase gene by

Southern and PCR were raised in the poly house for event selection study under RCGM contained green house trial. Screening the CLCuV transgenics with viruliferous whiteflies were carried in the polyhouse for event based selection. The transgenic plants were inoculated with the viruliferous whiteflies (24 hr acquisition period) for one month. Three events namely HS 6 (ARep), HS 6 (ACP), H 777 (SCP) was found to be resistant after screening with viruliferous whitefly.

J. Amudha, G. Balasubramani, V. G. Malathi, D. Monga, P. K. Chakrabarty & K. R. Kranthi

Insecticidal influence on papaya mealybug (*Paracoccus marginatus*) in cotton

Insecticidal influence on cotton plants (RCH2 B.t.)



Acetamiprid 20 gm a.i. / ha



Triazophos 600 gm a.i./ha



Dimethoate 250 gm a.i./ha



Control Plot

The most popular insecticides used in the cotton eco system (Imidacloprid 200 SL, Acetamiprid 20 SP, Thiomethoxam 25 WG, Dimethoate 30 % EC, Triazophos 40 % EC, Fipronil 5 % SC, Acephate 75 SP & new formulation of Acephate 95 % SG) were assessed for their effectiveness against Papaya mealybug, *Paracoccus marginatus* Williams and Granara de Willink in cotton during 2009-10 winter cotton season. The treatments were imposed on 37, 51, 65 & 98 days after sowing (DAS). During the vegetative and early reproductive stage up to 72 DAS, the mealybug was effectively controlled by all the treatments.

During later stage of crop growth, severe damage by the mealybug was observed in certain treatments and the intensity of the same was assessed on 158 days after sowing. Cotton plants treated with Acetamiprid 20 S.P. (20 gm.a.i. / ha), Dimethoate 30 % EC (250 gm.a.i. / ha) and Triazophos 40 % EC (600 gm.a.i. / ha) were less preferred for feeding and establishment by this mealybug. The above treatments had damage grade of 0.1 level infestation as against the severe infestation observed in Thiomethoxam (3.0

grade), Fipronil (2.5 grade), Acephate 75 SP (2.16 grade) and control (2.0 grade). Treatments with Imidacloprid and Acephate 95 % SG had moderate level of infestation, 1.33 to 1.83 grade.

T. Surulivelu, T. Sonai Rajan & B. Dharajothi

PUBLICATIONS

Bandyopadhyay, K.K., Ghosh, P.K., Hati, K.M. and Misra, A.K. (2009) Efficient utilization of limited available water in wheat through proper irrigation scheduling and integrated nutrient management under different cropping systems in a Vertisol. *Journal of Indian Society of Soil Science*. 57(2): 121-128.

Galkate, U.V. and S.N. Rokade (2010). Effect of dietary aflatoxin in certain egg production & quality parameters in white leghorn layers. *Animal Nutrition and Feed Technology Journal* 10; 121-126.

Gokte-Narkhedkar, Nandini, N. V. Lavhe, P. M. Mukewar and B.M.Khadi (2009) Optimization of conditions for maximum population index of *Heterorhabditis indica* in modified Wout's substrate for the control of cotton bollworm *Helicoverpa armigera*. *Indian J. Plant Prot*, 37 : 213-215.

Chakrabarty, P.K., R.L. Chavhan, and A.Ghosh (2009). Rapid and Efficient Protocols For Throughput Extraction of High Quality Plasmid DNA from Strains of *Xanthomonas axonopodis* pv. *malvacearum* and *Escherichia coli*. *J. Plant Biochem & Biotech*. 19: 99-102.

GENES SEQUENCED

A. Cotton leaf curl virus strains

1. Severe strain Rajasthan-DC : HM 037920: Cotton leaf curl virus "severe strain" isolate Sri Ganganagar (Rajasthan) segment DNA-A, complete sequence.

HM 037921: Cotton leaf curl virus "severe strain" isolate Sri Ganganagar (Rajasthan) segment beta DNA, complete sequence.

2. Enation : HM 037923: Cotton leaf curl virus isolate Sirsa (Haryana) segment DNA-A, complete sequence.

HM 037922: Cotton leaf curl virus isolates Sirsa (Haryana) segment beta-DNA, Complete sequence.

3. Upward curling : Bankit 1342888: Cotton leaf curl virus isolate Sirsa (Haryana) segment beta- DNA, complete sequence

4. Downward curling : Bankit 1342905: Cotton leaf curl virus isolate Mohanpura (Rajasthan), Segment beta- DNA, complete sequence.

B. *Gossypium hirsutum* chitinase gene : HM125506: *Gossypium hirsutum* Class I chitinase gene, complete cds

P.K.Chakrabarty

RECOGNITIONS AND AWARDS

Dr.Kranthi honoured with Bremen Award

Dr. K.R.Kranthi, Director, CICR, Nagpur was honoured with a special Bremen Award by President of the Bremen Baumwollborse, Wolfgang vogt-Jordan in Germany. He was honoured with a special Bremen Award during the 30th International Cotton Conference, held in Bremen, Germany from March 24-27, 2010. Dr.Kranthi was invited

to deliver a special talk on 'New Perspectives on crop Production Research' in the inaugural session. The international conference in Bremen is held once in every two years. About 400 participants from 40 countries attended the programme.



Dr. K. R. Kranthi, Director CICR Receiving Bremen Award



Dr. C. D. Mayee, Chairman, ASRB with other dignitaries at Zonal Sports Meet



Dr. J. Gulsar Banu, Senior Scientist (Nematology) has been conferred "Dr. Jagadiswari Rao Women Scientist Award of the year 2009" by Applied Zoologists Association, Central Rice Research Institute, Cuttack -753 006 for her outstanding contribution in the field of applied zoological research.

Dr. J. Gulsar Banu, Senior Scientist (Nematology) has been selected as Fellow of Society of Plant Protection Sciences, Indian Agricultural Research Institute, New Delhi 110 012.

Dr. P.R. Vijayakumari was winner in Table Tennis Singles and alongwith Dr. Sandhya Kranthi Senior Scientist won Table Tennis Doubles in ICAR Central Zone Sports Meet held from March 4-8, 2010 and hosted by NBSS & LUP, Nagpur



Dr. Bandyopadhyay receiving certificate from Dr. Rattan Lal

Director, Carbon Management and Sequestration Centre, School of Environment and Natural Resources, The Ohio State University, Columbus, Ohio, USA, from January 18 to April 17, 2010.

Sh Gulbir Singh attended HRD training programmes on 'Production Technology for Dry land fruit at Dr. PDKV Akola on Jan. 15-16, 2010.

Dr. R.R. Gupta and Dr. A.S. Tayde attended HRD training programmes on 'Organic Farming' at Dr. PDKV Akola on Jan. 29-30, 2010.

Sh Gulbir Singh and Smt. S. N. Chauhan attended HRD training programmes on 'Processing technology for fruit and vegetables crop' at Dr. PDKV Akola on February 24-25, 2010.



CICR contingent at March Past of Central Zone Sports Meet



Dr. Sandhya Kranthi and Dr. Vijayakumari receiving award for being winner of Table tennis Doubles event.

HUMAN RESOURCE DEVELOPMENT

Dr K.K. Bandyopadhyay, Senior Scientist (Soil Science), CICR, RS, Coimbatore attended an ICAR/NAIP sponsored training program on "Carbon Sequestration" under the supervision of Dr Rattan Lal,

PERSONNEL

Superannuation: Dr. PR Deoghare, Principal Scientist (Agril. Economics) on March 31, 2010.

Shri P Palaniappan, T-4, Sh BRX Pushpraj, T-I-3, Sh N Venugopalan, T-I from CICR RS Coimbatore on Feb. 28, 2010.

Shri N Natarajan, SS, Gr.IV, CICR, Coimbatore on March 31, 2010

Obituary : Shri Rotash, T-2 Driver, CICR RS Sirsa expired on Feb.6., 2010.

Shri K.R. Rokade, SS Gr.II, CICR, Nagpur expired on Feb.4., 2010

Transfer/Joining-Dr. Mrs Sharda Choudhary, Scientist (Biotechnology) (on probation) transferred to NRC Seed Spices, Ajmer and relieved on Jan.29, 2010.

Dr.C.S. Praharaj, Sr.Scientist (Agronomy), CICR, RS Coimbatore on selection as Principal Scientist at IIPR, Kanpur was relieved on Feb.11, 2010.

Dr. A.H.Prakash, Sr. Scientist (Agril. Physiology), CICR RS Coimbatore on selection as Principal Scientist joined CICR, Nagpur on Feb.01, 2010.

Dr. Chinna Babu Naik joined CICR, Nagpur as Scientist (Agril. Entomology) on March 15, 2010.

Compiled & Edited by : Dr. Nandini Gokte-Narkhedkar (Principal Scientist)

Produced & Published By : Dr. K. R. Kranthi, Director

Central Institute for Cotton Research Post Bag No. 2, Shankar Nagar P. O., Nagpur - 440 010,

Phones : 07103-275536/275538 Fax : 07103-275529 Gram : Kapassanathan,

E-mail : cicrngp@rediffmail.com CICR Newsletter also available at Website : www.cicr.org.in