

XXIV Workshop of AICRP on Biological Control of Crop Pests Organized

2-3 June 2015, Coimbatore

The XXIV Workshop of AICRP on Biological Control of Crop Pests was organized at Tamil Nadu Agricultural University (TNAU), Coimbatore on 2-3rd June, 2015. The objective of this workshop was to review the progress of work done by different AICRP centers during 2014-15 and to finalize the technical programme for 2015-16.

Inaugural Session



Participants at the Workshop



Dr. K. Ramasamy, Vice Chancellor TNAU inaugurated the workshop. In his presidential address, he suggested that the basic research has to be strengthened in all fields of agricultural sciences especially in biological control so that breakthroughs in pest management can be achieved and sustainability in agricultures is maintained. Studies on improving the plant immunity against biotic stresses through biotechnological interventions should be strengthened so that cost of plant protection is minimized.

In his address, Dr. P.K. Chakrabarty, Assistant Director General (PP&B), ICAR emphasized that more successful biocontrol technologies should be developed so that the area under BIPM can be increased to a greater extent and the harmful effects of chemical pesticides are minimized. ADG stressed the importance of publications of the data generated in AICRPs and bringing out good crop-wise manuals on BIPM/ Biocontrol technologies. He suggested strengthening of biocontrol studies in protected cultivation and also on plant diseases.

Dr. K. Ramaraju Director, Centre for Plant Protection studies, TNAU gave brief account the work carried out at on biological control at TANU.

Dr. Abraham Verghese, Director, NBAIR presented a summarized report of 2014-15 and along with Dr. C.A. Viraktamath Chairman RAC, NBAIR, reviewed the progress of research on biological control of insect pests and plant diseases of various crops using parasites, predators, pathogens and antagonists. Dr. B. Ramanujam, AICRP PC Cell I/C reviewed the progress of Tribal Sub Plan programme in ten centers.

Dr. R. J. Rabindra, former Director, Dr. M. Maheswaran, Director of Research, Dr. G. Gajendran, Dean, TNAU, Dr. Samiayyan, Dean, TNAU, Dr. N. Raghupathi, Director, TNAU and nearly 80 scientists of AICRP on Biocontrol and NBAIR and representatives from Biocontrol Industry participated in the workshop.

The recommendations and the technical Programme for 2015-16 were finalized on the occasion.

Significant Achievements during 2014-15

- New invasive pests like, South American tomato moth, *Tuta absoluta* was recorded in Karnataka, Maharastra, Gujarat. A programme on surveillance and management on this pest was initiated immediately. Western flower thrips *Frankliniella occidentalis* (Pergande) reported from Bangalore. Banana skipper *Erionota thrax* (Hesperiidae: lepidoptera) has become severe pest in Kerala, Karnataka, Mizoram, Assam and other states. *Pseudococcus jackbeardsley* recorded on cocoa in Dakshina Kannada dist of Karnataka. *Phenacoccus madeirensis* recorded on cashew in Malur area in Karnataka. Root mealybug, *Formicococcus polysperes* Williams was observed on pepper.
- Incidence of sugarcane woolly aphid and papaya mealy bug was very low throughout the country due to the intensive activity of the released parasitoids & predators
- *Beauveria bassiana* isolates could be established as endophytes in maize for stem borer management.

- Spraying of *Bt* strain NBAIL-BTG4 @ 2% thrice at fortnightly interval was as effective as insecticide (chlorpyrifos 0.05%) in reducing pigeon pea pod damage caused by *Helicoverpa armigera* and *Maruca testulalis* in Karnataka, Maharashtra, Telangana and Punjab.
- BIPM module effectively reduced 77.03% population of spiralling whitefly in casava in Tamil Nadu and increased the yield to 33.25t/ha as compared to 25.89 % reduction in insecticidal treated plots with lesser yield of 29.62t/ha The BCR was 1:3.26 in BIPM plot and 1:2.34 in insecticide treated plots.
- Demonstration of BIPM practice in rice in 100 acres in Angul district of Orissa showed that it was superior to the farmers' practice. Dead hearts, white ear heads, damage due to leaf folder, case worm and skipper were low in BIPM plots with higher numbers of beneficial fauna like spiders and ladybird beetles. Yields obtained in BIPM plots (4721kg/ha) were significantly higher than the non-BIPM plots (3489kg/ha). Similar demonstration in Jorhat district of Assam gave higher yield of 4126.0 Kg/ha in BIPM plots as against 3984kg/ha in plots of insecticidal sprays. Higher net return of Rs. 36709 /ha were obtained in BIPM package as compared to Rs. 29250/ha in farmers' practice.
- Large-scale demonstrations of biological control of maize stem borer, *Chilo partellus* conducted in an area of 202 acres in Hoshiarpur and Ropar districts of Punjab showed lesser dead heart incidence (6.2%) and was on par with chemical control (4.7 %). The yields recorded in the bioagent treated plots and in the chemical treated plots were on par (47.89 & 50.10 q/ha respectively) as compared to the yield of 41.17 q/ha in untreated control.