

3rd National Symposium on Eco-friendly Approaches to Pest Management for Sustainable Agriculture



24-25th November, 2012



PROCEEDINGS & RECOMMENDATIONS



Society for Plant Protection and Environment
Department of Entomology
Orissa University of Agriculture and Technology, Bhubaneswar, Odisha

Presentation-3 : Push pull strategy for termite management

Dr Gagan Kumar Mahapatra, National Fellow (ICAR) and Nodal Officer (Termite Control), New Delhi presented the paper on “Push pull strategy for termite management”. Dr Mahapatra highlighted termite management in Maize-Wheat cropping system in India. He emphasized upon the push –pull theory of termite management which involved a push (movement of insects away from wheat plants due to greenness of the crop) and pull (attraction of the termites at maize stubbles which was the residue of previous season applied within wheat



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rows). The aggregation of termites induced to release hydroquinone which was the cue more accumulation of termites at maize stubbles rather than at wheat plant zone. He also observed that zero tillage or minimum tillage did not favour high population of termites.

Seed treatment chemicals used in wheat rows repelled termites and the entomopathogenic fungi like *Beauveria bassiana* and *Metarhizium anisopliae* used in the stubble rows checked excessive population build up of the termites.

Dr Mahapatra also emphasized upon the seed treatment of wheat with chlorpyrifos @ 4.5 ml/kg or fipronil @ 3 ml/kg or imidacloprid @ 3.5 ml/kg to reduce the termite infestation.

RECOMMENDATIONS

1. At the national level emphasis should be given on researches in the field of Taxonomy and DNA barcoding should be popularized as a tool for identifying the species. This will facilitate quick identification of the specimen and will help in the IPM programme through release of proper strain of bio- agents for killing potential pests.
2. Considering the increasing threat from termites both in public and agriculture sector and pollution of ground water, research needs to be carried out in identifying the non chemical management of this pest including the bio control agents, and botanicals.
3. Efforts should be made for scientific validation of the ITKs and feasibility of their integration in to the IPM system.
4. As a cheap, effective and eco-friendly approach , pheromone needs to be popularized amongst the farmers for monitoring and mass trapping of the pest in a massive way.
5. Pheromone of pests of potential threat needs to be identified, isolated and synthesized through private and public partnership mode.
6. The new research frontiers should be encouraged to take up studies on endophytes as a potential control tactic in IPM programme.
7. Beekeeping as an enterprise should be encouraged exclusively for managed bee pollination in crop fields, which results in increasing the productivity by several folds in different crops. Special conservation priority should be given on non-Apis pollinators
8. All the research projects proposed in future should involve women participation particularly relating to sustainable agri based enterprises.
9. Lac cultivation should be popularized in the tribal pockets and *Flemingia semialata* should be used as an alternate host for massive lac culture in the country. For control of lac pests use of nylon mesh should be popularized.
10. Recommendation of pesticides to the farmers should be made as per the brand name instead of the chemical names to encourage the use of quality products. Further, mechanism should be developed to monitor the quality of the bio-pesticides which are available in the market for their better integration into the IPM system.

News Paper coverage

‘କୀର୍ତ୍ତନାଶକର ଅପମିଶ୍ରଣ ଉଦ୍‌ବେଗର କାରଣ’

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Entomologists for organic pesticides in agri sector

PRO BUREAU

BHUBANESWAR, NOV 24

EXPRESSING grave concern over growing presence of pesticide content in 90 to 95 per cent vegetables, crops and fruits being produced these days, entomologists and experts underscored the need for eco-friendly pest management.

Speaking at a two-day symposium organised by the Department of Entomology, Odisha University of Agriculture and Technology (OUAT), here today, Vice-Chancellor of the university DP Roy said, "Pesticides and

other poisonous chemicals are increasingly used to check pest in fruits and vegetables; they also pollute environment."

Eminent entomologist Niranjana Panda said pesticide content is particularly high in vegetables while 60 per cent of vegetables produced in state contain pesticide adding that this works like slow poison in human body. In foreign

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