

## Asia-Pacific Biopesticide Community of Practice

# ABCOP



### WHAT IS COP?

- A group of people who share a common interest, profession, or passion and come together to collectively learn, share knowledge, and improve their skills through regular interaction and collaboration.



**Monday, 24 June 2024**



**2 PM - 3 PM (Bangkok time)**

### **Presentation 1: Linking Academia, Industry, and Policy Makers for Advancing Entomopathogenic Nematodes Technology in Commercial Applications: A Success Story from India**

*Presented by Dr. Nagesh Mandadi, Principal Scientist & Former Acting Director, ICAR-National Bureau of Agricultural Insect Resources, India.*

Dr. Nagesh Mandadi's presentation offered valuable insights into the current landscape of synthetic pesticide use in India and highlighted the country's strategic shift toward biopesticides. Emerging market trends were discussed, emphasizing the growing demand for sustainable pest control solutions.

A key focus of the presentation was on the unique benefits of Entomopathogenic Nematode (EPN) technology compared to other biocontrol agents, showcasing its potential as a commercially viable biopesticide. Dr. Mandadi also covered national research initiatives and technological advancements in EPN, which have greatly contributed to its development. At the industry level, the technology has achieved production scalability, reaching 10-12 tons per month and expanding market penetration to 22 states.

On the policy front, EPN technology has been patented with the support of the Indian Patent Office (IPO) and other key institutions. The National Bureau of Agricultural Insect Resources (NBAIR) is now focusing on developing a stable and commercially viable product. As part of this effort, NBAIR has introduced a wettable powder (WP) formulation, a key innovation with a shelf life of 10-12 months, offering significant advantages over competing products in the market.

Dr. Mandadi also highlighted the relative advantages of NBAIR's WP technology, which has already been licensed to several commercial companies, positioning it for wider adoption in the biopesticide industry.

## **Presentation 2: Enhancing Trade through Regulatory Harmonization and Biopesticide-Based Residue Mitigation in the SADC Region**

*Presented by Dr. Dennis Ndolo, Group Leader - Biopesticides, International Centre for Genetic Engineering and Biotechnology (ICGEB), South Africa.*

Dr. Dennis Ndolo's presentation addressed the challenges many African countries face with pesticide residues, particularly those resulting from late-season pesticide applications. He explained that while early-season pesticide applications typically degrade over time, late-season applications often leave residues that exceed Maximum Residue Limits (MRLs), restricting market access, especially for exports.

The project Dr. Ndolo discussed successfully focused on replacing late-season synthetic pesticides with biopesticides. This approach allowed early-season pesticide residues to degrade naturally while biopesticides continued to protect crops, reducing overall residue levels at harvest. As a result, the project significantly improved the quality of agricultural exports from the region, enhancing access to international markets.

One of the major challenges addressed was the regulatory framework for biopesticides, as many African countries still operate under regulations designed for synthetic pesticides. The project worked towards harmonizing regulations across the Southern African Development Community (SADC) region, developing guidelines specifically tailored to biopesticides. This harmonization streamlined the registration process, making it easier for farmers to access sustainable pest management tools.

Another key achievement was identifying specific residue issues affecting trade. By addressing these challenges, the project recommended appropriate biopesticides that helped mitigate residue problems, aligning agricultural practices with international standards and improving the export potential of regional crops.

The project also focused on educating farmers about the availability and benefits of biopesticides, many of whom were previously unaware of these options. By raising awareness and providing essential information, the project empowered farmers to make more informed pest management decisions.

Dr. Ndolo also emphasized the importance of developing soft skills within the project team. He expressed gratitude to APAARI for their support in building functional capacities such as strategic thinking, leadership, and teamwork.

### **Presentation 3: Mitigating Pesticide Residue in Latin America Using Biopesticides**

*Presented by Dr. Adriana Castañeda, Consultant, Minor Use Foundation*

Dr. Adriana Castañeda's presentation detailed the progress of a project launched in 2022, aimed at expanding agricultural excellence across 12 countries in Latin America by mitigating pesticide residues using biopesticides. Inspired by successes in Asia and Africa, the project is scheduled to conclude in 2025, with significant milestones already achieved.

One of the key accomplishments so far is the establishment of a Regional Center of Excellence for Latin America, with the first successful training session held at the National University of Colombia. Participation has since expanded to 14 countries, indicating growing interest and regional collaboration. Additionally, soft skills training, organized by the University of Costa Rica, has been integrated into the project. A future training session will focus on improving Quality Assurance across the region.

Dr. Castañeda acknowledged that while regulatory affairs in the region are still developing, efforts are being made to improve them. The project aims to raise the visibility of minor crops, leveraging the Minor Use Foundation to support initiatives at both national and regional levels. She also highlighted various successful minor use programs from around the world.

A critical aspect of the project is the emphasis on extension services to disseminate expert recommendations and project outputs. By the project's conclusion, both technical and functional capacities across participating countries are expected to be significantly enhanced.