



## Pesticide Residue Mitigation Through the Promotion of Biopesticides

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This regional project aims to mitigate pesticide MRL export violations by combining the use of conventional pesticides with the use of microbial-based biopesticides to control key pests. In consultation with researchers, extension and commodity groups, crops of major commercial priority importance to most Asian countries have been selected for the project. These include: chili pepper, greens, basil, dragon fruit, and rice. The project will apply an innovative approach with a scientific rationale towards capacity development and evaluation related to Sanitary and Phytosanitary Measures (SPS).

### **STDF/PG/634**

#### **Status**

On-going

#### **Start Date**

20/02/2020

#### **Project Value (US\$)**

\$1,269,603

#### **STDF Contribution (US\$)**

\$899,586

#### **Beneficiaries**

Bangladesh  
Cambodia  
Indonesia  
Lao PDR  
Malaysia  
Nepal  
Sri Lanka  
Thailand  
Viet Nam

#### **Implementing Entities**

Asia-Pacific Association of Agricultural Research Institutions (APAARI)

#### **Partners**

IR-4 Project, Rutgers University  
Singapore

#### **Background**

Many less developed economies in Asia still face increasing challenges in conforming to the Codex Alimentarius – a globally

recognized body responsible for setting food safety standards to help in the facilitation of international trade in safe foods – and pesticide MRLs of other trade partners. This is because these MRLs are either not established or they are too low to reasonably comply with real-world use patterns by farmers. As a result, Asian trade is significantly constrained by rejections due to food safety issues, including excess MRLs for permitted pesticides, presence of prohibited pesticides, presence of quarantine plant pests, and pathogens and food-borne pathogens. The SPS Agreement of the WTO encourages WTO Members to harmonize or base their national measures for food safety on the international standards, guidelines and recommendations developed by Codex. While participation of Asian nations in the Codex Committee on Pesticide Residues (CCPR) has significantly increased, there is no clear organized effort on how to promote the inclusion of biopesticides into integrated pest management (IPM) programmes or how they can be used to mitigate the residues of conventional pesticides that can be problematic for trade.

IPM approaches have included utilization of biopesticides to overcome resistance issues and maintenance of beneficial insects. However, pesticide residues are primarily determined by the last application, therefore simply including a biopesticide in a rotation is not likely to result in lower residues of conventional products and will not help trade. A purely biopesticide program would result in lower residues, but may not be sufficient alone to control the pest or be financially viable. This project aims to balance the advantages of conventional pesticides (generally lower cost and generally greater efficacy) with the advantages of a biopesticide at the end of the season. This is expected to result in lower residues while providing sufficient extension of pest control caused by extending the PHI of the conventional product.

## **Expected Results**

### **Capacity strengthened at the national and regional level**

The project will focus on two types of capacity development: (i) technical knowledge and skills that are specific to the project's objectives; and (ii) functional skills, knowledge, attitudes and behaviour needed to apply and coordinate technical capacities to enable the project stakeholders to work effectively. The technical programme will focus on residue mitigation and residue trials for setting new CODEX MRLS in the future. In addition to technical capacities, the project recognizes that developing the overall capacity of the project stakeholders should also focus on what it takes to build more effective and dynamic relationships among multiple actors. The project activities will therefore be designed to create an environment in which the project participants learn to analyze internal and external context, bring various perspectives to bear through interaction, reflection and learning; access, create as well as take advantage of opportunities, in order to co-create and use knowledge, learn and chart the future.

### **Residue mitigation through the use of biopesticides**

This project will provide and test a process for resolving up to 15 trade-related residue issues, which could be replicated for other crops/products and/or in other regions in the future. This will be done through field and laboratory preparations; field residue mitigation studies/trials; sample analysis; efficacy studies with biopesticides; report writing: Once a study is complete, the Technical Director and consultant will assist in the preparation of a final report; and dissemination of results and facilitation of residue mitigation strategy.