CABI Global Partnership for Pesticide Risk Reduction

Creating and facilitating the move towards safer and sustainable food systems where human health and the environment are protected

Executive Council show and tell

Challenge: Higher risk pesticides are negatively impacting food systems, human health and the environment

What action is needed?

Policy

Enabling availability of lower risk plant protection products by improving policies and tackling regulatory barriers.

Research

Generating evidence and developing practical IPM and bioprotection solutions that support pesticide risk reduction.

Production

Equipping value chain actors with the knowledge and capacity to adopt affordable, locally effective lower risk options, and improving the quality and availability of bioprotection products.

We will do this by applying Integrated Pest Management (IPM) practices

Policy

Stakeholders across agriculture, environment, health and other sectors aligned and contributing to common PRR goals

Strengthened policies, regulatory frameworks and capacity

Agricultural value chain actors integrate lower risk practices into their sourcing standards and requirements

National governments supported to implement international conventions and comply with trade regulations

Strengthened policies, regulatory frameworks and capacity: Pakistan case study

- We support the development and implementation of policies and regulations to support entry of lower risk plant protection products into the market
- CABI has worked with the Pakistan Government's Ministry of National Food Security and Research and the Department of Plant Protection (DPP) to develop biopesticide regulation guidance to further improve the quality of food produced and to mitigate trade-related issues

2018 Process to formalise the registration of biopesticides in Pakistan initiated

2019 Formal discussions begin

2020 Understand existing registration process, develop the guidelines for registration of biopesticides.

2020 post workshop Consultations with regulatory authorities, biopesticide experts and PARC

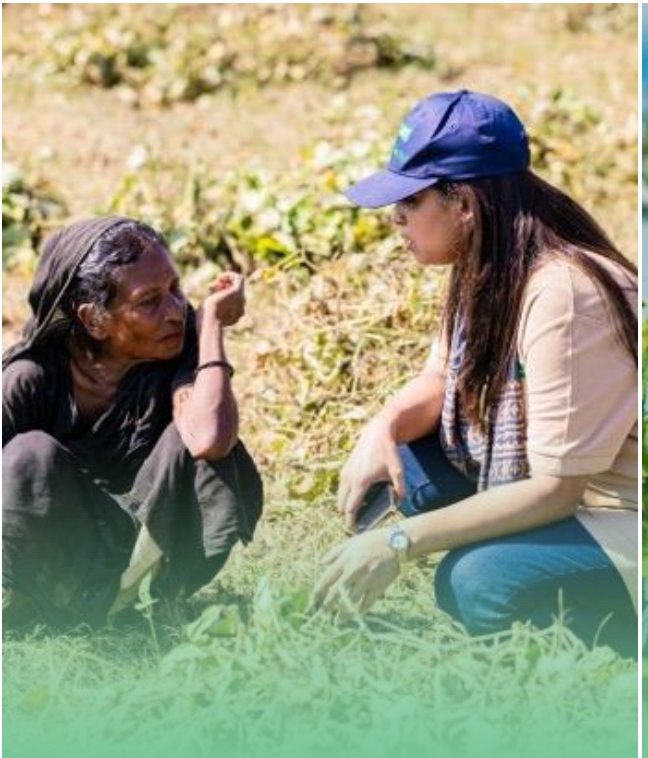
July 2020 Biopesticides registration guidance document submitted to the regulatory authorities

2020-2023 Consultations run by regulatory authority with relevant stakeholders and authorities

2023 Biopesticides registration guidance document approved by technical committees

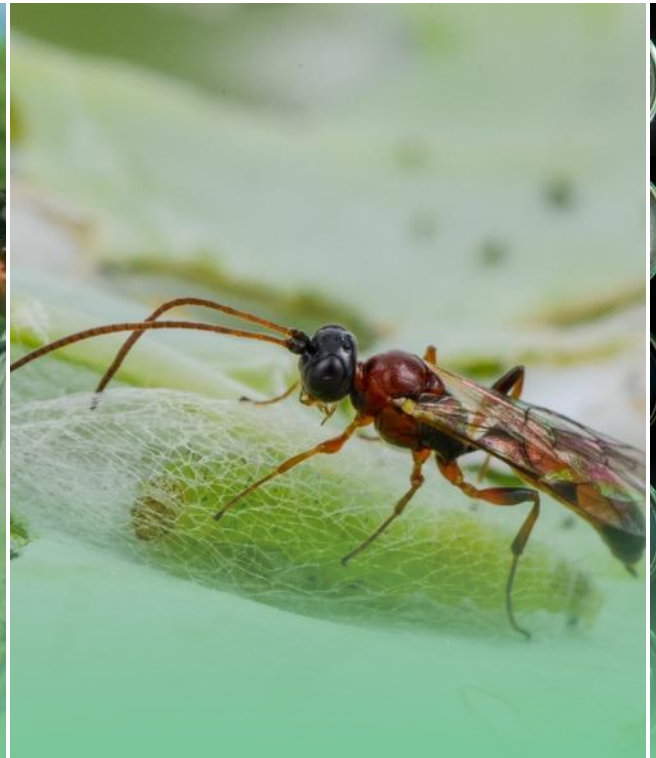
2024 Biopesticides registration guidance document approved by a Legislative Committee.

Research

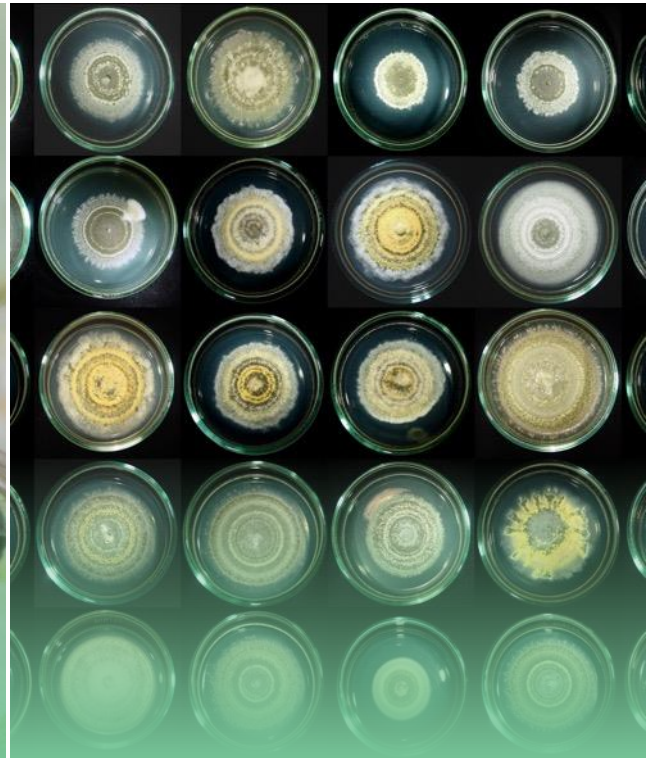


Evidence gaps identified and prioritised

IPM tools and approaches developed and tested



Classical biological control agents identified and tested



Bioprotection products developed and tested

Proven expertise: We collaborate on research and development of innovative IPM solutions

- The biopesticide “Green Muscle” was developed by LUBILOSA a multistakeholder programme led by CABI. The product was deployed successfully in multiple locust outbreaks and continues to be produced commercially[1].
- LUBILOSA addressed key challenges related to mass production of spores, formulation, stability and shelf life
- Commercialised as ‘Green Muscle’ by Becker Underwood (a company later bought by BASF). Now commercially licensed and produced/marketed mainly by Éléphant Vert.
- Was used to successfully treat around 10,000 hectares of wetlands infested with red locusts in Tanzania.
- A plague of locusts broke out in Southeastern Egypt and Northeastern Sudan in February 2013, and the Green Muscle biopesticides controlled the outbreak within the first week

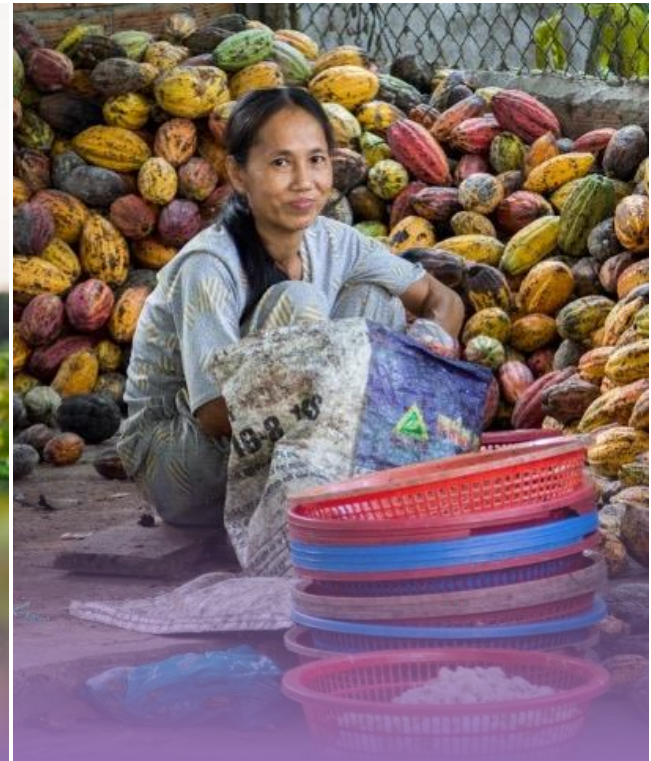
[1]Imperial College London (2014). The development and application of successful mycoinsecticides for locust control in Africa and Australia: Green Muscle and Green Guard. Research Excellence Framework Impact Case Study

Production

Stakeholders across agriculture, environment, health and other sectors aligned and contributing to common PRR goals

IPM products made available, and practices and proper use promoted by value chain actors

Affordable bioprotection products available and effective in local conditions



Private sector actors in food industry supported in pesticide risk reduction approaches

Proven expertise: We support value chain actors to transition towards lower risk production: Plant Clinics

- **Farmers** who attend plant clinics are more likely to use sustainable alternatives to chemical pest control and to wear PPE while working with pesticides.[1]
- Through training **plant doctors,** we increased the % of advisories relating to biological control by 38%, pest monitoring by 8%, cultural controls by 11% and almost eliminated advisories for red list chemicals from 1.2% to 0.2% in China[2]
- After attending **plant clinics**, farmers in Cambodia, Myanmar, Thailand and Vietnam **reduced the frequency of pesticide applications on crops**, replaced the most toxic chemicals with safer alternatives, increased the use of non-chemical options to tackle pests and reported a dramatic decrease in health problems.

[1]Tambo, J. A., Romney, D., Mugambi, I., Mbugua, F., Bundi, M., Uzayisenga, B., ... & Ndhlovu, M. (2021). Can plant clinics enhance judicious use of pesticides? Evidence from Rwanda and Zambia. Food Policy, 101, 102073. [2]Toepfer, S., Zhang, T., Wang, B., Qiao, Y., Peng, H., Luo, H., ... & Wan, M. (2020). Sustainable pest management through improved advice in agricultural extension. *Sustainability*, *12*(17), 6767. [3]Williams F., Hy, H.C., Rattanakarn, W., Luechaikarm, C., Channoo, C., Win, K.K., Xuân, P.T., Suu, T.D., Khing, S.L., Faheem, M., Sivapragasam, A., Chaudhary, M., Ali, I., Chan, H.T., Chan, F.W., Faisal, S. 2018. Plant clinics in Asia: reducing the use and risks of pesticides. CABI Study Brief 27.DOI: https://dx.doi.org/10.1079/CABICOMM-62-8114..

Impact: Safer and sustainable food systems where human health and the environment are protected

Please contact Ulli or Bryony for any further questions:
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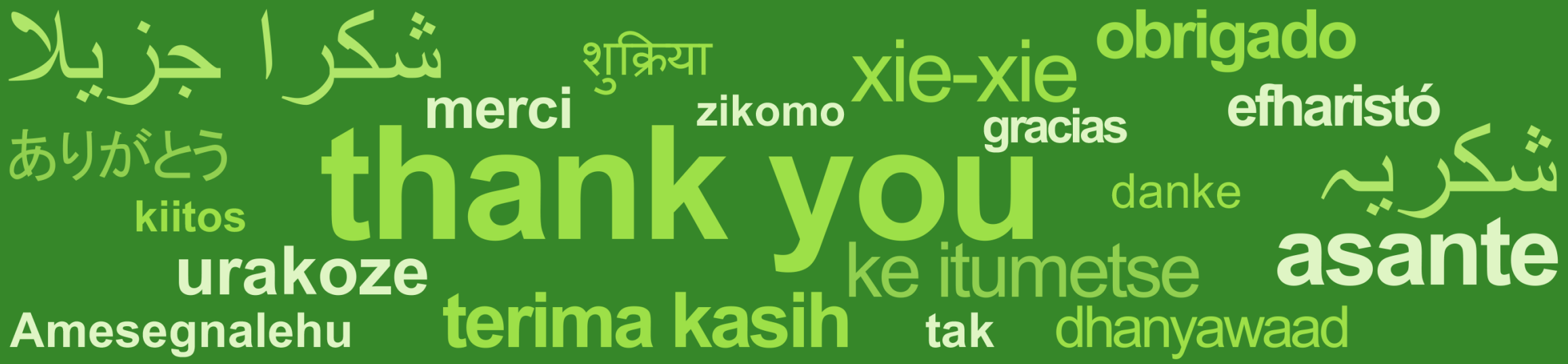
Or contact your Regional Director or Executive Director for further details of how we can support you



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