



## Off-Campus Online Collaborative Training Programme

on

# Field Applications of Biocontrol Agents for Invasive and Transboundary Pests Management

(15.12.2022 to 17.12.2022)



### Organisers

**ICAR - National Institute of Biotic Stress Management**

Baronda, Raipur, Chhattisgarh - 493225

&

**National Institute of Agricultural Extension Management**

Hyderabad, Telangana - 500030

## Preamble

A total of 33 invasive pests including insect and non-insect pests have been reported to enter and establish in various crop habitats in India during pre- and post-independence era, green and post-green revolution era. It continued till date with the 2<sup>nd</sup> decade of 21<sup>st</sup> century and has caused heavy yield losses, leading to a threat for food security. Increasing international trade has created more pathways for invasive species and accelerated the rate at which introductions occur. As globalization intensifies, the worldwide economic and ecological burden of invasive species is expected to increase. The COVID-19 induced lockdowns are responsible for few insects to attain dreadful status in causing significant damage and yield losses in crops.

When invasive alien species (IAS) introduced to ecosystems that lack coevolved natural enemies and host plant defenses. IAS can substantially reduce host plant fitness and cause widespread mortality, leading to significant ecological, cultural, and economic losses, and control expenses for invasive plant pests come with high price tags. It is estimated that global losses associated with invasive insects, plants, and pathogens account for up to 1.4 trillion USD annually. Two insects viz., desert locust and carambola fruit fly are considered as transboundary pests in India. The Locust Warning Organization, Faridabad is the premier agency to monitor and forewarn the movement and occurrence of desert locust in India, using the geo-spatial technologies including GPS, GIS, remote sensing etc. The Carambola fruit fly reported to prevail in Bangladesh may be likely to invade India which requires rigorous monitoring of geo-boundaries. In addition, early monitoring, early detection and early/fore warning on the movement of already existing and/or likely to invade in future in India are pre-requisites.

Early detection of invasive species is the key to effectively control any outbreak and hence minimize the damage they cause; by either preventing an outbreak occurring in the first place or by finding it early and then stopping it from establishing and spreading further. Transboundary pests can be monitored with the effective early warning system, using geospatial technologies like GPS, GIS, RS etc. Some of the other green technologies like biocontrol agents, biopesticides, pheromones, ITKs, conservation agriculture etc., can be used for sustainable control of invasive and transboundary pests.

With this background, on-line training to educate the stakeholders on various aspects of plant protection has been formulated in collaboration with NAARM, Hyderabad with the following objective.

## Objective

To mitigate invasive and transboundary pests, using early detection and warning and green technologies.

## Who can Participate

Extension functionaries from state line departments including Block / District level extension Officers, faculty in SAUs, Subject Matter Specialists from KVKs and Research Scholler can apply through submission of online registration form. The participants will be selected based on their recommendation and relevance to the training course. The list of the selected participants

will be displayed on institute website <https://nibsm.icar.gov.in/> and conveyed to the applicants through e-mail.

## About ICAR-NIBSM and MANAGE

ICAR-National Institute of Biotic Stress Management is a research institute established under Indian Council of Agricultural Research, DARE, Government of India. This institute established to take up research and education on Biotic stresses in agriculture. ICAR-NIBSM situated at Baronda, Raipur (Chhattisgarh) about 30 km away from the Raipur city en-route to Baloda Bazar. ICAR-NIBSM with Deemed to be University status to utilize cutting edge scientific approach to address the emerging biotic stress of agricultural and allied crops (<https://nibsm.icar.gov.in/>).

MANAGE is an autonomous institute under the Ministry of Agriculture & Farmers Welfare, Government of India. MANAGE is the Indian response to challenges of agricultural extension in a rapidly growing and diverse agriculture sector. The policies of liberalization and globalization of the economy and the level of agricultural technology becoming more sophisticated and complex, called for major initiatives towards reorientation and modernization of the agricultural extension system. (<http://www.manage.gov.in>).

## How to Apply:

The participants can apply online on MANAGE website and also with the help of link given below.  
<https://www.manage.gov.in/trgModule/emailRegn.asp?tpno=JI&tpyear=FDFF>

## Patron

**Dr. P. K. Ghosh**, FNAAS, FNASc, FISA, FISPP, FWAST, Founder Director and Vice Chancellor  
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## Course Co-ordinators

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