

# PROTECTING CROPS WITH ICT





The Pink Bollworm (*Pectinophora gossypiella*) is one of the most destructive pests that targets the cotton plant. In all probability native to India, Pink Bollworm (PBW) ravages cotton crops and its cultivators all across the world by boring into cotton bolls, devouring blossoms and seeds. Needless to say, this causes immense financial and psychological distress to farmer communities. Efforts of the Department of Agriculture, Govt. of Maharashtra have always been aimed at helping farmers achieve better crop productivity with the use of various and appropriate agricultural technologies and practices. Farmers of Maharashtra suffered a serious setback in Kharif season of 2017 due to a sudden outbreak of the PBW. Almost 100% area of the state under cotton cultivation was impacted leading to huge losses to farmers. Cotton productivity declined to 265 kg lint/ha as compared to 434kg lint/ha in 2016. The financial loss due to pest outbreak was estimated at about Rs. 8000 Cr. To alleviate

farmer distress, the State Government undertook a survey of the affected area and distributed an amount of Rs. 3132 Crores as crop damage compensation to as many as 50.11 lakh farmers.

Needless to say the situation that prevailed was catastrophic for cotton farmers and warranted a systematic and coordinated approach to tackle the pest problem. Considering various factors responsible for the onset and spread of the pest, a detailed multi-stakeholder initiative involving latest tools of ICT and administrative machinery of the Maharashtra Agricultural Department was undertaken. The stakeholders involved included State Agriculture Department, State Agriculture Universities, Central Institute for Cotton Research (Nagpur), Central Research Institute for Dryland Agriculture (Hyderabad), National Institute of Plant Health Management (Hyderabad), National Informatics Centre (Pune) and National Research Centre for Integrated Pest

## OBJECTIVES

- DEVELOPING ICT BASED PEST MONITORING SYSTEM FOR MAJOR PESTS OF COTTON THROUGHOUT MAHARASHTRA.
- IDENTIFYING HOT-SPOTS WITH SPECIAL REFERENCE TO COTTON PINK BOLLWORM AND ISSUE REAL TIME ADVISORIES BASED ON PEST STATUS.
- CREATING AWARENESS AMONG FARMERS ABOUT INTEGRATED CROP MANAGEMENT (ICM) PRACTICES.
- GUIDING THE FARMERS FOR MANAGEMENT OF MAJOR PESTS OF SELECTED CROPS.
- CONVERGENCE OF MANPOWER RESOURCES, GOVERNMENT SCHEMES AND INPUTS FOR EFFECTIVE MANAGEMENT OF PINK BOLLWORM.

Management (New Delhi); various *Krishi Vigyan Kendras* in the region and, obviously, the affected farmers. The initiative involved sustained pest monitoring and awareness creation among farmers across all cotton growing districts of Maharashtra. e-pest surveillance based real time advisory system through mobile was dovetailed with a web based monitoring and reporting system using ICT tools. 20,160 villages across 26 cotton growing districts of Maharashtra were covered under the initiative.

## OUTCOMES

The efforts outlined above have led to a rapid and significant positive change in the situation. Salient achievements are:

- Number of farmers enrolled for SMS service has increased to 67.73 lakh.
- Total 9765 advisories were suggested by State Agricultural Universities for cotton pest management in the state. These advisories were transmitted to 17.21 lakh registered cotton growing farmers of the state through SMSs, free of cost.
- Technology dissemination achievement has been made possible in a short span of just one year.
- Percentage of villages below Economic Threshold Level (ETL) during *Kharif* 2017 was about 75%, because of PBW management strategy it is reduced up to 7% in *Kharif* 2018.
- By investing a modest amount of Rs.18.42 Cr. in preventive measures, losses of Rs.8000 Cr. worth of cotton crops were averted.
- Cotton productivity as well as lint quality is now better compared to 2017. This is despite the drought situation faced in 2018. ●

