



Integrated Pest Management in Major Crops



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Use of ICT Initiatives in Integrated Pest Management

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Agriculture production in India has increased significantly in last few decades and country has achieved self-sufficiency in the food grain production. Today's challenge is to sustain the growth in agriculture production to meet the food requirement of the ever-increasing population. Since there is limited land under cultivation, growth in agriculture production has to come from ever increasing productivity. One of the important ways to increase the production and productivity is to minimize losses due to pests and diseases. Agriculture production systems in the 21st century need to be based on the appropriate use of biotechnology, information technology and eco technology. Integrated Pest Management (IPM) is such a technology, which combines multiple ecologically safer and economically sound pest control methods (Swaminathan, 1999).

Information Communication Technology (ICT) refers to systems for producing storing, sending and retrieving digital files. These files can contain text, sounds and images both still and moving. Integrated Pest Management (IPM) refers to an ecologically based strategy of maintaining insect pest population below the economic injury level by the use of any or all control techniques that are economically, ecologically and socially acceptable. IPM is knowledge intensive, requiring holistic approach, expert advice, timely decision making and action on fast track. Pest management revolves around pest diagnostics, surveillance, forecasting and dissemination of expert information in short duration (Gupta and Singh, 2016).

Due to climate change, agricultural pests and diseases are significantly undermining food availability by reducing crop yield in the form of pre-harvest and post harvest losses. Pest and diseases causes yield losses of 15-25%. ICTs have increasingly important in IPM in the contest of changing pest scenario (Ramkewal *et al.*, 2012). Risk to food security has increased as most of the population depends on one or two major crops in a year. If these crops are infested by a particular virulent disease or pest, it causes a great economic