

Farmer-centric, community-based plant health management for small farmers

Plant clinics for a one-stop solution to access farmer-friendly plant health diagnosis and advisories

42,477 farmers benefitted

Context ●●●

Pests and diseases cause significant crop losses and income to farmers. Timely diagnosis of the issue (including pest, disease and nutritional deficiencies) that hamper crop growth is necessary to minimise production losses. However, the existing agricultural extension systems do not have adequate capacity to extend farmer-centric plant health advisories. Thus, farmers depend on informal sources particularly input dealers with vested interests / close allies from pesticide dealing firms, and receive poor quality. Farmers are investing higher cost and effort in pest management for the whole crop cycle, and ultimately end up with high production costs.

●●● Intervention

To address the gap in the extension services, diagnosis and advisory services were introduced at farmer-level through Plant Clinics. Plant clinic is a diagnosing and advisory platform for all types of crop-related problems. Plant clinics were piloted in Tamil Nadu by MSSRF in partnership with Centre for Agriculture and Bioscience International (CABI) in 2012. It was up-scaled to Odisha, Maharashtra, Kerala, Assam and Puducherry.

Plant clinics are conducted at a common location in a village by trained plant doctors. Plant doctors are either agricultural extension officers or progressive farmers trained and certified by CABI. The minimum necessary tools for conducting plant clinics are a laptop/tab and digital microscope to support accurate diagnosis of the



2,694 sessions

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issue, and build the capacity of farmers to handle the pest/disease/issues. Farmers view the tiny pests, symptoms of diseases, or micronutrient deficiency on the laptop/tab screen, and can also connect a projector to display the images on a bigger screen. This process allows for better understanding of the issue at hand as farmers understand crop damages clearly and get appropriate management measures. Plant doctors adopt Integrated Pest Management (IPM) principles while recommending the management practices. As part of the process, Pest Management Decision Guides (PMDGs) and factsheets about pests and diseases are developed as reference guides for plant doctors. Resource materials were jointly developed with scientists from Tamil Nadu Agricultural University, Department of Agriculture, Krishi Vigyan Kendra and MSSRF. Farmers are also improving their skills to distinguish between symptoms caused by insects, diseases, and nutrient deficiencies, as well as to understand the harmful effects of red labelled / banned pesticides, pest resurgence, resistance to pesticides, etc. Besides, the whole session promotes social learning and farmers share their experiences and challenges.



Our
Results
since
2012



Outcomes

A specific outcome study indicates that

About 40 percent farmers who visited plant clinics shifted pest management practices from complete chemicals to IPM. They reduced the use of chemical pesticides and increased the proportion of biocontrol inputs

Reduction in input cost up to 55 - 65 percent by avoiding unnecessary number of sprays and indiscriminate chemical inputs

56 percent farmers realised increased income between Rs 12,500- 20,000 /ha.

Farmers have improved negotiation skills with agro-input dealers based on new knowledge gained from plant clinic sessions

Women-farmer participation in plant health management increased by 30 percent; it was completely a man's role in farming



Outputs



- * MSSRF trained 38 plant doctors including 19 women conducting the plant clinic sessions in Assam, Odisha, Tamil Nadu, Puducherry and Kerala.
- * 2694 Plant Clinic sessions conducted, 42477 farmers including 7298 women farmers received advisories from plant doctors, and diagnosed 41876 affected crop samples including paddy, maize, vegetables, fruits, cotton, sugarcane, banana, groundnut, etc.
- * 80 PMDGs, and 85 factsheets on major plant health issues identified during plant health sessions were developed.



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