

Farmers Field School - A Way towards Participatory Pest Control Approach

Ipsita Samal, Shruti Mohapatra, Subhrajyoti Panda

Assistant Professor, Faculty of Agriculture, Sri Sri University, Cuttack, Odisha

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Introduction

Global pest management is currently dominated by various genetically modified crops and better biotechnology technologies. However, the socioeconomic and environmental consequences of pesticide abuse and misuse must not be overlooked. Furthermore, the pest management technique has evolved through the phases of subsistence, exploitation, crisis, disaster, and integrated control, with integrated control emerging as the most significant way of pest management. Integrated pest management is a community-based pest management technique, not an individual approach. Thus, farmer-centered pest control is the need of the hour, and a participative strategy might be a stand-alone solution in this context. As a result, pest control based on Farmers Field School (FFS) might have far-reaching ramifications in the future.

Farmers Field School (FFS)

Agro Eco System Analysis (AESA) is the most crucial and initial method during the integrated pest management. The FFS usually considers the tritrophic interaction along with the ecological parameters.

Major objectives of an FFS

In an FFS, the emphasis is on holistic crop and pest management. FFS has 5 basic objectives:

1. Grow a healthy crop
2. Conserve natural enemies of crop pests
3. Conduct regular field observations
4. Make farmers competent in their own field
5. Reduce production costs

Any given crop grows in the presence of biological variables such as pests and predators, as well as non-biological, physical, and chemical elements such as moisture content, rainfall, nitrogen content, and so on. For example, if a farmer's crop is afflicted with



a certain insect, it may be beneficial to closely study the bug-when it multiplies, what it feeds on (stem, leaves, flower nectar), its life cycle, and its predator. This hands-on experience will better equip farmers to manage the pest and control the harm it causes. So, farmer's empowerment and community participation is mediated through FFS.

In 1989, keeping the major objectives in view, the first IPM Farmer Field School was held in Central Java, Indonesia, with the goal of reducing farmers' dependency on pesticides in rice. It began in the 1980s, when paddy was infested with the brown plant hopper insect. FAO (Food and Agriculture Organization) established the Farmer Field School in an attempt to discover a solution. IPM FFS quickly caught up, and FFS was carried out in a few other Asian nations, not only rice. Farmers are the key drivers of the crop production system, being unaware of their respective Agro Ecosystem. So, the crop environment is a critical component that farmers must comprehend. Furthermore, integrated pest management (IPM) was established in the 1960s and 1970s with the goal of reducing pesticide use via the use of more "natural" pest management strategies. Integrated pest management methods promoted in FFSs typically range from more simple practises, such as not applying pesticides within the first 30 days of planning ('no early spray'), to more complex ones that require in-depth agro-ecological and crop management knowledge, such as distinguishing beneficial from harmful insects and creating a conducive environment for pest predators (Ricker-Gilbert et al., 2008). FFSs are participative, learner-centered, and overly dependent on learning-by-doing (Pontius et al., 2002).

Farmer field schools employ rigorous 'discovery learning' methodologies to provide farmers the knowledge and confidence they need to try new growing techniques and vary the mix of inputs they use on their farms. In the case of IPM-FFSs, field school participants are taught how to transition away from pesticides and toward more natural pest control practises. The schools' goals include enhancing agricultural production, lowering negative environmental consequences, and encouraging farmer empowerment. The FFS approach is based on participatory methods, both in terms of its bottom-up approach, with curricula based on farmer priorities, and requires coordination among diverse disciplines (Khisa, 2004). Thus, FFSs attempt to give farmers with skills that enable them to address problems for themselves, and group activities empower farmers both inside and outside of their communities.



Indeed, the strategy is significantly more intense than other extension delivery mechanisms and wider in its goal of providing skills and empowering individuals; as a result, some practitioners and analysts consider it an adult education intervention. As FFSs became more popular across the world, the IPM curriculum was adapted to the setting and applied to other food staples, vegetables, and cotton (Braun & Duveskog, 2008). Other associations include Integrated Disease Management (IDM), Integrated Crop Management (ICM), Integrated Plant Nutrient Management (IPNM), and Integrated Water and Soil Management (IWSM).

Conclusion

Interdisciplinary approaches altogether can enhance farmers understanding regarding the current agro ecosystem and thus can be helpful in obtaining participatory community based pest control. Finally this sustainable pest management approaches could be helpful in minimising resistance, resurgence and resurgence type problems related to pest management.

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