

Knowledge for better life

The Situation/ Problem

District Swat, specially the target area is very famous for its fertile land and natural beauty. Majority of the target community depends on Agriculture as their mainstay. Lack of knowledge and improper farm practices has led to a huge gap between potential and actual production level. Similarly, cost of production has been increased many folds due mainly to unawareness of cost effective and sound techniques. The injudicious use of chemicals sprays and fertilizers has also generated threats to natural ecosystem including the farmers themselves (pesticides applicator), wild life, marine life, general public and livestock. There are many reports which shows that Hepatitis and Cancer rates are high in this region compared to others areas.



Introduction of the model:

Environmental Protection Society (EPS) in partnership with Pakistan Poverty Alleviation Fund (PPAF) started a **capacity building program** in Agriculture Sector for its established four **Common Interest Groups (CIGs)**. The **approach** adopted is **Farmer Field School (FFS)** which is a farmer-led season-long participatory training which starts from land preparation till harvesting. FFS approach is not a new one and is tested one globally. The FFS provide an opportunity for learning-by-doing which is based on principles of non-formal education. Change agents (extensionists, NGO staff) or trained farmers facilitate the learning process, encouraging farmers to discover key agro-ecological concepts and develop IPM skills through self-discovery activities in the field (Ooi, 1996).

Originally the FFS were developed in Asia to address a major food security threat caused by severe losses in rice production by the brown plant hopper (Winarto, 1995; van de Fliert et al., 1995). First time in 1989 in Indonesia.....in response to a major pest outbreak (brown plant hoppers), caused by the misuse of pesticides on rice farms....a national integrated pest management (IPM) programme began....attempted to improve the organizational & management skills of farmers.

EPS has implemented similar projects in partnership with FAO of UN in district Upper Dir and was a success. FFS is a more specialized and technical program, the experts of which are rare. This is an edge that human resources available in the target area have technical know-how of the FFS program and has been trained by leading international organization like CABI South Asia (the pioneer of this approach in Pakistan 1997).

The FFS approach which EPS started is in its middle stage. Although the quick results can be judged at this stage but it is more likely that the overall impacts will be judged upon its completion. So far, major achievements includes but not limited to;

1. Change in perception of the FFS participants towards Good Agricultural Practices (GAPs) including land preparation/sowing, insect pest/disease management, nutrient management, moisture management etc.
2. Healthier Plants



3. More regular crops in terms of its quality & quantity
4. Reduced use of pesticides
5. Reduced inputs cost
6. Better use of natural resources

Change or the Uniqueness in the story

1. Through FFS focus was on healthy plants which are stronger and thus better equipped to withstand attacks by pests and diseases. Many factors contributed to this like good variety, healthy seeds and healthy seedlings, land preparation, correct spacing, fertilizer management, water management etc.)
2. The term “defender” is sometimes used instead of “natural enemy”, because a natural enemy of a pest is a defender of the crop. In target four FFS the farmers know defenders and understand their role through regular observations of the agro ecosystem and they avoid the use of poisonous chemicals that kill the natural enemies of pests.
3. Through these FFS, the farmers manage their crop (based on information about the actual field situation). They don't use “calendar spraying” to control pests. Target farmers monitor the field situation at least once a week (soil, water, plants, pests, natural enemies, etc.) and make decisions based on the field situation and take direct action when needed (e.g. collect egg masses, remove infested plants, use of homemade formulation or plant extracts for the control of insect pest and diseases etc.)
4. Farmers are capable of improving farming practices by experimenting (small field trials and comparison between FFS plot and Farmer Practicing Plot)
5. Farmers have somewhat become expert and can share their knowledge with other farmers



The END/Conclusion

Environmental Protection Society (EPS) in partnership with Pakistan Poverty Alleviation Fund (PPAF) through its initiative of Farmer Field Schools (FFS) with different established Common Interest Groups (CIGs) have achieved quite good immediate impacts in the following domain;

Technical

1. Through FFS right from the identification and land preparation the farmers are able to manage their crops with optimal quality and quantity through learning by doing, group discussion, trails and participatory decisions.
2. Use of homemade formulation and indigenous techniques like a mixture of detergent, baking soda & mustered oil, similarly use of plants extracts like red pepper solution and garlic solution sprays reduced production cost and saved natural enemies.

3. Beneficial insects/defender and harmful insects identification, their mode of action, and life cycle through insect zoo enabled them to identify crop loss factors and suitable time for their management like preventive and curative measures to minimize crop loss.
4. By using indigenous techniques health hazard risk are minimized to public, pesticides applicator, livestock, fisheries, and wildlife.
5. Judicious use of fertilizer application, time of fertilization, dose and method of fertilization for nutrient management helped the target farmers to produce healthy crop with cost minimization. Similarly best fertilizer like Farm Yard Manure (FYM)/Compost making techniques in which all the 16 components (needed for plant) is available were introduced which was appreciated by the target farmers.
6. Quality seed identification, seed multiplication, seed health, seedling methods, transplantation, reduced seed rate, de-weeding etc reduced the production gap between potential and actual.
7. Through introduction of resistant varieties, certified seed and by applying cultural measures, the disease problems in target pepper, rice and tomato crops in four FFS were introduced.

Economical

1. Pesticides cost minimized in all target four FFS by introduction of indigenous control methods
2. Fertilizer cost minimized through capacity building and introduction of compost making techniques and actual demonstration in the fields.
3. Nursery raising cost minimized through management of proper seed rate and other relevant management practices. Along with this healthy seedling were produced which had more resistant and production capacity.
4. As per Research Institution recommendation proper line to line and row to row distance minimized the cost and maximize
5. In all target four FFS, inputs cost was reduced through mobilization for bulk buying



District Officer Agriculture Extension
Department Swat briefing FFS
participants about Compost Making

Social

1. These four FFS were carried out with four established CIGs which have a formal setup. The farmer associations will provide a forum to their voice and collective efforts means sure success.
2. Collaboration between farmers enhanced which is a real success as farmers shared their experiences and benefited from each one knowledge and experience. Along with this other social problems were also solved.
3. As in FFS, farmers are made able to deliver and become experts. Hence community agenda setting and formally organizing a session and solving their problems is now easy for each participating member.
4. Participatory Reflection and Action (PRA) tools applied really probed their actual problems in the concerned CIGs and targeting was made accordingly.
5. Formation of farmer study groups and analytical skills will help them to find ways and means to solve their problems within available local resources and will lead them towards self-reliance.

Political

1. Farmer and Extension services/Research institutions linkage were developed which primarily realized them that they have technical resources and services available in the region and the representative visits to these FFS ensured to develop strong linkages as relevant information/profile with them were shared.
2. Formation of farmers association will work for their rights.



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