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FARMERS' FIELD SCHOOLS AN ALTERNATIVE EXTENSION STRATEGY TO BENEFIT RESOURCE POOR FARMERS IN KP

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ABSTRACT

Many extension strategies have been tried in Pakistan but none of them seems to be effective in serving the farmers through increasing farm productivity and improving their income. Recently the Government of KP has introduced a new extension approach i.e Farmers' Field Schools (FFS) to build the capacity of farmers through discovery based learning. The present paper is based on the study designed to analyze the participation of farmers in the FFS as an alternative extension strategy to benefit resource poor farmers from the existing agricultural technologies in KP. The results show that highest farmers' participation was observed under crop production activities in the aspects of nursery raising techniques and soil analysis with mean values 3.30, 2.86 and Standard deviation 1.18 and 1.30 respectively. Similarly, highest farmers' participation was noticed under crop protection activities in the areas of seed treatment and insect pests identification with mean values 3.03, 2.96 and standard deviation 1.35 and 1.23 respectively. The study was conducted in the central region of KP which comprises seven districts. The sample for the study consisted of FFS farmers in the central region of KP, Pakistan. The data were collected through "survey" method and were analyzed by using the computer software called Statistical Package for Social Sciences (SPSS).

Keywords: **Farmers' Field Schools, Farmers' participation, Alternative Extension Strategies, Benefit resource poor farmers, Agricultural Technologies.**

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INTRODUCTION

The Farmers' Field Schools (FFS) approach is a form of adult education. It aims at benefiting resource poor farmers by improving their knowledge level regarding existing agricultural technologies as well as their decision making capacity through discovery based learning in the field. The Government of KP (Pakistan) introduced Farmers' Field Schools (FFS), a participatory agricultural extension approach to improve the skills and knowledge of its farmers and extension field staff in all the 24 districts of the province during the year 2004. Each FFS comprises a group of 25 farmers who meet weekly or fortnightly to improve their skills and knowledge during the whole cropping season i.e from planting till harvest Luther *et al.*, (2005). They conduct simple experiments in order to understand about agro-ecological systems and their relationship with each other e.g pests, predators, their mode of action and finally their rationale control which help them improve their capacity regarding IPM knowledge and skills. Mangan and Mangan (2003) stated that the way farmers are trained in FFS is different from the way a teacher teaches students in a formal school or an extension worker transfer technology. This standard model of the school with its emphasis on learner-centered and experiential learning initially tried for rice system is now being adopted for improvement in production of a range of food crops. van Duuren (2003) stated that IPM planners in Cambodia implemented a standard model by allowing farmers to observe, discover, analyze, and decide the steps they have to do in managing their fields.

This approach goes beyond disseminating technologies among farmers to the processes of discoveries and learning by doing in the field. FFS provides sufficient opportunities to small farmers to organize themselves for sharing their experiences regarding crop production, crop protection, irrigation techniques, pre and post-harvest technologies, marketing protection of environment in such a way that efficiently empower the farming community. FFS provides an alternative extension strategy which is more participatory in nature where farmers relate and share their experiences regarding integrated pest management IPM and try to reach to a decision in diverse ecological conditions (Mubashir et. Al, 2007). Keeping in view the tremendous effect of FFS on the

enhancement of skills and knowledge of farmers as well as EFS, the present study was designed to analyze farmers' participation in FFS as an alternative extension strategy to benefit resource poor farmers from the existing agricultural technologies.

MATERIALS AND METHODS

The population for the study consisted of all the FFS farmers in the study area, which comprised 7 districts. From each district 4 FFS were randomly selected. Ten farmers were selected at random from each FFS, thereby making a total of 280 farmer respondents. The data were collected with the help of pre tested interview schedules. Means, standard deviation, weighted score and rank orders were computed based on the frequency counts.

Table-I ***Mean, standard deviation and rank order of FFS activities based on the level of participation of farmer respondents in the training of crop production technology***

Crop production activities	Rank order	Score	Mean	SD
Nursery raising techniques	1	924	3.30	1.18
Soil analysis	2	800	2.86	1.30
Timely and balanced use of fertilizers	3	796	2.84	1.29
Seed rate	4	789	2.82	1.36
High yielding varieties	5	778	2.78	1.29
Sowing methods	6	741	2.65	1.18
FYM decomposition	7	707	2.53	1.23
Seed bed preparation	8	699	2.50	1.29

Tables 1 depict that majority of farmers' participation was seen in the learning of nursery raising techniques, soil analysis and timely and balanced use of fertilizers followed seed rate high yielding varieties and sowing methods. However, FYM decomposition and seed bed preparation were the least interested areas of farmers' participation. In case of rating, it was clear that participation level of the farmer respondents in the trainings of nursery raising techniques showed the trend of 'satisfactory' to 'good' and all other training aspects were ranged between 'fair' to 'satisfactory'. The highest interest of farmers in nursery raising may be due to the reasons that land holding in the study area is small and marginal, thus they want to get maximum benefit of it which is possible only by raising nurseries of various crops, vegetables, orchards, ornamental plants and forestry that give high return to the farmers even on small pieces of lands.

The findings of this study are supported by those of Brent et al. 2002 who stated that through the efforts of the FAO Global IPM Facility (GIF), the IPM FFS approach and with the support from the Deutsche Gesellschaft fuer Technische Zusammenarbeit (GTz), nearly 6,000 farmers and 400 extension agents have been trained through FFS in integrated production and pest management (IPPM) practices, covering over a dozen different crop species.

Table-II ***Mean, standard deviation and rank order of various activities of FFS based on the level of participation of farmer respondents in the training of crop protection technology***

Crop protection activities	Rank order	Score	Mean	SD
Seed treatment	1	843	3.03	1.35
Insect pests identification	2	830	2.96	1.23
Insect pests control by local recipes	3	766	2.74	1.25
Mass killing of insect pests	4	758	2.71	1.22
Insect pests management with Bio-Control	5	733	2.62	1.25
Manual pest control	6	695	2.48	1.23

Table 2 indicates that major forms of farmers' participation in the crop protection activities of FFS was observed in the activities of seed treatment, insect pests identification and insect pests control by local recipes followed mass killing of insects and insect pests management with biological control. The manual pest control appeared to be the least important area of farmers' participation. The above picture showed that farmer respondents rated their participation in the activities regarding seed treatment from 'satisfactory' to 'good' whereas, all other aspects of crop protection activities under FFS were rated as 'fair' to 'satisfactory'.

The importance given to seed treatment by the farmer respondents might be due to the reason that hilly areas of study region had more infestation of fungal and bacterial diseases as compared to insect pests which are

easy to control by seed treatment with lowest expenses on fungicides. Similarly, identification of insect pests through maintaining insects zoo in FFS help them know their mode of action and ultimately their control become easier as well as cheaper.

RESULT AND DISCUSSION

The above research findings are in accordance with those of Hamidullah et al. (2006) who stated that seed treatment should be encouraged to reduce the incidence of seed and soil born diseases and also partially coincide with those of Mancini et al. (2008) who reported that FFS farmers significantly improved their ability to identify cotton insects, to describe whether the insects were pests or predators, to describe the damage caused by the pest insects, and the predatory habits of beneficial insects after the IPM FFS training, whereas no significant changes were recorded for non FFS participants..

Table-III Mean, standard deviation and rank order of FFS activities based on the level of participation of farmer respondents in demonstrations

Demonstrations	Rank order	Score	Mean	SD
Spray techniques	1	964	3.44	1.12
Agro-eco-system-analysis (AESA)	2	937	3.35	1.16
Nursery raising	3	909	3.25	1.21
Field layout	4	814	2.91	1.18

Table 4 depicts that highest level of farmers' participation was noticed in the demonstrations of spray techniques, followed by agro-eco-system-analysis (AESA), and nursery raising under FFS activities. However, farmers' participation in field layout was ranked as the lowest. During AESA of a crop under FFS approach, all agricultural activities are undertaken by farmers themselves in order to observe how various phenomena occur in nature, then they compare and relate those observations with each other, draw some conclusions and thus learn things through discovery and learning by doing method. This showed that except field layout demonstrations, all other type of demonstrations ranged between "satisfactory" to "good" level of participation.

The highest level of farmers' participation in the demonstrations of spray techniques, and agro-eco-system-analysis (AESA) may be due to the increased interest in new means of learning techniques i.e learning by doing, discovery based learning and group dynamic activities.

The present research findings are supported by Tripp *et al.* (2005) who found that farmer Field School (FFS) approach could improve farmers' knowledge in pest identification and their timely management and also improve their understanding about agro-ecosystems (AESA).

CONCLUSION AND RECOMMENDATIONS

From the results it is concluded that majority of the farmer respondents actively participated in the discovery based learning processes of FFS that ultimately improved their knowledge and skills regarding crop production activities, crop protection activities and various demonstrations including **s**pray techniques, agro-eco-system-analysis (AESA), nursery raising and field layout. However, lower farmers'participation was observed in the learning process about FYM decomposition, Seed bed preparation, Insect pests management with Bio-Control, Manual pest control and Field layout which needs concretes efforts of the government to overcome the challenge and resultantly improve farmers' livelihood.

REFERENCES

Govt. of Pakistan, 2007. Economic survey of Pakistan, Finance Div. Econ. Advisor's Wing, Islamabad, Pakistan.

Hamid, J., M. Sajid, M. Ayaz, R. Asif and A. Nawaz, 2006. On-farm seed potato production using Farmers' Field School approach. (A guide for trainers). Hazara Agric. Res. Station, Abbottabad, KP, Pakistan.

Luther, G.C., C. Harris, S. Sherwood, K. Gallagher, J. Mangan and K.T. Gamby. 2005. Developments and innovations in farmer field schools and the training of trainers. A participatory research process. Blackwell Sci. Oxford. pp. 159–190

Mangan, J. and M.S. Mangan, 2003. FFS for tree crops: Learning with Farmer Field Schools. LEISA (Magazine on Low External Input and Sustainable Agric.). 19: 30-31

Mancini, F., A. J. Termorshuizen, J.L.S. Jiggins and A.H.C. van Bruggen. 2008. Increasing the environmental and social sustainability of cotton farming through farmer education in Andhra Pradesh, India. Agric. Syst. 96(1-3):16-25.

Habib, M., Zafarullah, M. Iqbal, K. Nawab and S. Ali. 2007. Effect of FFS on sugarcane productivity in Malakand Agency. Sarhad J. Agric 23 (4):1133-1137.

Simpson, B.M. and M. Owens 2002. "Farmer Field Schools and the future of agricultural extension in Africa. Global IPM Facility. FAO, Rome.

Tripp, R., M. Wijeratne and V.H. Piyadasa. 2005. What should we expect from farmer field schools? A Sri Lanka case study. World Dev. 33(10):1705-1720.

van Duuren, B. 2003. Report of consultancy on the assessment of the impact of the IPM program at the field level Integrated Pest Management farmer training project Cambodia. Royal Govt. of Denmark, Ministry of Foreign Affairs, Danida and Royal Govt. of Cambodia, Ministry of Agric. Forestry and Fisheries, National IPM Program. DAALI, Phnom Penh.