

## Farmers' Perception Regarding Dissemination of Improved Agricultural Technology through FFS in Tehsil Rawalpindi

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### Abstract

The agricultural sector is one of the major sectors of Pakistan's economy having lion share in the GDP. Hither to, there are many approaches applied in the country for smooth running of the extension services but unfortunately, none has changed the desired objectives. To disseminate the agricultural knowledge more efficiently and effectively extension workers have been using a variety of approaches. FFS is one of the agricultural extension approach introduced in some districts of Punjab province in 2005-06. Both public and private sectors have been investing a lot on the development of FFS. This current study was conducted to assess the role of FFS in transfer of upgraded agricultural technology among the farmers in Tehsil Rawalpindi. Simple random sampling was used according to the nature of the topic and objectives. A sample of 120 farmers, who were in collaboration with farmer field school, was taken to collect the data. The results showed that most of the farmers (38.33%) of the respondents joined FFS. An overwhelming majority (84.33-95.00%) of the respondents agreed about FFS trainings to be conducted on the suitable time and place. The FFS provide a chance for learning-by-doing, based on principles of non-formal education.

**Keywords:** Dissemination, FFS, Perception, Approaches.

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## INTRODUCTION

The agricultural sector is one of the pivotal sectors of Pakistan's economy, having the share of about 23.1% of the Gross Domestic Product (GDP) and provides occupation to 45% of the total workforce of the country. More than 70% of Pakistani population directly or indirectly depends on agriculture for their existence. Agriculture sector in our country occupies a prime and pivotal position in its economy (Govt. of Pak, 2010).

In Pakistan, agricultural extension amenities have conventionally been organized as part of the Provincial Ministry of Agriculture. Numerous extension models and approaches have been tried since freedom, containing the Village Agricultural and Industrial Development Programme (Village -AID Programme), Basic Democracies System (BDS), Integrated Rural Development Programme (IRDP) and Inputs at Farmers' Doorsteps Approach. Grounded on the undeviating approach, these programmes met limited achievement and were wild one after another. The existing Training and Visit (T & V) programme, while specifically concentrated on agriculture, also suffers from intrinsic

rigidities i.e. contact farmers to diffuse technical information to nearby farmers (Davidson *et al.*, 2005).

Government of the Punjab chalked out a comprehensive integrated situation plan to increase per acre production of crops in the province and introduced as innovative approach i.e. Farmers Field School (FFS) approach. It was introduced by Pakistan Agricultural Research Council (PARC), Government of Pakistan for cotton Integrated Pest Management (IPM) during 2002 and FFS for fruit and vegetables development (F&V) during 2005. This approach was also adopted by Punjab Government during 2004. Under this approach an intensive training has also been presented in last decade in many developing countries to encourage awareness and production enrichment with least use of insecticides for maintainable agricultural development (Bajwa, 2009).

The objective of FFS is to make farmers trained so that they can examine their production systems, recognize their chief problems and to test conceivable solutions finally identifying and accepting the practices most appropriate to their farming system. Knowledge is one of the most significant mechanisms of behavior and plays an important

role in the secret and explicit behavior of human beings (IFAD 1998). Once the farmer's knowledge is increased and he starts understanding his problems and agrees with the extension staff that farmer wants change it helps to grow positive attitude towards enhanced practices and thereby inspire an individual to take certain action in accommodating a new invention or any practice. The knowledge acquired enable farmers to adopt new improved technologies and improve their farm yield. By FFS method farmers go through a learning process in which they are offered with new technologies, new ideas, new conditions and ways to fight with the field problems.

As an extension method, the FFS concept does not involve that all farmers have to join FFS physical activity. Slightly, only a particular number of growers within same village or local farmers group are skilled in an informal school, where weekly meetings are held in a crop season. However, in order to transfer new information more speedily within the farming community, nominated farmers get extra skill based training to become farmer-trainers and are expected to establish field school within the group of people, with some support from public sources (Ali and Haider, 2012). In addition, all FFS trained members are motivated to share their knowledge and practices with fellow farmers of the local rural community. These farmers that are real grower of this technology transfer effects are assumed to bring about cost-effective knowledge diffusion and economic consistency issues that have hindered many public extension schemes in both developed and developing states of the globe (Quizon *et al.*, 2001).

The FFS were considered to tackle these difficulties and for the capacity building of farmers in the longer-term so that they could influence policy makers. The main objectives were to increase farmers' critical thinking and decision-making abilities, improve their command on IPM, and end dependency on insecticides as the main or special pest-control measure. To complete this, growers had to gain an understanding of the environmental values and methods leading pest population dynamics. The FFS provide a chance for learning-by-doing, based on principles of non-formal education. Extension agents or skilled growers facilitate the learning process, inspiring farmers to determine key agro-ecological ideas and improve IPM skills through self-discovery deeds practiced in the arena (Ooi, 1996).

## METHODOLOGY

The study was carried out in Rawalpindi district. Rawalpindi is one of important districts of the Punjab Province, Pakistan. The total area of the district is 5286 square km. It consist of seven tehsils namely Gujar Khan, Kahuta, Kotli Sattian, Kallar Syedan, Murree, Rawalpindi Town and Taxila. The data was collected from FFS, Fruit and Vegetable Development project (F&V). Six out of twelve (12) FFS dealing with F&V project were randomly selected for data collection. A sample of 120 farmers, who were in

collaboration with farmer FFS under Government F&V project, were taken to collect the data. Quantitative assessments were done by the open ended and close ended questions. Questions were prepared in English but were asked in the local language for proper understanding of the respondents. Outcomes were scrutinized through Statistical Package for Social Sciences (SPSS) in which expressive statistics was used for quick understanding.

## RESULTS AND DISCUSSION

Most (39.33%) of the respondents had education up to middle, only 5.00% of respondents were intermediate and the same were graduate and almost 10.83% of the respondents were illiterate. The number of years when a person spent in formal education is one of the most important determinants to increased farmers knowledge. Educated farmers usually have a better opportunity to access information on new agricultural technologies and are generally able to assimilate, to process and to use this information to improve productivity (Makone *et al.*, 2015). An over whelming majority (95.00%) of the respondents were regular farmers and almost all of them were married having small landholdings (up to 12.5 acres).

The farmer field school (FFS) approach that promotes group learning optimally from field observation and experimentation based on principles of adult education and training to farmers is seen as the single approach of agriculture extension that can meet these goals (Luther *et.al* 2005). The results revealed that most (38.33%) of the respondents joined FFS because it helps in solving their field problems, 34.16% of the respondents joined FFS because they found it interesting and slightly more than one-fourth (27.51%) of the respondents joined FFS because they want to increase their farm production (Table 1).

**Table 1. Distribution of respondents according to the reasons for joining FFS**

Reasons	Frequency	% age
Found interesting	41	34.16
Helpful in solving field problems	46	38.33
Increase Production	33	27.51
Total	120	100.00

About 96.4% of the respondents indicated that, the dissemination of agricultural technologies through supported farmer groups is effective and 2.7% showed that it is not effective (Soire *et al.*, 2016). In current study farmers were asked regarding their response about FFS trainings and the responses were displayed in the (Table 2) which indicated that an overwhelming majority (84.33-95.00%) of the respondents agreed about FFS trainings are conducted on the suitable time and place, SMS participation and use of A&V aids in meetings. Results are quite similar to (Bajwa, 2009).

**Table 2. Distribution of according to their response about FFS trainings**

Trainings	Yes		No		Total	
	F	%	F	%	F	%
selection of suitable time	114	95	6	5	120	100
selection of suitable place	113	94	7	5	120	100
SMS participation	101	84	19	15	120	100
Use of A&V aids	109	90	11	9	120	100

\*F= Frequency

The results presented in (Table 3), showed that most of the respondents (45.83%) were strongly satisfied with the seed selection training in FFS, 15.83% of the respondents were strongly satisfied with plant protection and plant management, 13.33% of the respondents were strongly satisfied with fertilizer application training, 11.67% of the respondents are strongly satisfied with weed control training, 6.67% of the respondents answered that they are strongly satisfied with marketing their product training, 5.83% of the respondents are strongly satisfied with training regards sowing. Furthermore, a fair majority (66.67%) of the respondents were partially satisfied with the sowing training in FFS, 47.50% of the respondents were partially satisfied with marketing, 43.33% of respondents are partially satisfied with plant management training, 40.00% of the respondents were partially satisfied with weed control training, 37.50% of the respondents were partially satisfied with fertilizer application training, 34.20% of the respondents answered that they are partially satisfied with plant protection training

and 21.67% of the respondents are partially satisfied with training regards seed selection. Moreover, 50.00% of the respondents were satisfied with plant protection, 45.00% of the respondents were satisfied with weed control training, 42.17% of the respondents were satisfied with fertilizer application training, 38.33% of the respondents were satisfied with pest management training, 32.50% of the respondents were satisfied with seed selection, 25.83% of the respondents were satisfied with sowing practices and 19.16% of the respondents were satisfied with marketing facility. However, 26.67% of the respondents were not satisfied with training regards marketing their product effectively, 6.67% of the respondents were not satisfied with training regards fertilizer application, 3.33% of the respondents were not satisfied with training regards weed control, 2.50% of respondents were not satisfied with training regards plant management and only a small number of respondents were not satisfied with training on sowing practices. Results showed one-fourth majority was unsatisfied regarding different ways of marketing their products. According to previous research, FFS approach improve livelihoods/human well-being (increase the crop productivity, income from farming also increased); poverty alleviation; improve sustainable land management (improved productivity of agricultural crops; improve soil properties and soil/reclamation conditions) (Adato and Dick, 2002). A previous study reported that output of farmers much less than from their investment, which took away the entire livelihood from them and made them more vulnerable (Haider *et al.*, 2016).

**Table 3. Distribution of respondents regards their satisfaction level about FFS trainings**

Recommendations	Strongly satisfied		Partially satisfied		Satisfied		Not satisfied		Total	
	F	%	F	%	F	%	F	%	F	%
Seed Selection	55	45.83	26	21.67	39	32.50	-	-	120	100
Sowing	7	5.83	80	66.67	31	25.83	2	1.67	120	100
Plant Protection	19	15.83	41	34.20	60	50.00	-	-	120	100
Pest Management	19	15.83	52	43.33	46	38.33	3	2.50	120	100
Weed Control	14	11.67	48	40.00	54	45.00	4	3.33	120	100
Fertilizer Application	16	13.33	45	37.50	51	42.50	8	6.67	120	100
Marketing	8	6.67	57	47.50	23	19.20	32	26.67	120	100

## CONCLUSION

It is noticed that (38.33%) of the respondents joined FFS because it helps in solving their field problems, 34.16% of the respondents joined FFS because they found it interesting. An overwhelming majority (84.33-95.00%) of the respondents agreed about FFS trainings are conducted on the suitable time and place, SMS participation and use of A&V aids in meetings. A fair majority (66.67%) of the respondents are partially satisfied with the sowing training in

FFS, 47.50% of the respondents are partially satisfied with marketing, 43.33% of respondents are partially satisfied with plant management training, 40.00% of the respondents are partially satisfied with weed control training.

## RECOMMENDATIONS

Government should continue FFS projects in future to provide more benefits to the farmers of the area even after the abolishment of F&V project in District. FFS staff must

also concern SMS in solving the farmer's problems. There is need that FFS staff must increase the use of A&V aids to make the lectures more interesting and to increase the retention power. Marketing is the main factor by which a farmer can earn profit so there is need that FFS staff must also trained farmers marketing techniques so they can sell their product effectively and efficiently.

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## CONFLICT OF INTEREST

There is no conflict of interest.

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