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FARMING SYSTEMS RESEARCH PROJECT: ITS STRENGTHS AND WEAKNESSES

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Nothing seems more crucial for a successful agricultural extension service than the availability of technologies to be disseminated among rural people that actually fit their needs and interests. Farming systems research project was based on the assumption that technology which fits the needs of farmers, is not available and needs to be developed locally through a multidisciplinary team of experts by applying an integrated approach to on-farm cropllivestock research through active farmer participation. The data revealed that the project had been very effective with regard to farmers' involvement in their problem identification, farmers' interactions with each other and with project personnel. The impact of the project had been relatively poor concerning aspects such as family living, farm income, women participation, adoption of improved farm practices, farmers' organizations, and farmers' participation in validation of technologies.

Key words: farmers' participation, farming systems research

INTRODUCTION

Agricultural extension services are likely to have a little or no impact on farm production when they deliver to farmers something which does not fit their real needs and interests. Experience has shown that too often agricultural extension efforts have failed because the technologies available to extension field staff (EFS) did not fit the local farming conditions. Tractors, for example, when introduced by EFS in places where there was a surplus of labour, small land holdings, and no capital, the extension programmes tended to fail (Axinn, 1988). Such a situation demands an extension approach which could generate technologies tailored to meet the needs of local farming conditions. Farming systems research (FSR) approach appeared to be one of such approaches which involves farmers themselves in the identification of their problems and testing the potential solutions under their own conditions, enhancing thereby innovation adoption (Kishindo, 1988). In rainfed areas of Bihar (India), FSR proved to be more successful in on-farm experiments of different technological packages in terms of profitability, sustainability, and acceptability (Sarans et al., 1992).

Farming systems research was first used in 1970s in different countries of the world (Hildebrand, 1986). The approach was used in the Fourth Livestock Development Project in Ethiopia in 1986, in several programmes associated with the International Rice Research Institute in the Philippines and in other Asian and African countries. It has also been employed by Ministries of Agriculture in many countries (Axinn, 1988). The approach aimed at improving the living style of small scale farm families who generally reap a disproportionately small share of the benefits of organized research, extension and other development activities. The approach involves a thorough understanding of farmers' situation through a multidisciplinary team of experts. Norman (1982) recognized this approach as farming systems research and extension (FSRJE) approach to technology generation, evaluation and delivery. It involves researchers, extensionists, and farmers who become partners in problem identification, generating potential solutions, testing solutions under farm conditions, evaluating solutions, and finally disseminating solutions among the farming community. It is based on active farmer participation and utilizes existing farmer organizations.

In Pakistan, farming systems research project (FSRP) which was based on FSRJE approach was started in 1987 at different locations of the Punjab in collaboration with the University of Agriculture, Faisalabad, Ayub Agricultural Research Institute, Faisalabad, and Livestock and Dairy Development Department, Punjab (Baloch, 1996). The project extended over six years and aimed at studying the farming system as a whole by applying an integrated approach to on-farm cropllivestock research through farmer participation. How for the project had been successful to achieve the desired objectives seems to be an important area to look into. The present paper, therefore, looks into the strengths and-weaknesses of the project.

MATERIAL AND METHODS

The study area comprised five villages of FSRP at Shahkot, district Sheikhupura. All the 80 contact farmers' (CFs) of the project were taken as respondents for the study. The data were collected

Table 1. Relative impact of FSRP as perceived by the respondents

Aspects	Impact										
	Very effective (x4)		Effective (x3)		Marginally effective (x2)		Less effective (x1)		Ineffective (x0)		Weighted mean
	No.	Score	No.	Score	No.	Score	No.	Score	No.	Score	
Farmers' involvement in problem identification	76	304	0	0	1	2	0	0	3	0	3.82
Farmers' interactions with each other	75	300	1	3	1	2	0	0	3	0	3.81
Farmers' interactions with project personnel	63	252	4	12	3	6	1	1	9	0	3.38
Farmers' involvement in livestock production and protection techniques	50	200	0	0	0	0	15	15	15	0	2.68
Farmers' participation in validation of technologies	50	200	0	0	0	0	6	6	24	0	2.57
Promotion of farmers' organizations	37	148	7	21	4	8	7	7	25	0	2.30
Adoption of improved farm practices	37	148	6	18	6	12	10	10	21	0	2.21
Women participation in farming	13	52	31	93	6	12	18	18	12	0	2.18
Farm income	26	104	13	39	7	14	13	13	21	0	2.12
Family living	26	104	13	39	6	12	14	14	21	0	1.97

with the help of an interview schedule. The respondents were interviewed by the second author personally. The data collected were analyzed by using simple percentages, where necessary weighted scores and finally weighted means were calculated to draw conclusions.

RESULTS AND DISCUSSION

Awareness of Respondents About the Existence of FSRP: Awareness of the respondents about the existence of FSRP can be regarded as an indicator of the project's success and its popularity in the area. All the respondents were found to be aware of the existence of FSRP. Moreover, all of them were aware of their own status as CFs of the project. The data further showed that a vast majority of the respondents (88.75%) had been CFs of the project for 4 to 6 years.

Farmers' Perception About the Impact of FSRP on Different Aspects of Farming: Farmers being the beneficiaries of the project, were considered to be the real and important source of information regarding the impact of the project on different aspects of farming (Table 1). The data presented in Table 1 showed that the project had been relatively more effective with regard to farmers' involvement in their problem identification, farmers' interactions with each other and with project personnel than other aspects. The impact of the project had been perceived as relatively poor especially in case of family living, farm income, women participation, adoption of improved farm practices, farmers' organizations, and participation of farmers in validation of technologies.

Respondents' Awareness and Adoption of Improved Practices Introduced by the Project Staff: The project staff introduced various farm practices. The respondents were asked about whether or not they knew/adopted the same (Table 2). The data presented in Table 2 revealed that the improved fodder variety (Mott grass) was found to be at the top with regard to awareness and adoption. The other

Table 2. Awareness and adoption of improved practices introduced by the project staff

Improved practices	Awareness		Adoption	
	No.	%	No.	%
Improved fodder variety (Mott grass)	80	100.00	65	81,25
Enrichment of crop residues through urea treatment	54	67.50	48	60.00
Mineral supplementation	55	68.75	49	61,25
Deworming and vaccination	75	93.75	70	87.50
Treatment of berseem seed with saline solution	52	65.00	47	58.75
Utilization of industrial byproducts/wastes	38	47.50	38	47.50
Use ofiple iple as a feed source	36	45.00	36	45.00
Use of citrus pulp as a feed source	47	58.75	45	56.25

Table 3. Relative impact of practices introduced by project staff on different aspects relating to animals as perceived by respondents

	Excellent-Ixd)		Good (X2)		Satisfactory (xl)		Poor (xO)		Weighted mean
	No.	Score	No.	Score	No.	Score	No.	Score	
Growth rate	40	120	7	14	8	8	25	0	1,77
Milk yield	40	120	7	14	8	8	25	'0	1,77
sexual maturity	17	51	19	38	13	13	31	0	1,27
Calving interval	16	48	17	34	15	15	32	0	1,21
Conception rate	16	48	15	30	16	16	33	0	1,17

important practices known to and adopted by respondents included deworming and vaccination of animals, mineral supplementation, enrichment of crop residues through urea treatment, and treatment of berseem seed with saline solution.

Impact of Practices Introduced by the Project Staff on Different Aspects Relating to Animals as Perceived by Respondents: The respondents were asked about the impact of the practices (if any) introduced by the project staff on different aspects relating to animals. The data in this regard presented in Table 3 indicated that the practices introduced by the project staff relating to animals had been perceived by the respondents as more useful in improving animal growth rate and increasing milk yield than other aspects.

Conclusions

1. The project had been relatively more effective in the areas like farmers' involvement in problem identification, farmers' interactions with each other and with the project staff, but was less effective in the areas such as farmers' participation in validation of technologies, adoption of improved practices, women participation in farming, improving family living, etc.

2. Among the practices introduced by the project staff, improved fodder variety (Mott grass) was found to be known to all respondents and adopted by a vast majority. Other important practices included deworming and vaccination of animals, mineral supplementation,

enrichment of crop residues through urea treatment, and treatment of berseem seed with saline solution. The practices introduced by the project staff had been perceived by the respondents as having positive impact on animal growth rate and milk yield.

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