

ANALYSIS OF FARM SERVICES CENTRES AS A NEW STRATEGY FOR SERVING FARMING COMMUNITY IN KHYBER PAKHTUN KHWA, PAKISTAN

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Abstract. Pakistan has fertile lands, favorable agro-ecological conditions and hardworking farmers but its per acre yield is lower as compared to the world averages. Many extension strategies have so far been launched in Pakistan to bridge the gap. A new strategy Farm Services Centre (FSC) was initiated in Khyber Pakhtun Khwa (KPK) in 24 districts for supplying quality farm inputs to the farming community, build farmers' capacity along with its rationale utilization at farms. FSC is a form of public-private partnership. The present study is therefore, conducted to assess a new strategy FSC for serving farming community in KPK, Pakistan in 2008-09. The analysis revealed that seeds (mean value= 2.827) of various crops and tractors with the mean value of 2.363 on rent basis were the most provided agricultural items under FSC. The data collected by "survey" method was analyzed and results indicated that fertilizer application methods with the mean value of 2.574 was of prime focus among capacity building and need assessment skills (mean value=2.644) were found significantly important for improvement in yield per acre.

Keywords: Farm Services Centre, Public-private partnership, Confidence building, Farmers' participation, Capacity building, Decision making, Inputs' management.

1. Introduction

The economy of Pakistan is Agro based and a great proportion of its population earns its living. (Government of N.W.F.P 2007-08). Contribution to GDP is 20.9% and engages 43.4% of the total work force. Agriculture contributes to growth as supplier of raw materials to industry besides serving as market for industrial products and also adds substantially to Pakistan's exports earnings. About 66.7% of country's populace resides in rural areas and is directly or indirectly linked with agriculture (Govt. of Pakistan, 2007). The crop production in Pakistan is among the lowest compared to the world's averages (Khan, 2004) which can be increased substantially by applying improved crop management practices by farmers at their farms. The Extension workers facing numerous challenges in the 21st century. The most important one is how to develop a sustainable agricultural extension approach that impart technical knowledge, helps small scale farmers, organize farmers for sharing production and protection technologies, marketing empowering the farming community (David, 2007). To cope with the challenge and shift the paradigm, many extension approaches were used in Pakistan for increasing productivity in general and profitability in particular. Agricultural Extension has been successful in providing technical advice and transfer of improved technologies to the farmers whereas, the crucial needs of the farmers are material based, such as seed, fertilizers, machinery etc. Therefore, Government of KPK initiated a new extension strategy FSC during 2000-01 to improve farmers' livelihood. It provides all essential farm inputs including seeds, fertilizers, pesticides and farm machinery to farming community at their door steps. FSC consists of a group of farmers who are facilitated by an extension worker in conducting training and inputs management activities. The farmers are registered in FSC and registered farmers' constitutes general body (GB) of the FSC. As FSC provides opportunity to its registered farmers to identify their problems, prioritize them and finally find out the most suitable. The training in FSC seeks to assist farmers in developing their ability to make critical and

informed decisions that will render their crop production systems more productive, profitable and sustainable (Khisa, 2003). The present investigation intended to assess FSC for its ultimate benefits to the farming community in KPK province, Pakistan.

2. Materials and Methods

The population for the study consisted of all the FSC farmers in the study area. Two districts of the KPK i.e Swabi and Lakki Marwat were randomly selected. On the basis of Fitzgibbon *et al.* (1987) only 2 FSCs out of 05 were selected at random from each district, a total of 491 farmers responded to the questionnaire (217 from Swabi and 274). The primary data were collected by the researcher himself by using “survey” method. For this purpose 25 farmers were interviewed. After interval of fifteen days, the same personnel were re-interviewed who were not included in the sample. The responses of both the interviews were compared with one another. The data were analyzed through the computer soft ware Statistical Package for Social Sciences (SPSS).

3. Results and Discussion

Table I: Frequency distribution, mean, standard deviation and rank order of the farmer respondents regarding agricultural inputs provided under FSC

Inputs	Response		Extent of provision										Mean	SD	R.O
	Yes		1		2		3		4		5				
	n	%	n	%	n	%	n	%	N	%	n	%			
Seed	491	100.0	34	6.9	67	14.0	347	70.7	36	7.3	7	1.4	2.827	0.718	1
Fertilizer	491	100.0	53	10.8	95	19.0	293	59.7	37	7.5	13	2.8	2.719	0.854	3
Pesticides	491	100.0	57	11.6	61	12.0	327	66.6	37	7.5	9	1.8	2.756	0.824	2

Source-Field data n=491 S. D= Standard Deviation R. O= Rank Order

Scale: To some extent=1 Below average=2 Average =3 Above average=4 To high extent=5

Results in Table I shows that under FSC the most provided agricultural input was seed as reported by farmer respondents that ranked 1st for different crops with mean 2.827 and SD 0.718, followed by pesticides and fertilizers with means 2.756 and 2.719 with SD 0.824 and 0.854 respectively. The more focus on seed was due to lack of awareness among the farming community regarding quality of certified seeds. Therefore, FSC focused on the provision of seeds. The present study results are supported with those of Qamar. (2002); Iesalniaks and Leimane, (2007) who concluded that improved the quality of technical knowledge and supply of inputs through public private partnership. It enabled farmers’ body to buy inputs through their organization on wholesale rates to get high quality inputs at reasonable rates. Research studies showed that when inputs were made available, the yield increased Mesic *et al.*, (2007).

Results revealed that now seed and pesticides availability is satisfactory due to the efforts of FSCs. Farmers adopted the use of balanced fertilizers which helpful in obtaining potential yield so their demand was enhanced which resulted in hampering of smooth supply and timely availability of these inputs.

Table II: Frequency distribution, mean, standard deviation and rank order of the respondents concerning farm machinery provided under FSC

Farm machinery	n/%	Response	Extent of provision					Mean	SD	R.O
			1	2	3	4	5			
Tractor	n	491	99	141	233	10	8	2.363	0.880	1
	%	100.0	20.2	28.7	47.5	2.0	1.6			

Bulldozers	n	491	341	133	17	0.0	0.0	1.340	0.542	6
	%	100.0	69.5	27.1	3.5	0.0	0.0			
Thresher	n	491	147	207	118	10	9	2.037	0.887	2
	%	100.0	29.9	42.2	24.0	2.0	1.8			
Maize Sheller	n	491	283	166	39	3	0.0	1.515	0.668	4
	%	100.0	57.6	33.8	7.9	0.6	0.0			
Wheat reaper	n	491	273	166	52	0.0	0.0	1.550	0.678	3
	%	100.0	55.6	33.8	10.6	0.0	0.0			
Ridger	n	491	315	141	35	0.0	0.0	1.430	0.623	5
	%	100.0	64.2	28.7	7.1	0.0	0.0			

Source-Field data n=491

Scale: To some extent=1 Below average =2 Average =3 Above average =4 To high extent=5

Table II indicates that provision of tractor on rent basis ranked 1st among the farm machinery provided to farmer respondents under FSC with mean 2.363 and SD 0.880. However, thresher and wheat reaper stood on 2nd and 3rd in rank as reported by farmer respondents. The reason for greater demand of tractors might be due to the crop intensification, heavy use in land reclamation and transportation of agricultural produce. Whereas thresher and wheat reaper are used once a year, so their demand was comparatively lower.

Similar findings were observed by Rehman *et al.*, (2007) and Khan *et al.* (2009).

Table III: Frequency distribution, mean, standard deviation and rank order of the respondents regarding capacity building in various areas under FSC

Capacity building regarding	n / %	Response	Extent of provision					Mean	SD	R.O
			1	2	3	4	5			
Ploughing methods	n	491	83	184	136	67	21	2.509	1.058	3
	%	100.0	16.9	37.5	27.7	13.6	4.3			
Storage skills	n	491	92	172	135	68	24	2.511	1.094	2
	%	100.0	18.7	35.0	27.5	13.8	4.9			
Fertilizer application methods	n	491	86	168	136	71	30	2.574	1.119	1
	%	100.0	17.5	34.2	27.7	14.5	6.10			

Source-Field data n=491

Table III reveals that hundred percent farmer respondents reported that their capacity was built in different methods under the umbrella of FSC. However, capacity building in fertilizer application skills ranked 1st with mean 2.574 and SD 1.119, followed by Storage skills and Ploughing methods which stood 2nd and 3rd respectively. The fertilizer application methods were the top priority of the farmer respondents. Furthermore, proper application of fertilizers to the crops leads to the achievement of a bumper crop.

The findings of this research are supported with those of Shah *et al.* (2009) who stated that fertilizers used in solution recipe proved significantly better and increased yield/returns than those of other methods.

Table IV: Frequency distribution, mean, standard deviation and rank order of the respondents regarding skill development in various areas under FSC

Skills	n / %	Response		Extent of provision					Mean	SD	R.O
		Yes	No	1	2	3	4	5			
Pesticides application skills	n	491	-	94	176	126	74	21	2.495	1.092	6
	%	100.0	-	19.1	35.8	25.7	15.1	4.3			
Seed storage skills	n	491	-	89	169	128	73	32	2.572	1.139	5

	%	100.0	-	18.1	34.4	26.1	14.9	6.5			
Need assessment skills	n	491	-	90	154	126	83	38	2.644	1.184	1
	%	100.0	-	18.3	31.4	25.7	16.9	7.7			

Source-Field data n=491

Table IV reveals that hundred percent farmer respondents received different skill development trainings under the umbrella of FSC and ranked the need assessment skills at 1st with mean 2.644 and SD 1.184. The need assessment skills were the top priority of farmers in the study area. The reason for this trend might be for putting the potential at the right stream and avoid extra expenditures on undertaking unnecessary activities. Furthermore, skillfully planned programs lead to successful achievement of the intended objectives.

The findings of this research are supported with those of Bell *et al.* (1999), World Bank, (1997) and World Bank, (1999) who stated that other benefits of partnership include resources and skill complementarily, improved needs assessment, increased flow of knowledge, and facilitation for market-led and demand-driven approach.

4. General Discussion

Results show that FSCs are functioning excellently as reported by majority of the farmer respondents in the study districts. These organizations successfully providing quality farm inputs at reasonable prices to the farming community. All the inputs were arranged by the management committee of the FSCs. Moreover these bodies nicely built up farmers' capacity in different skills including need assessment, program planning, budding and grafting, farm management, seed storage and pesticides application. The capacity building in these aspects implied that it was probably due to the positive correlation of FSC with the potential skill and knowledge of the farmers. Similarly, farmers got opportunity under this forum to learn regarding various farm activities. The highest capacity building in fertilizer application and storage skills was due to the improvement in the potential managerial capabilities of the respondents. To benefit the rest of the people, it is modestly suggested that number of FSCs may be increased in all districts of the country as encouraging results were obtained from current study.

5. References

- [1] Bell, M. A., R. Raab, C. Edmonds, C. Chung and S. Morin. *New multi-sectoral partnerships*. IBC's 4th Asian International Rice Conference. Cebu Island, Philippines. 1999. 28-29 October.
- [2] David, S. *Learning to think for ourselves: knowledge improvement and social benefits among farmer field school participants in Cameroon*. J. Int. Agri. and Ext. Edu, 2007. 14(02): 35-49.
- [3] Fitzgibbon, Carol. T & Lynn, L. M. *Table for determination of sample size from the given population. How to design a programme evaluation*. Newbury Park CA: Sage publications. 1987.
- [4] Govt. of N.W.F.P. *Crop statistics N.W.F.P*, Crop Reporting Services. Agric. Livestock & Coop: Dept. 2007-08
- [5] Govt. of Pakistan. *Economic survey of Pakistan*, Finance Division, Economic Advisor's wing, Islamabad. 2007
- [6] Iesalnieks, I. and I. Leimane. *Rural technology transfer in transition economies in Latvia. Under Project Agro economic policy analysis of the new member states, the candidate states and the countries of the western Balkan*. Ceec Agri-Policy. 2007.
- [7] Khan, N., Shahzad., Idrees, M., Shah, M., Ali, A and Niaz, M. *The tractor impact in the rural area of district Peshawar*. Sarhad J. of Agric. 2009. 3(25):509-515.
- [8] Khan, S.R.A. *Wheat Production Scenario*. Daily Dawn. 2004. Jan 12: 3
- [9] Khisa, S. G. *Overview of farmer field schools approach in Kenya*. In K. R. Sones, D. Duveskog, and B. Minjauw (Eds.), *Farmer Field Schools: The Kenyan experience*. Report of the Farmer Field Schools stakeholders' forum. ILRI, Nairobi, Kenya, 2003. pp 3-10.

- [10] Mesic, Ž, Žutinic, Đ and Wibberley, J. *Rural technology transfer in transition economies in Croatia. Under Project Agro economic policy analysis of the new member states, the candidate states and the countries of the western Balkan.* Ceec Agri-Policy. 2007.
- [11] Qamar, K. M. *Global trends in agricultural extension: challenges facing Asia and the Pacific region.* Ext. Edu. and Communication Service FAO Res. Ext. and Trg. Div. Rome, Italy. 2002.
- [12] Rehman, G, Vincze, M, Kölcsey, A and Kerekes, K. *Rural technology transfer in transition economies in Romania. Under Project Agro economic policy analysis of the new member states, the candidate states and the countries of the western Balkan.* Ceec Agri-Policy. 2007.
- [13] World Bank. *Rural Development: From Vision to Action.* Sector Strategy, Environmentally and Socially Sustainable Development Studies and Monographs Series 12. Washington, D.C. 1997.
- [14] World Bank. *Comprehensive Development Framework. Worldwide.* In *Global Consultation on Agricultural Extension.* Rome: FAO. 1999