



ROLE OF MODEL FARM SERVICES CENTERS IN IMPROVING FARMERS' ACCESS TO AGRICULTURAL INPUTS AND FARM MACHINERY

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ABSTRACT

Model Farm Services Centers (MFSCs) approach was launched in Khyber Pakhtunkhwa to increase the accessibility of farmers to agricultural inputs including farm machinery during the year 2008. The present study was conducted at the Institute of Agri. Extension and Rural Development, University of Agriculture Faisalabad, Pakistan to assess the role of these MFSCs to meet the purpose. The population for study consisted of member farmers of the MFSCs in four districts (Peshawar, Swat, Abbotabad and Swabi) having different ecological mix cropping zones. From each district, 100 member farmers of MFSCs were randomly selected thereby making a total of 400 respondents from the entire population. The data were collected with the help of a validated and reliable interview schedule through a research team comprising four members who were properly trained for the purpose. The analysis of the data reveals that supply of fertilizers to the respondents through MFSCs ranked 1st with mean value 3.24 closely followed by supply of seed and pesticides which were ranked 2nd and 3rd with mean values 3.07 and 3.09, respectively. Under farm machinery, supply of hand sprayers to the farming community through MFSCs ranked 1st with mean value 2.76 closely followed by supply of tractors and mould board ploughs which were ranked 2nd and 3rd with mean values 2.40 and 2.57, respectively. Farm machinery was the weakest component of MFSCs; most of the machinery available at the MFSCs was nonfunctional and was of no utility to the farmers. The study recommends that sufficient farm machinery (functional in all respects) may be given to MFSCs to be rented out to the farming community which could be of benefit to the farmers. Moreover, timely repair and maintenance of farm machinery, provision of more funds to MFSCs, timely availability of inputs in sufficient quantity, monitoring of farm services and supply of inputs to farmers at union council level may be some important steps for improvement of existing functioning of MFSCs.

KEYWORDS: Model farm services; performance; farm inputs; machinery; farmers excess; Pakistan.

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INTRODUCTION

Pakistan's economy is based on agriculture which offers immense opportunities to overwhelming majority of the populace to earn its livelihood. Agriculture accounts for over 21% of GDP and employs 45% of the total work force. It contributes to growth as supplier of raw material to industry besides serving as market for industrial products and also shares substantially to Pakistan's exports earnings. Nearly 62% of country's population lives in rural areas and is directly or indirectly linked with agriculture for their livelihood (GoP, 2013).

The nature has bestowed us a wide agro-climatic range which is fit for field crops and also for fruits. However, crop productivity in Pakistan is lower as compared to the world's averages (Khan, 2004). This low production is mainly due to lack of knowledge on the part of farmers about improved agricultural technologies.

It may be the result of farmers' lack of interest, non-involvement and lack of participation in planning and implementation of different agricultural programmes. In this context, Khan (2006) argues that gains in yield and knowledge can be achieved through participation of farmers in the preparation and implementation of various agricultural extension programmes. It calls for concerted educational efforts for capacity building of farmers to fully utilize agricultural resources through exploiting the potential yield of crops not only to feed the rapidly growing population but also to earn reasonable foreign exchange for the country.

To achieve the objective, many extension approaches have so far been tried but none of them seems to be fully effective in enhancing farm productivity in general and profitability in particular. Therefore, Government of Khyber Pakhtunkhwa adopted the Model Farm

Services Centers (MFSCs) approach in the year 2008 in all 24 districts of the province to strengthen the existing approach introduced by the Department of Agriculture (Extension), Government of KPK in 2001 with the name of Farm Services Centers (FSCs).

MFSCs approach was launched to increase the accessibility of farmers to extension services firstly by establishing the FSCs and then further strengthening some of them through setting up MFSCs. These MFSCs were established to bring various wings (agriculture extension, research, water management, livestock/poultry and plant protection) under one roof so that hassle-free services could be offered to the farming communities. The MFSCs were established with the mandate to provide quality inputs, farm machinery/implements better transfer of technology, efficient marketing system, and facilitation of the farmers in resolving their agricultural conflicts and subsequently getting autonomous entities at district level. According to the provincial agricultural policy 2005, the farming community was granted more autonomy in its roles and responsibilities in terms of running these MFSCs by themselves. The concept of MFSCs was based on the idea that farmers who are generally resource-thirsty be provided with a platform where they can collectively pool their resources. In turn, the government provided matching grant and endowment funds to help them manage the service needs of member farmers.

MFSCs are a type of public and private partnership which aims at accomplishing a mutually decided goal. Any collaborative effort between the public and private sectors, in which each sector contributes to the planning, management of resources, and various activities needed to achieve a mutual objective is known as public-private partnership. These partnerships are constructive means of enhancing the production of goods, services and technologies that would not otherwise be produced by either sector acting alone (Ojha and Morin, 2000, Govt. of Pak., 2006).

MATERIALS AND METHODS

This study was conducted at the Institute of Agri. Extension and Rural Development, University of Agriculture, Faisalabad, Pakistan during the year 2014. The population for study consisted of the member farmers of MFSCs in the four districts (Peshawar, Swat, Abbotabad and Swabi) having different ecological mix cropping zones. From each district 100 member farmers of the MFSCs were randomly selected, making a total of 400 farmer respondents from the entire population. The survey method was used for data collection. The data were collected with the help of a validated and reliable interview schedule through a research team comprising four members who were properly trained for the purpose. The interview schedule consisted of both open and close ended questions. A five point Likert scale was also used in certain questions. The collected data were analyzed using Statistical Package for Social Sciences (SPSS).

RESULTS AND DISCUSSION

Improvement in farmers' access to agricultural inputs through MFSCs

The results (Table 1) reveal that a vast majority of the respondents reported that their access to fertilizers 93.2% and seed (88.2%) respectively has been improved under MFSCs. Most of the respondents rated the improvement from medium to high category. However, a good number (45.0%) of the respondents reported no improvement with regard to pesticides. It means that provision of pesticides through MFSCs needs improvement.

In order to rank various inputs based on their access, weighted scores were computed by multiplying the score values allotted to each category of the scale with the frequency count. The weighted scores, mean values, standard deviation and rank order are presented in Table 2.

Table 1. Extent of improvement in respondents' access to agricultural inputs through MFSCs.

Inputs supplied	Very low		Low		Medium		High		Very high		No improvement	
	f	%	f	%	f	%	f	%	f	%	F	%
Seed	10	2.5	69	17.3	170	42.5	94	23.5	10	2.5	47	11.8
Fertilizers	5	1.3	64	16.0	154	38.5	137	34.3	13	3.3	27	6.8
Pesticides	11	2.8	29	7.3	111	27.8	68	17.0	1	0.3	180	45.0

Table 2. Mean, standard deviation, weighted scores and rank of inputs supplied through MFSCs.

Inputs supplied	WS	Mean	SD	Rank
Fertilizers	1208	3.24	0.82	1
Seed	1084	3.07	0.83	2
Pesticides	679	3.09	0.81	3

The data (Table 2) indicate that supply of fertilizers to the respondents through MFSCs was ranked 1st with mean value of 3.24 closely followed by supply of seed and pesticides with mean values of 3.07 and 3.09, respectively. The mean values show that inputs supplied through MFSCs fell between medium and high categories with a tendency towards medium category.

The highest ranking given to fertilizers by the respondents may be due to comparatively lower prices at MFSCs. High ranking may also be due to enough trust of farming community in the public organizations as well as the quality they provide. These results are in accordance with those of Michael (2008) who stated

that under public-private partnership, farmers have coordinated to achieve the volumes necessary for agro-processors, and in return have got access to affordable credit, extension services to meet quality standards, specified agricultural inputs and secure purchasing agreements.

Improvement in farmers’ access to farm machinery through MFSCs

Provision of farm machinery on rent basis to farmers is another important function of MFSCs. Therefore, MFSCs were equipped with needed farm machinery including tractors and other implements to be used by the farmer. The data (Table 3) reveal that majority

Table 3. Extent of improvement in respondents’ access to farm machinery through MFSCs.

Farm machinery	Very low		Low		Medium		High		Very high		No improvement	
	F	%	F	%	F	%	F	%	F	%	F	%
Tractor	42	10.5	39	9.8	43	10.8	27	6.8	2	0.5	247	61.8
Wheat thresher	28	7.0	30	7.5	51	12.8	7	1.8	1	0.3	283	70.8
Maize sheller	28	7.0	23	5.8	43	10.8	3	0.8	1	0.3	302	75.5
Rabi drill	26	6.5	21	5.3	3	0.8	2	0.5	1	0.3	347	86.8
Kharif drill	27	6.8	17	4.3	4	1.0	0	0.0	1	0.3	351	87.8
Wheat reaper	28	7.0	15	3.8	4	1.0	1	0.3	0	0.0	352	88.0
Ridger	31	7.8	20	5.0	34	8.5	1	0.3	1	0.3	313	78.3
Trolley	29	7.3	19	4.8	39	9.8	3	0.8	1	0.3	309	77.3
Bulldozer	13	3.3	3	0.8	7	1.8	3	0.8	0	0.0	374	93.5
Rotavator	28	7.0	23	5.8	28	7.0	3	0.8	1	0.3	317	79.3
Mould board plough	16	4.0	29	7.3	71	17.8	6	1.5	1	0.3	277	69.3
Hand sprayer pumps	10	2.5	51	12.8	95	23.8	25	6.3	1	0.3	218	54.5

(ranging from 54.5-93.5%) of the respondents perceived that their access to farm machinery through MFSCs has not improved. It was observed that farm machinery was the weakest component of MFSCs which needs special attention of the concerned authorities. Most of the machinery available at MFSCs was out of order. Based on the data, ranking of various farm machinery according to their access to farmers was done. The results (Table 4) indicated that supply of hand sprayers to the farming community through MFSCs was ranked 1st with mean value 2.76 followed by supply of tractor and mould board plough with mean values of 2.40 and 2.57, respectively.

The mean values show that by and large farm machinery supplied through MFSCs fell between low and medium categories with majority of the items tending towards low category. Some farm machinery supplied through MFSCs even fell between very low and low categories. It was further observed that most of the machinery provided to MFSCs was not operational, it was just dumped. The data further showed that supply of farm machinery through MFSCs was perceived to be poor. Therefore, this aspect of MFSCs was quite disappointing and needs special attention by the concerned authorities.

Similar results have been reported by Haq (2009) who concluded that supply of tractor under the umbrella of FSCs was ranked 1st with regard to farm machinery provided to farmers. However, provision of thresher and wheat reaper were ranked 2nd and 3rd by the respondents.

Table 4. Mean, standard deviation, weighted scores and rank of farm machinery supplied through MFSCs.

Farm machinery	WS	Mean	SD	Rank
Hand sprayers	502	2.76	0.78	1
Tractor	367	2.40	1.11	2
Mould board plough	316	2.57	0.81	3
Wheat thresher	274	2.34	0.94	4
Maize sheller	220	2.24	0.94	5
Trolley	201	2.21	0.97	6
Ridger	182	2.09	0.95	7
Rotavator	175	2.11	0.96	8
Rabi drill	90	1.70	0.89	9
Kharif drill	78	1.59	0.81	10
Wheat reaper	74	1.54	0.74	11
Bulldozer	52	2.00	1.13	12

CONCLUSIONS AND RECOMMENDATIONS

The results of the study show that supply of fertilizers to the respondents through MFSCs was ranked 1st with mean value 3.24 closely followed by supply of seed and pesticides with mean values 3.07 and 3.09, respectively. Under farm machinery, supply of hand sprayers to the farming community through MFSCs

was ranked 1st with mean value 2.76 closely followed by supply of tractors and mould board ploughs which were ranked 2nd and 3rd with mean values 2.40 and 2.57, respectively. The study concludes that farm machinery was the weakest component of MFSCs. Most of the machinery available at the MFSCs was nonfunctional and was of no utility to the farmers. Therefore, it is recommended that sufficient farm machinery (functional in all respects) may be provided to MFSCs to be rented out to the farming community which could be of benefit to the farmers. Moreover, timely repair and maintenance of farm machinery, provision of more funds to MFSCs, timely availability of inputs in sufficient quantity, monitoring of extension farm services and supply of inputs to farmers at union council level, may be some other important steps for improvement of existing functioning of MFSCs.

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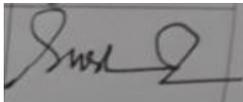
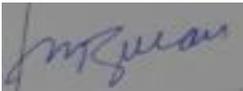
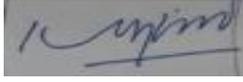
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CONTRIBUTION OF AUTHORS

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2.	Ijaz Ashraf	Prepared data collection instrument	
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4.	Amir Khatam	Collected data	