Study of Extension Teaching Methods Adopted through Crop Maximization Project: A Case Study of Sindh Province

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Abstract: Farmers' decisions to adopt a new agricultural technology depend on complex factors. One of the factors is farmers' perception. Ministry of Food and Agriculture (MINFA) launched an integrated development programme entitled "Crop Maximization Project (CMP)" in 15 districts of the country. A successful extension teaching method can play a vital role to transfer the technology to the farming community. The role of the extension agent cannot be ignored for dissemination of information at field level. This study was conducted six districts of Sindh province comprising Mirpurkhas, Sanghar, Shaheed Benazirabad, Naushahro Feroze, Khairpur and Larkana. Five villages were selected from the each district through multistage sampling techniques. Ten famers were selected from each village. Thus making a sample of 300 farmers was randomly selected for the study. A well structured interview schedule was used to collect information from the small farmers on their personal and socio-economic characteristics and effectiveness of extension teaching method at farm level. Statistical techniques like mean scores and percentages were used to analyze the data. The findings of the study showed that majority 35% of the small farmers were youth having age group (26-35 years). About 57% of the respondents were married; majority (40%) maintained a range of small farmers having land 6-12 acres. 45% of the respondents having their primary education. Almost 47% of the respondents were experienced between 6 to 10 years. The result of the study showed that land management practices and selection and sowing of certified seed at proper time ranked highest in the order of acquiring knowledge. The majority 80% farmers perceived farmers field school, while 70% farmers were identified result demonstration, 68% farmers through method demonstration as the extension teaching method used by extension personnel. It is recommended that farmers should be trained through farmer's field school for the adoption of the technology at field level. Crop maximization project should be extended to other districts of Sindh province and knowledge of the farmers should be enhanced through extension teaching methods for crop productivity enhancement and better livelihood for the farming community.

Keywords: Extension Teaching Method, Crop Maximization, Small Farmers, Adoption.

INTRODUCTION

Farmers' decisions to adopt a new agricultural technology depend on multifarious factors. One of the factors is farmers' perception. Alonge and Martin (1995) [1] found that farmer's perceptions regarding the compatibility of sustainable practices with their farming systems appeared as the best predictors for adoption of agriculture practices. If farmers are to adopt sustainable agricultural practices, the farmers first need to consider that the practices are important. Therefore, determine farmers' perceptions and identify the socioeconomic characteristics and information-seeking behavior that influence those perceptions should be the preliminary step in developing agriculture extension outreach programs to support sustainability among farmers and rural population [2]. Hence, there is a need to identify what farmers' perceptions are with regard to applying selected agricultural practices. Therefore, this study proposed to identify farmers' perceptions on selected agricultural practices and the extent to which various socioeconomic and other factors are linked with their perceptions. Ministry of Food and Agriculture (MINFA) initiated an integrated development programme entitled "Crop Maximization Project (CMP-II)" in 15 districts of the country; simultaneously the project was launched in Sindh province which was aimed at providing agriculture technology and inputs for productive enhancement and provide revolving fund for the financial assistance of the farmers in the project area. Under an agreement, the MINFA was responsible in providing funds in the tune of Rs 299.89 million to ZTBL for onward lending to the project farmers to meet the input requirements for various crops (GOP, 2008) [3]. The farmers were also provided through establishing district project offices in various district of Sindh provinces where agriculture officers provided technical knowledge for agriculture practices to the

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farming community of Sindh province. Keeping in view the importance of wheat crop for food security, the government of Pakistan had made a comprehensive effort to enhance wheat productivity and overall wheat production to meet growing needs of increasing population and having surplus for export as well. Federal Agriculture Department of the Pakistan launched a project in 2006 entitled "Targeting food security through productivity enhancement of wheat in CMP-II Project". A successful agriculture extension teaching method can play a fundamental role to transfer of agriculture technology to the farming community, the role of the extension worker cannot be ignored for dissemination of information at farm level. Through the Crop Maximization Project (CMP-II) the agriculture extension teaching methods, tools and techniques were used to enhance crop production of wheat crop of small farmers. The study was designed to determine the farmers awareness regarding agriculture practices disseminated through extension teaching methods in the project villages of Sindh province. Therefore the study was also conducted to assess the impact of the agriculture extension teaching methods on the adoption of crop productivity at farm level. The main objective of the study was to analyze the socio-economic and demographic characteristics of the respondents and to assess the impact of the agriculture extension teaching methods.

METHODOLOGY

This study used a descriptive research methodology, the universe of study was consisted of six districts of Sindh province including Mirpurkhas, Sanghar, Shaheed Benazirabad, Naushahro Feroze, Khairpur and Larkana. From each district five villages were selected through multistage sampling techniques. Later on ten famers were selected from each village. Thus making a sample of 300 farmers was randomly selected from the study area. A well structured questionnaire and interview schedule was used to collect relevant information from the small farmers who were involved in the project activities and their personal and socio-economic characteristics and efficacy of extension teaching method at farm level. Statistical techniques like mean scores and percentages were used to analyze the data.

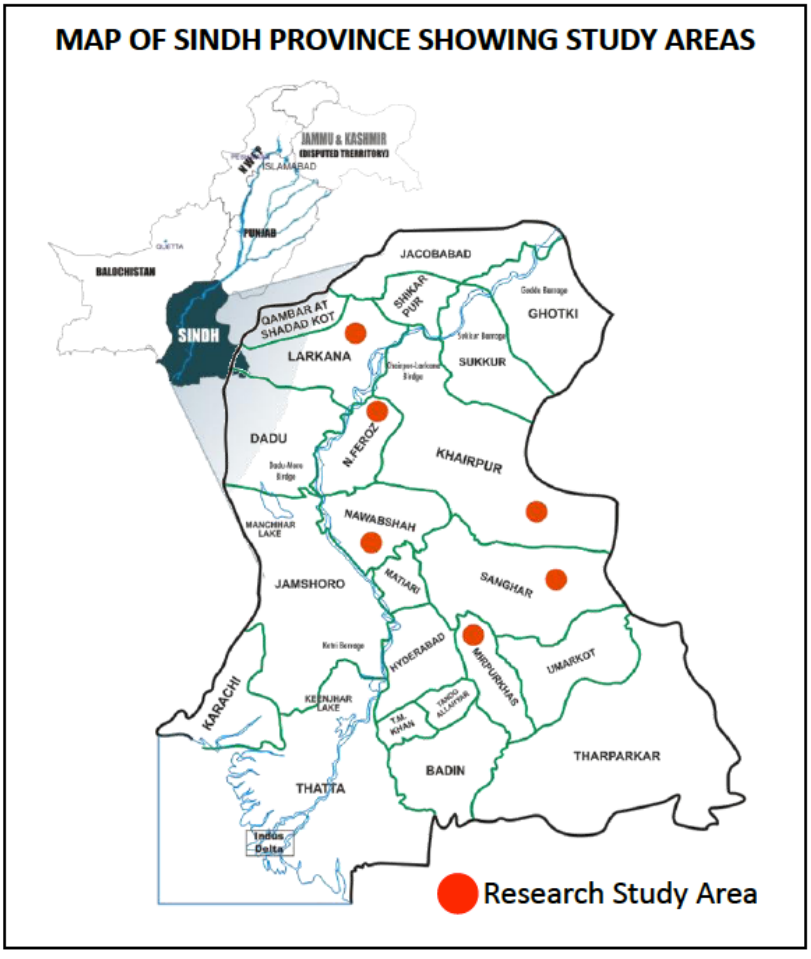

Table 1: Socio-Economic and Demographic Characteristics of the Small Farmers (N = 300)

Socio-demographic characteristics	Frequency	%
Age		
Less than 25 years	85	28
26 to 35	105	35
36 to 45	55	18
46 to 55	30	10
56 years and above	25	8
Marital Status		
Single	130	43
Married	170	57
Size of Land Holding (acres)		
1 to 5	80	27
6 to12	120	40
13 to 25	70	23
More than 26	30	10
Level of education		
Illiterate	80	27
Primary education	135	45
Secondary school education	85	28
Farming experience		
Less than 5 years	68	23
6 to 10 years	140	47
More than 11 years	92	31

RESULTS AND DISCUSSION

Table **1** show that about 35% of the small farmers were youth having age group (26-35 years), while 28% of the respondents were age group having less than 25 years. The finding also showed that 57% of the respondents were married; a large percentage (40%) maintained a range of small farmers having land 6-12 acres. The level of education of the respondents showed that 45% of the respondents having their primary education, while 28% were secondary school education. In addition, the findings showed that 47% of the respondents were experienced between 6 to 10 years, however, 31% farmers having their experience more than 11 years.

The data in the Table **2** show that a 90% each of the respondents were aware of land management practices, while 91% were aware and adapted selection and sowing of certified seed at proper time, a majority 88.33%, 85.00, 83.33 and 80.00 farmers were familiar and adapted irrigation management practices, integrated plant nutrition management practices, integrated plant management (IPM) system and use of herbicide respectively, while 76.67 and 73.33 percent were aware of fertilizer application and post harvest management practices respectively.

The data in Table **3** show the extension teaching methods as perceived by small farmers. The data shows that (80%) farmers perceived farmers field school, while 70% farmers were identified result demonstration, 68% farmers through method demonstration as the extension teaching method used by extension personnel. However, 65%, 63% and 56% farmers perceived farmers field day, timely advised through literature and farm visit respectively.

CONCLUSION

Majority 35% of the small farmers were youth having age group (26-35 years). About 57% of the respondents were married; majority (40%) maintained a range of small farmers having land 6-12 acres. 45% of the respondents having their primary education. Almost 47% of the respondents were experienced between 6 to 10 years. The result of the study showed

Table 2: Adoption Level of the Small Farmers Regarding Recommended Agricultural Practices (N=300)

Adoption	Frequency	Percentage
Land management practices	270	90.00
Integrated plant nutrition management practices	255	85.00
Selection and sowing of certified seed at proper time	275	91.67
Irrigation management practices	265	88.33
Fertilizer application	230	76.67
Integrated Plant Management (IPM) System	250	83.33
Use of herbicide	240	80.00
Post harvest management practices	220	73.33

Table 3: Farmers Level of Knowledge Regarding Agriculture Extension Teaching Methods (N=300)

Agriculture Extension Teaching Methods	Frequency	Percentage	Ranke
Through farmer field school	240	80.00	I
Through result demonstration	210	70.00	II
Through method demonstration	205	68.33	III
Through timely advised through literature	190	63.33	V
Farmers field day	195	65.00	IV
Through exhibitions	150	50.00	VII
Through farm visit	170	56.67	VI
Through newspaper	130	43.33	VIII
Through FM radio	110	36.67	IX

that land management practices and selection and sowing of certified seed at proper time ranked highest in the order of acquiring knowledge. The majority 80% farmers perceived farmers field school, while 70% farmers were identified result demonstration, 68% farmers through method demonstration as the extension teaching method used by extension personnel.

RECOMMENDATIONS

Based on the conclusion of this study, the following recommendations are made:

- Farmers should be trained through farmer's field school for the adoption of the technology at field level.
- Crop maximization project should be extended to the other districts of Sindh province and knowledge of the farmers should be enhanced through extension teaching methods for crop productivity enhancement and better livelihood.
- Agricultural technology should be extended through FM radio services and farmers radio station should be establish in agro ecological zones of Sindh province.
- Extension agents should be trained through modern method of teaching so that he can use suitable teaching methods to the small farmers.
- Appropriate agriculture extension teaching methods should be disseminated through demand driven technology to the small farmers of Sindh province.

REFERENCES

[1] Alonge AJ, Martin RA. Assessment of the adoption of sustainable agriculture practices: Implications for agricultural education. Journal of Agricultural Education 1995; 3(3): 34-42. http://dx.doi.org/10.5032/jae.1995.03034

[2] Tatlidil FF, Boz I, Tatlidil H. Farmers' perception of sustainable agriculture and its determinants: a case study in Kahramanmaras Province of Turkey. Environ Dev Sustain 2009; 11: 1091-1106. http://dx.doi.org/10.1007/s10668-008-9168-x

[3] Govt. of Pakistan. Economic Survey of Pakistan. Economic Advisor's Wing, Finance Div., Islamabad 2008.

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http://dx.doi.org/10.6000/1927-5129.2015.11.44