

ANALYSIS OF AGRICULTURAL EXTENSION SYSTEM: A DISCREPANCY BETWEEN PROVIDERS AND RECIPIENTS OF THE EXTENSION SERVICES EMPIRICAL EVIDENCE FROM NORTH-WEST PAKISTAN

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ABSTRACT

The aim of this study was to analyze the agricultural extension system in North West Frontier Province of Pakistan. The findings of the study show that weak extension-farmers linkage system prevails in the area. Despite the commitment of the government to provide extension services to the farmers at doorsteps, the farmers complain about no visits of the extension field workers to their farms. The study concludes that the weakness of the extension system was due to the lack of devotion, motivation and sense of responsibility among extension agents and weak monitoring system. The normal task of transferring and disseminating of appropriate agricultural technologies to farmers and good farm practices would not be sufficient for agricultural production unless supported by an effective extension system. Extension department need to exercise a more proactive and participatory role which should be based on strong extension-farmers linkage.

Key words: Extension System, Agricultural Research, Modern Technology, Training, Small Farmers

INTRODUCTION

Like other developing countries, the population in Pakistan is increasing at an overwhelming rate. The present population of Pakistan is 158 million with an annual growth rate of 2.8%. By the year 2015, the total population of Pakistan would raise to 190.5 million (UNDP, Country Report, 2006). As a result, the food demand by the possibly overwhelming population growth will increase with the same rate. This is a challenge of the day which agriculture has to meet through increasing food production per unit area. Since land is fixed and becoming scarce with time, therefore priority should be given to maintain and improve the capacity of the higher potential agricultural land to support the food demand of the expanding population.

In Pakistan, land fragmentation is one of the main problems which are effecting production per unit area. Besides, the reasons for low productivity are insufficient information available to the farmers about outcomes of modern research, use of modern technology and inputs, and improved farming practices. This is mainly because of weak extension methods being practiced which are characterised by traditional approach of educating farmers coupled with the insufficient financial availability to the big proportion of small farmers. The matter of enhancing agricultural productivity, therefore, largely depends on factors such as the availability of up-to-date information about farm practices, utilizing new technology, and adoption of modern farming practices (Inayat, 2007).

Pakistan has a large rural sector which is primarily based on agriculture for food production and employment generation of rural inhabitants.

Agriculture provides employment to 51.5% of the labour force, contributes 45% to export earnings and 26% to the gross domestic product (Government of Pakistan, 2004). Being an important sector of the economy, major changes in agricultural system are necessary to solve the problem of food security. These changes require competent farmers who have the capability to increase productivity, while at the same time maintaining the sustainability of their farming system by making effective use of the knowledge and information which is available from or can be generated by several different information sources, like research institutes, extension departments and markets. Nevertheless, the fact remains that majority of the farmers are not formally well-educated and the illiteracy rate is high amongst them. The perception of the technical information regarding modern agricultural research remains a constraint for their mental models. Hence, the extension service has to apply appropriate methods of extension to ensure the transfer of relevant information and technologies to the farmers.

Agricultural research has made major contributions to increasing agricultural productivity. However, research does not always provide farmers with the information they need. Research does not take into account the fact that many farmers, especially in the developing countries, have limited access to resources. Similarly very few farmers can have direct contact with researchers, especially in an economy where a large number of farmers depends on very few (insufficient) research organisations, poor transportation and large social distance (differences) between these groups. Research will only have real impact on agricultural production if there are others

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who act as communicators between agriculture researchers and farmers. This role is played by Agricultural Extension (Ban / Hawkins, 1998).

Agricultural extension involves offering advice, helping farmers to analyze problems and identify opportunities, sharing information, supporting group formation and facilitating collective action. Traditional extension services were aimed to deliver information and new technologies to farmers in order to increase production. Many have failed to meet their objectives and, in some cases, it has been unclear whether they have had any impact at all (Manig, 1991). Although the role of agricultural extension is vital for the diffusion of new technology, still extension is currently failing (Government of Malawi, 2000) or moribund (Eicher, 2001) in Africa and many other developing countries. In many low-income countries, extension is in disarray or barely functioning at all. One of the several reasons for this is the low educational level and less training opportunities for the extension worker himself. Staff is bloated, under-trained, not mobile, and therefore, not proactive (FAO, 2001). Better education and proper training is necessary for an agent to change the behaviour of the traditional farmers towards modern agriculture. In the traditional extension systems, the extension agent's educational level, communicative skills and training capacity was not enough to perform the required tasks, therefore, failed to properly convey the information and outcomes of research to the target farmers (Inayat, 2007).

Structure and Mechanism of Agricultural Extension system in NWFP

In NWFP, like other provinces of Pakistan, extension services are the domain of the public sector. Besides, some NGOs, commercial companies, mass media organizations, and farmers group are also providing these services. In NWFP, agricultural extension wing of the provincial agriculture department is the major extension services providing organization. The Director General extension is responsible for managing and supervising extension activities in the whole province. At the lower end of the hierarchy are Field Assistants and Field Workers at the union council/village level. A Field Assistant / Field Worker are mostly responsible for making direct contacts with the farmers.

In NWFP, the extension agents are trained by schools of agriculture and Extension Department for changing behaviour of farmers towards making decisions to adopt new agricultural technologies. Figure I provides a simplified picture of the mechanism of agricultural extension. The extension

organization obtain information from agricultural research, agricultural policy decisions, and from social and psychological research. This information is used by the extension organization to provide it to the farmers through a network of their extension agents. It is expected that such knowledge provision to the farmers will bring about changes in farm management and practices. The system in reality works in two ways and information from farmers comes as feedback and goes back to the mother institutions.

The importance of extension in Pakistan's agriculture cannot be under estimated as large proportion of population in Pakistan depends directly or indirectly on agriculture for their subsistence. A properly functional extension – farmers' linkage system is vital for improving farm practices to ensure food security for the growing population. This study is aimed to analyze the agricultural extension system in NWFP and identify strengths and weaknesses of the extension system on both supply and demand side.

MATERIALS AND METHODS

The data for research was collected from February 2005 to February 2006 in six villages of district Peshawar in North West Frontier Province (NWFP). The sample villages surround Peshawar city include Dalazak, Kukar, Gulbela, Kochian, Mushtarzai and Yousaf Khel. These villages represent different socio-economic, topological as well as infrastructural situation. The cropping pattern and land tenure system also differ within villages. Therefore, a variety of feedback was expected from the respondents in different villages.

The research method used for data collection was mainly interview based. A semi-structured questionnaire was used to collect both qualitative as well as quantitative data. The data came mainly from two sources. The primary data was collected from the villages where as secondary data was collected from the Extension Department of NWFP in the form of informal interviews. All households in each village were separated as farm and non-farm households. The farm households were further categorized on the basis of land holding. To ensure an even and unbiased inclusion of all socio-economic groups in the sample, the selection of the sample respondent from each village was made proportionately from different categories of farmers. The total sample size across six villages was 120 which were proportionately made from all farm household categories. Thus proportionate stratified random sampling technique was used to select the sample size.

Information and data from the officials of the extension department was collected as outreach survey. The officials were informally interviewed and information was recorded as notes. The data was analyzed through SPSS.

RESULTS AND DISCUSSIONS

The performance of extension workers, as reported by the sample respondents in the area is presented below. The discussion starts with the visits of extension worker to the farmer's field.

Frequency of the extension field worker's visit to the area

The spirit and philosophy of extension worker flourishes in the minds of those who have a deep concern for the well-being of mankind in general and an abiding faith in rural people and, in particular, their ability to develop themselves (Benor / Harrison, 1977). Given the fact of strong commitment to this philosophy, the extension worker will approach his problem in the spirit of a true teacher and leave a profound influence upon the farmers. The efficiency of an extension worker to convey the knowledge of modern agriculture to the farmers can be evaluated by the frequency of extension workers visits to a particular area. The data presented in table I show the number of farmers visited by extension workers during the last year, last five years and ten years ago.

Table I depicts that the extension workers visited only 2.5% of the total sample households in the last year. In the last five years, the extension workers contacted 10% farmers. A total of 62.5% farmers reported that they were visited by the extension workers ten years ago. However, it is assumed that it may not give a true picture of the real situation. The respondents, most probably, were optimistic about past and they over-valued it compared to the present situation. Another reason for this could be that the extension workers may visit the large farmers, whereas majority of the sample respondents were having small farm sizes. Therefore, it seems that the response in this regard does not reflect the real picture.

The studies on evaluation of extension system in Pakistan show poor performance of the extension agents in the field. An analysis of the extension system in 1986-87 in six villages (including four villages from the present study) showed poor efficiency of extension staff to visit the farmers and convey them knowledge about the modern technology. The study show that only 14% of the farmers reported that they were visited by the extension workers during the last year. The situation

before five years and ten years remain weak as well, where 13% and 6% farmers respectively were contacted by the extension workers (Humayun, 1990:28).

Similarly, in his research report on the evaluation of working of Agricultural Department (Extension) in Shahkot, Pakistan, Muhammad (1981) concluded that 96% of the farmers reported about no regular visits of the extension workers to their area. Nevertheless, the government has keen interest in providing the outcomes of modern agriculture research at the doorstep to the farmers. For achieving these objectives, the government is enforcing structural adjustments in the agricultural extension department quite frequently. The incentives available to the extension officers are far better than those in the past. The prevailing inefficiency of the extension workers is, perhaps due to the lack of devotion, motivation and sense of responsibility among the extension officials themselves, who take benefits from the government for performing no duties.

Visits of extension officers to the area

Extension officers from the extension department are the responsible high ranked officials to visit their field area to ensure more efficient delivery of the extension services in the area. The effectiveness of an extension mechanism can be determined from the fact that extension officers are also contributing their time and efforts to provide more knowledge to the farmers in field.

For this purpose the farmers in the study area were asked about the extension officers' visit to their respective village and meeting arranged by him with different farmers. But it was surprising to know from 100% farmers that no extension officer visits their area, neither held any meeting with farmers in the area. The results of the research by Muhammad (1981) shows that 93% of the farmers in the Shahkot area of Punjab, were not visited by the extension officers. As the extension officers do not visit the field and that is why extension workers very rarely go to perform their duty having no fear of the accountability to the higher officials of their department.

Demonstrations plot and lectures by extension department

Extension staff normally disseminates agriculture information to the farmers by using different methods. The farmers were asked about demonstrations plot and lectures organized by extension staff in their villages. The unsatisfactory response of the farmers reflected on the weak

extension services available in the area. No farmers reported about any demonstration plot or lecture arranged by extension department in any of the six villages.

In connection to the negative response of the farmers about the extension scenario in their area that with the exception of only one large farmer, none of the respondents reported satisfaction about the performance of the extension worker in their respective areas. The farmer who was satisfied with the extension services was a landlord in Gulbela and the extension worker used to go to his *hujra* in the village.

How do farmers access the extension services?

Table II shows the ways how farmers acquire extension worker's help. In response to the question how do farmers approach extension workers in need, 54% farmers report to go directly to extension office in Peshawar to discuss their problems. Only 2.5% farmers told that extension worker comes to them and they take their help. The rest 43.5% reported about no need to take any help from extension worker.

Out of the farmers who acquired extension worker's help, 1.7% from Gulbela and 0.8% from Kukar, reported that extension worker visits them at farm. The rest of the farmers in all villages confirmed that no extension agent come to them. In Dalazak, Kukar, Gulbela and Kochian, majority of the farmers told that they go to extension office to seek help of the extension workers. In Mushtarzai and Yousaf Khel, most of the farmers reported that they do not require any help from extension workers. This is possibly due to the fact that the farmers are more confident about their knowledge, skills and the local farm conditions. Furthermore, they have made the experience that the extension agents provide them no valuable knowledge and information that copes with their problems and needs.

Opinion of extension officials about extension services in the area

This section is based on the information which was collected from the officials of the extension department in the form of discussion and informal interviews. The extension department, as reported by the different positions, has brought tremendous changes in their service delivery to the farmers. In the recent past, traditional and Training and Visiting (T&V) systems of extension were functional in the area. But with the demise of T & V system in the late 80s and less outcomes of the traditional systems, both of these systems are no more practiced in the area. Presently, the department is focusing on providing

trainings to the farmers through Farmers Field School, Integrated Pest Management, Integrated Seed and Crop Management, and other recently introduced approaches of extension. The extension officials presented an ideal situation.

The service portfolio of the extension department, as mentioned by the officials of the department, has also incurred changes with time. In the present set up, extension agents are frequently visiting the villages as compared to the past. Similarly, the training portfolio of the department has also changed by providing more training to the farmers compared to the past. A remarkable point added by the extension officials was provision of training on micro enterprises development to the female of the farm households. Comparison of the information from the extension officials with the evidence from the field, the empirical finding in reality did not support any such situation in the area.

CONCLUSION AND RECOMMENDATIONS

The study finds clear discrepancies between providers and recipients of extension services in the study area. The evidence disproves the claims made by the extension agents that they disseminate the information and other relevant material for improvement of agriculture. There exists a weak extension – farmers' linkages in the area. Very rarely extension officials go to the field to make contacts with the farmers and convey them knowledge and information about the recent research and development in agriculture. With the exception of the few cases where the field staff go to the village; pay visits to the landlords and other influential farmers, the rest of farmers, who wish to share their technical problems with extension workers, remain un-served. Consequently they rely on the traditional farm practices or resort to other private sources for extension services. One of the reasons could be the weak monitoring system that exists in the agriculture extension department in the country.

Since the job of extension personnel calls for technical skills as well as commitment and willingness to educate the farmers, an appropriate recruitment and monitoring system should be adopted to ensure the dissemination of information regarding agricultural technologies. Besides, regular training to update the extension workers about the modern agricultural research and how to convey these developments to the farmers should be made an integral part of the extension policy. The training portfolios should be based on the actual field experience of the extension personnel.

For improving performance of the extension personnel in the field, it is also necessary to develop an effective performance appraisal strategy within the extension department. An open appraisal system is recommended for the extension department to provide feedback and opportunities for open discussion with extension staff on their performance. This will not only help the extension workers to know about their strengths and weaknesses but also

can motivate them to further develop their skills to effectively train the targeted groups of farmers.

For improvement of the extension services in the field, the government should follow such a mechanism for promotion of the extension agents which is to be based on the performance of the extension workers in the field.

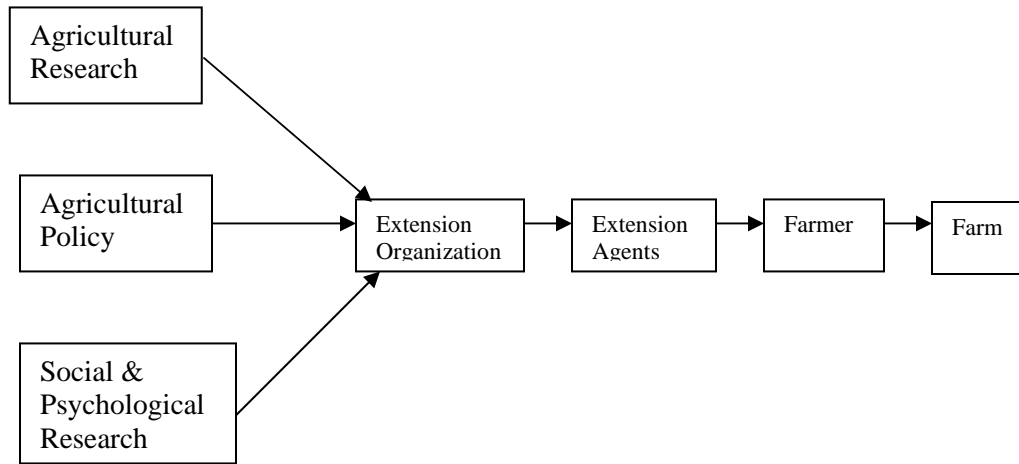


Figure 1 Information flow of agricultural extension
Source: (Ban / Hawkins, 1998:22)

Table I Frequency of extension worker’s visits to the area

Response	Last Year		5 Years ago		10 Years ago	
	Count	Percent	Count	Percent	Count	Percent
Yes	3	2.5	12	10.0	75	62.5
No	117	97.5	108	90.0	45	37.5
Total	120	100	120	100	120	100

Table II Percent distribution of farmers to acquire extension help

Village	Go to Extension Office	Extension Worker Comes	No need of Extension help
Dalazak	13.3	0.0	3.3
Gulbela	12.5	1.7	2.5
Kochian	10.0	0.0	6.8
Kukar	11.5	0.8	4.2
Mushtarzai	2.5	0.0	14.2
Yousaf Khel	4.2	0.0	12.5
Total	54.0	2.5	43.5

Source: Field Survey

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