

## Evaluation of Effectiveness of Crop Production Programme under Lachi Poverty Reduction Programme (Lprp) In Tehsil Lachi of District Kohat

*Mehnaz Safdar<sup>1</sup>, Khalid Nawab<sup>1</sup>, Rahmatullah<sup>1-2</sup>, Saqib Ullah<sup>3</sup>, Muhammad Munir<sup>4</sup>, and Nadia Bostan<sup>5</sup>*

<sup>1</sup>Department of Agricultural Extension Education and Communication, the University of Agriculture, Peshawar, Pakistan

<sup>2</sup>Department of Agricultural Extension Education, Balochistan Agriculture College, Quetta, Pakistan

<sup>3</sup>Department of Statistics, Balochistan Agricultural College Quetta, Pakistan

<sup>4</sup>Department of Agronomy, the University of Agriculture, Peshawar, Pakistan

<sup>5</sup>Department of Horticulture, the University of Agriculture, Peshawar, Pakistan

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**ABSTRACT:** Lachi Poverty Reduction Program aimed at developing and promoting a replicable model for rural poverty alleviation. It is a research and development project set off to improve the livelihoods of over 100,000 people in Lachi Tehsil of North West Frontier Province Kohat District. The project was initiated in April, 2000 with a proposed period of five years. LPRP has adopted multi-pronged strategy to ensure maximum return from crop production, animal husbandry and utilization of available natural resources. Based on this a study was designed to evaluate the effect of crop production program under LPRP, to evaluate the LPRP innovations regarding crop production, to study the application/adoption of these innovations by the farmers and to draw conclusions and recommendations for further improvement. The study was conducted in 09 representatives Union Councils of Tehsil Lachi, District Kohat. Interview schedule were designed in order to collect complete and correct information. The data was analyzed using computer program SPSS. It was observed that 45% of the respondents were in the age of 40-45 years and 23% were 30-40 years. Forty two percent of the respondents were illiterate, 25% were up to primary and 06% were above metric. Fifty nine percent of the respondents were having medium landholdings in the range of 12.5 acres. Twenty three percent were having less than 5 acres. Tenancy status of the farmers shows that 77% were owners of the land, 08% tenants and 15% were owner-cum-tenants. LPRP introduced different varieties of wheat, chickpea and groundnut. Daman-98, Tatara-96, KT-2000 and Uqab in wheat, KK-1 in chickpea and BARD-479 in groundnut were adopted by the people. The statement that the innovation of seed villages practically implemented was agreed by 60% of the respondents. Sixty three percent of the respondents were agreed that the schemes introduced by LPRP have given them more returns than the one they were doing. Forty five percent were agreed that these trainings were of practical application. Results of this study showed that LPRP has brought a positive change in the attitude of farmers in the project area.

**KEYWORDS:** Evaluation, Effectiveness, Crop Production, Lachi Poverty Reduction Programme, District Kohat.

### 1 INTRODUCTION

Lachi Poverty Reduction Project (LPRP) is a research and development project set up to improve the livelihoods of over 100,000 people in Lachi tehsil of Khyber Pakhtunkhwa Kohat District. The project aims at developing and promoting a replicable mode for rural poverty alleviation. The project was initiated in April, 2000 with a proposed period of five years. This project is jointly funded by the UK's Department for International Development (DFID) and United Nations Development Program (UNDP), while it is implemented by Sarhad Rural Support Program (SRSP).

LPRP has adopted multi-pronged strategy to ensure maximum return from crop production, animal husbandry and utilization of available natural resources. The overall theme of the project is to alleviate poverty through better management of the existing Flora. Main focal areas are crop production, water harvesting, livestock improvement and capacity building in agriculture related sectors.

Traditionally, wheat is a main rabbi crop of the entire Lachi Tehsil, However, some acreage is spread for chickpea. Similarly there is no crop in Kharif season in rainfed region and the area is left for uncontrolled grazing of cattle and goats, while maize, sorghum, vegetables and mung/mash are planted where water is available.

It is customary that in social sciences, particularly in agriculture extension, two models i.e. top down (TD) or bottom up (BU) are followed particularly under devolution of power to the grass root level but in LPRP, in consultation with local farming communities, followed Participatory Mobilization and Appraisal (PMA) which is fully supported by both male and female community organizations. To increase per unit production and thus generate maximum revenue from the available piece of land within the prevailing Argo-ecology, LPRP introduced a concept of participator Variety selection (PVS). In collaboration with the experts from both Agriculture Research and Agriculture Extension, the project introduced newly approved varieties of different crop plants like wheat, maize, sorghum, chickpea, groundnut, millets etc, in the project area. Farmers of the area were encouraged to select the best out of the introduced varieties according to their own environment and needs. Thus countless numbers of new varieties were introduced to diversify the flora. Workshops, seminars and field days were arranged and experts were hired to educate the farmers on respective plots in addition to regular trainings on crop production and management.

In order to generate the flow of regular supply of seed of the selected and privileged varieties, another innovative concept of "Seed Village" was introduced. In this program a nominated growers from each CO was encouraged to multiply the seed of selected variety and share it with other members either on barter system or on cash payment. Seed villages resulted in the quick dissemination of the preferred varieties in many crops like wheat, maize and groundnut.

Although most of the area in Lachi Tehsil is rain fed, some union councils are irrigated by Tanda Dam, Kohat. Similarly, there are several tube wells and dug wells meant for irrigation purpose. To make the best use of available water and to maximize the farm returns LPRP promoted and strengthen off-season vegetables in such areas. Plastic tunnel technology was introduced to prevent young seedlings of vegetables from frost injury and cold shocks.

It is worth mentioning that in order to diversify the existing flora, LPRP introduced different species of forest and fruit plants. Selection of both types of plants was done according to the existing ecology. Guava, pomegranate, lemon and Jamon were distributed free of cost to several households in each CO. In order to make sure the participation of women, special trainings were arranged on forest nursery growing and management, poultry production and kitchen gardening. To boost the women's' earnings, they were encouraged to grow forest nurseries on commercial scale.

Any new innovation and or promotional program is considered successful only if it is widely adopted by the communities. Regarding crop production, LPRP introduced several programs for poverty alleviation in Lachi Tehsil. Now that the LPRP is winding upon, a need was felt to alleviate its crop production innovations and see the level of adoption by the beneficiaries. Moreover, assessment of these innovations based on their positives and negatives will provide bases for future replication of these innovations in similar agro-climate.

This study is designed to achieve the following objectives:

## **2 OBJECTIVES**

1. To evaluate the LPRP innovations regarding crop production
2. To study the application / adoption of these innovations by the farmers.
3. To formulate suggestions for further improvement.

## **3 RESEARCH METHODOLOGY**

The universe of the research comprised of the LPRP Project in Lachi region of district Kohat. Population of the study consisted of all members (male and female) who had received trainings from LPRP in the field of agriculture, livestock and forestry and were residing in Lachi region of Kohat district. Since it is very hard to approach all the organizations and farmers, where LPRP has launched their program, 09 representative Union Councils were selected purposively in both Barani as well

as irrigated regions of Lachi Tehsil. Total of 150 members and nonmembers of organizations among these union councils were randomly selected.

Keeping in view objectives of the study, an interview schedule was prepared to gather information from the respondents. The interview schedule was pre- tested to check the validity and reliability. Irrelevant questions were omitted and some relevant questions where needed were added. Data were collected with the help of the interview schedule, from the sampled respondents in the selected union councils of Lachi region. The collected data were analyzed by using computer software "Statistical Package for Social Sciences" (SPSS) to draw results and conclusions on the basis of results obtained and observations made by the respondents. Chi-square test was used where needed.

## **4 RESULTS AND DISCUSSION**

### **AGE LEVEL OF THE SAMPLE RESPONDENTS**

It has been shown in different studies conducted on various social problems, that age plays an important role in dissemination, adoption and diffusion of any innovation. In other words adoption and diffusion of invention is positively correlated with age.

It is evident from the above table that out of the total respondents 45% were in the age group of 40-50 years followed by 30-40 years age group which were 23%. Nineteen percent were in the age group of 20-30 years and 13% were above 50 years of age. It means that younger is the person more is the adoptability and acceptability but in the area the younger people were of school age or were involved in other services therefore, the agricultural practices were mostly carried out by middle age people.

### **EDUCATION**

Education plays a vital role in human resource development. It influences the pace of development by providing skills, knowledge and problem solving techniques. Educational level of respondents helps in judging the quality of human resources and developing stage of society as it broadens the vision of the community. Education is an important factor which has a positive influence on human behavior either directly or indirectly. Educated people are expected to have more favorable attitude towards agricultural skills, knowledge and information as compared to uneducated ones, (Hassan, 1991). Data in this regard is represented as below:

Most of the respondents (42%) were illiterate. The literate were further classified as primary, middle, metric and above metric. The above table shows that 25% had the education up to primary level, 15% were up to middle level, 12% were up to metric and only 6% were above metric. As Lachi Tehsil is one of the backward area of Kohat district that's why the literacy rate is very low.

### **LAND HOLDINGS**

In Lachi area land holdings of the people were of three major categories i.e., small having land holdings of less than 5 acres, medium having land holdings of 12.5 acres and large, having land holdings of above 12.5 acres. Land holdings refer to the land used for agricultural practices.

In the study area 23% of the total respondents were having less than 5 acres land, 59% were having medium land holding in the range of 12.5 acres and 18% were having large land holding of above 12.5 acres. Mansha (1970) stated that there existed no significant relationship between educational level of the respondents and the adoption of recommended cropping patterns but the size of land holding had positive relationship with the adoption of recommended practices.

### **TENANCY STATUS**

Peoples carrying out agricultural practices are of three types. Owners are the land lords i.e., they have their own land. Tenants are those farmers who have no land and they cultivate the land of others. Owner-com-tenants are those who had their own land and they themselves cultivate it.

In the above table 77% of the total respondents were owners of their lands, 08% were tenants and 15% were owner-cum tenants.

Different varieties of the three major crops i.e., wheat, chickpea and groundnut were introduced in Lachi area and people selected varieties suitable to their conditions. For wheat Tatar-96, Daman-98, Suleiman-96, Dera-98, Raj, Uqab, Nasir-2000, Fakhre Sarhad, S-2000, K-96, K-87, KT-2000, Wafaq and Chakwal, were introduced, of which Daman-98, Tatar-96, KT-2000 and Uqab were the most liked varieties in that area. For chickpea Sheen Ghar, KK-1, KC-98 and Parbat were introduced and KK-1 was mostly selected by the people of the area. For groundnut BARD-479, BARD-92 and C-130 were introduced of which BARD-479 was adopted by most of the farmers of the study area. Identification and development of crops and their cultivars with improved salt tolerance has been the key to improve and production (Sharma Goyal 2003). Similarly Muhammad (1979) observed that availability of good quality certified seed of recommended varieties is perhaps the main bottleneck in the efforts of government agencies.

#### **SEED VILLAGES**

Improved varieties of wheat, chickpea and groundnut were provided to the farmers by LPRP. They sow these improved varieties in comparison to their local varieties and they got the highest and better yield. Those farmers then sold that improved varieties seed to other farmers, as reported by Dahiyat al.1996 that the reduction in area and production of food legumes, which are an integral components of farming system of agricultural based developing economics, is of great concern in the context of sustainability of agriculture. Waheed (1980) reported that to encourage production of quality seed, the government should purchase approved seed from the registered growers at premium prices.

a. Chi-square ( $\chi^2$ ) Significant at .05 level

The following information were collected

- 1) The innovation of seed villages was practically implemented. Sixty percent of the total respondents were satisfied with this statement, 30% were strongly agree while 30% agreed, 12% were uncertain, 18% were disagree and only 10% were strongly disagree.
- 2) Seed Villages helped in getting quality seed, 27% respondents were agree with it, 16% were strongly agree, 24% were uncertain, 17% disagree and 16% were strongly disagree.
- 3) Seed villages be continued: About 58% people were agree that seed villages should be continued, 30% were strongly agree, 16% were uncertain, 16% were disagree and only 9% were strongly disagree.
- 4) The concept of seed villages be extended to other crops too. Fifty four percent respondents were of the opinion that the concept of seed villages be extended to other crops as well, 20% were uncertain, 26% were not in favor of this statement.
- 5) The community members are mobilized to continue this innovation even after winding up of the project. Out of the total respondents 34% were mobilized to continue this innovation after winding up of the project, 31% were uncertain and 27% were disagree and only 8% were strongly disagree.
- 6) Fifty seven percent of the total respondents were not agree with the services of government organizations, 23% were uncertain and 20% of the respondents were in favor of it.

Forty six percent of the total respondents were agree that the schemes are meeting our needs, 28% were uncertain, 18% were disagree while 8% were strongly disagree with the statement.

Sixty three percent were of the opinion that these schemes are giving us more returns than the one which they had adopted, 23% were uncertain and only 13% were not agree. Thirty four percent of the respondents were agree that these technologies are environmentally friendly, 40% were uncertain and 16% were disagree.

Forty three percent of the respondents were happy in getting these technologies, 23% were uncertain and 34% were disagree. Nine percent were strongly agree that they have enough skills to undertake these technologies, 28% were agree, 45% were not sure while 18% were not in favor. Fifty nine percent of the respondents were of the opinion that they can easily get the material used in these innovations, 11% were uncertain and 30% were disagree. Forty three percent agreed that these activities are well suited in our conditions, 34% were uncertain, 21% disagreed and only 2% strongly disagreed. Farmers should be motivated to attend the trainings and their interest be raised similar evaluation was found by Budakand Yurdaul (2004). The effectiveness of agricultural extension services will clearly be enhanced when an extension worker's and farmer's training centers is established.

a. Chi-square (x2) Significant at 0.05 level

Forty five percent of the respondents were agree that these trainings were of practical application to them, 21 % were uncertain, 34% were disagree, 59% of the respondents were agree that these trainings helped them in increasing their farm income, 27% were uncertain and 13% were not satisfied. Thirty three percent were of the opinion that the technologies projected in these trainings are environmentally friendly, 37% were uncertain and 20% disagreed. Sixty two percent of the respondents agreed that the participants of the trainings were actually farmers, 20% were uncertain and 18% were disagree. Forty percent of the respondents were agree that most farmers are using the technical knowhow which they gained from these trainings, 20% were uncertain about it and 40% were disagree. Twenty percent of the respondents were satisfied that LPRP has arranged sufficient trainings and there is no need of further trainings in crop production, 34% were uncertain and 46% were disagreed. Chaudhary (1970) observed that the hurdles which impeded the adaptation of improved agricultural practices by farmers were lack of awareness about certain practices.

**Table 1. Distribution of respondents according to age level**

Age Groups	NO.	% age	Chi-square test
20-30	29	19	9.27 (0.017)a
30-40	35	23	
40-50	68	45	
Above 50	18	13	
Chi-square (*x2 )Significant at 0.05 level			

**Table 2. Distribution of respondents according to their education level**

Education	No.	% age	Chi-square test
Illiterate	64	42	5.44 (0.029)a
Up to primary	38	25	
Up to middle	23	15	
Up to matric	16	12	
Above matric	09	06	
Chi-square (x2) significant at 0.05 level			

**Table 3. Distribution of respondents according to land holdings (Acres)**

Area	No.	% age	Chi-square test
Small (5ac)	35	23	12.71(.009)a
Medium(12.5 ac)	88	59	
Large (above 12.5)	27	18	
a. Chi-square (x2) Significant at 0.05 level			

**Table 4. Distribution of respondents according to tenancy status**

Category	No	% age	Chi-square test
Owner	116	77	16.06(.000)a
Tenant	12	08	
Owner-cum-tenant	22	15	
a. Chi-square (x2) Significant at 0.05 level			

Table 5. Distribution of respondents regarding the following information

Statements	Strongly agree	Agree	Uncertain	Disagree	Strongly disagreed	Chi-square test
The innovation of seed village was practically implemented	30	30	12	18	10	9.41 (0.011)a
Seed villages helped in getting quality seed	16	27	24	17	16	5.61(.032)a
Seed villages should be continued	30	29	16	16	9	8.30(.017)a
The concept of seed villages be extended to other crops too	26	28	20	15	11	10.04(.007)a
The community members are mobilized to continue this innovation even after winding up of the project	12	22	31	27	8	2.11(0.54)ns
The services of government organizations, especially extension department will further improve the quality of this venture	13	7	23	32	25	6.44(.015)a

Table 6. Distribution of respondents regarding overall rating by the community members

Statements	Strongly agree	Agree	Uncertain	Disagree	Strongly disagreed	Chi-square test
These schemes are matching my needs?	20	26	28	18	8	9.35(0.012)a
These schemes are giving me more returns than the one I am doing?	34	29	23	4	9	12.09(.002)a
These technologies are environmentally friendly?	13	21	40	12	4	4.89(.050)a
People are happy in getting the technologies?	22	21	23	15	19	3.66(.067)ns
I have enough skills to undertake these technologies?	9	28	45	9	9	11.34(.001)a
I can easily get the material used in these innovations?	20	39	11	20	10	6.32(.018)a
These activities are suited well in our conditions	18	25	34	21	2	5.13(.034)a

a. Chi-square (x2) significant at .05 level

Table 7. Distribution of respondents regarding level of satisfaction from the trainings on these innovations arranged by LPRP.

Statements	Strongly agree	Agree	Uncertain	Disagree	Strongly Disagree	Chi-square test
These trainings were of practical applications.	22	23	21	15	19	3.41(.066)ns
These trainings helped me in increasing my farm income	33	26	27	9	4	12.22(.002)a
The technologies projected in these trainings are environmentally friendly	12	21	37	13	7	6.30(.017)a
The participants of the trainings were actually farmers.	23	39	20	11	7	10.64(.007)a
Most farmers are using the technical know-how which they gained from these trainings	10	30	20	20	20	5.11(.5034)a
The LPRP arranged sufficient trainings and there is no need of further trainings in crop production.	7	13	34	21	25	6.49(.018)a

## 5 CONCLUSIONS AND RECOMMENDATIONS

Results of this study show that LPRP has brought a positive change in the attitude of farmers in the project area. The role of LPRP in the development of agriculture was worth mentioning. It has brought improvements in crop yield and livestock industry. The farmers were made aware of the new varieties, their cropping technologies, new breed of livestock and water management techniques. LPRP plays a major role in capacity building of farmers in modern agricultural practices. The study is useful document for future programmes of such nature.

- LPRP should spread their development activities for maximum participation of the entire rural masses
- More and more capacity building trainings should be arranged
- Farmers should be strongly motivated to adopt the new varieties and technologies
- LPRP facilitators and coordinators should be more skilled and practical oriented so that farmers face fewer problems.

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