

Farmers' Perceptions of Livestock Extension Services in District Dera Ismail Khan, Khyber Pakhtunkhwa, Pakistan

Khalid Nawab¹, Tariq Rahim², Saqib Ullah³, Mahmood Iqbal⁴, Sahid Zaman⁵, Tariq Ahmad⁶

1,2,4,5,6. Department of Agricultural Extension Education and Communication, Faculty of Rural Social Sciences, The University of Agriculture Peshawar

3. Department of Statistics, Balochistan Agriculture College, Quetta, Pakistan

DOI: <https://doi.org/10.71145/rjsp.v3i4.472>

Abstract

The economy of the country is based on Agriculture. It contributes 18.5% to the in gross domestic product (GDP) and absorbs 38.5% of population that offers working opportunities, however, it remains not a major sector of economy, and effective farming is a key to economic development and eradication of poverty. D.I. Khan District has livestock as one of its major sectors in the rural economy. It is not only used as an endowment to poor farmers, but it also forms a crucial source of nutrition particularly milk and meat. This research was conducted in the district of D.I. Khan to determine the perception of the farmers on livestock extension services and analyses the contribution of livestock extension services. Purposely, out of 21 Union councils of selected tehsil D.I. Khan, three union councils viz. Dewala, Lachra and Muryali were sampled, as the highest of the population of the farming community members practice livestock in these UCs. Each of the union councils was randomly picked in two villages. In this research 30 percent of respondents were picked through proportional allocation method. Statistical Package of Social Sciences (SPSS) was used in the analysis of the data collected. As was also discovered, 36.4 percent of respondents were aged between 31-40 years. The respondents that fell within the age group of 30 years were 31.2% percent, those who fell between the age group of 41-50 years were 20 percent and respondents in the above 50 years fell in the old age category. The current research indicates that 27.2 percent respondents were illiterate and other 72.8 percent respondents were literate, 49 percent respondents rely on agriculture as a source of income and 36 percent respondents were relying on both agriculture and non-agriculture as their source of income but 15 percent respondents relied on non-agriculture as the source of income. Approximately forty-eight percent of the respondents stated that livestock extension department offers them information on modern technologies then followed by NGOs (25.6%), fellow farmers (16.8%), self-motivation (5.6%), and radio and TV (4%). Most (67%) of the respondents were happy with the services offered by livestock extension department. But, 33 percent of the respondents were dissatisfied with the livestock department. The conclusion of the study is that most of the respondents were pleased with livestock extension services of livestock department, yet livestock sector remains a subject of numerous problems and challenges such as livestock production, marketing problems and insufficient priority at the level of planning. Access and acquisition of livestock inputs is also becoming problematic to farmers. It is suggested that the interaction between the livestock extension workers with the farmers should be on weekly basis and also should be armed with the recent extension knowledge and communication skills.

Keywords: Farmers' Perceptions, Livestock, Extension Services, Dera Ismail Khan, Khyber Pakhtunkhwa, Pakistan

Introduction

The sub-sectors of agriculture are livestock production and crop production. Pakistan has one of the largest industries which is livestock. Several years back, livestock has overtaken farming properties and has remained the biggest source of added value of agriculture. Currently, it contributes to an overall value in terms of agricultural output to 60.5% as well as to GDP at 11.2%. The value added of livestock grew by 4.0% in 2018-19 over the same figure in 2017-18 to 14.40 trillion rupees as compared to 1384 billion rupees. The importance of livestock can also be recalled due to the facts that livestock is not only a source of foreign exchange income which is 3.1 percent of the total exports but also a source of 35-40 percent of the earnings of over 8 million rural families due to Provision of food safety by supplementation of high-value protein by animal sources. The livestock industry cannot Gregarize enormous levels of speculation owing to its intensive viability and structure, nonetheless, the industry recorded a healthy growth of 4.0% in 2018-19 as compared to the previous year 2017-18 (GoP, 2018-2019). Without ice, livestock practice occupies approximately 30 percent of the terrestrial landmass of the planet (Steinfeld et al., 2006) and is an important global investment valued at a minimum of \$ 1.5 trillion. The livestock industry is expanded to form large market sector who interact with the smallest 1.3 billion global populations and direct to livelihoods of the 600 million impoverished farmer in the developing world (Thornton et al., 2006). One of the definite policies to reduce the threat to vulnerable group is the livestock conservation, and livestock is a significant source of nutrients and lure to the growing crops in the small farm approach. Glo-calories and protein sharing by animal production: 17% rich-poor world markets, big gaps, big gaps (Rosegrant et al., 2009). The present contribution of livestock to the Pakistani economy displays much of the substantial contribution of the livestock and livestock production in the rural prosperity. Its products (meat, milk and eggs) are used traditionally as invaluable components of food. The fourth largest milk manner in the world is Pakistan after India, china and the United States. The industry has 8 million farmers who yield approximately 36.2 million tons of milk annually. Annual production value of milk in the country is a high of 177 billion rupees and is by all means the biggest production in the whole agricultural sector. The total investment in the national economy by the dairy industry amounts to about 45 billion rupees and 97 percent of the investment is casual non-documents economic advantage. The liquid milk requirement in the country is estimated at 43.2 million tons at the current. The request is estimated on the basis of the monthly expenditure specification family expenditure survey (Balochistan times, 2010). The Khyber Pakhtunkhwa Province is predominantly an agricultural province. Moreover 70 percent of all the populace of the province is directly or indirectly dependent on agriculture. Approximately 60 percent of the land is being irrigated by use of rain water and majority of this land is below the mountain. These mountains are fit in the rearing of animals, dairy Industry. Certainly as a result of epidemics like enterotoxaemia, black season and anthracnose, lack of forage, bad management and bad selection of breeds; the livestock production in Khyber Pakhtunkhwa is minimal as compared to other regions in Pakistan. This can be explained by illiteracy and lack of knowledge among people on how animal husbandry and dairy industry developed. In this case, the extension workers have the opportunity to play a significant role in knowledge and information transfer relating to animal husbandry to the whole body of agriculture in the province. It is only with proper management, extension services and effective disease control programs, it is possible to enhance the livestock production by enhancing the livestock of the rural population (Moaeen-u-din and Babar, 2006). In D.I. Khan District livestock industry is major contributor to rural economy. It is not only a source of income to poor or peasant, but is a source of basic food (particularly meat and milk). In livestock section the dairy development team who undergo training in the Peshawar Agricultural Training Institute are

supposed to offer farmers with improved health management procedure. Artificial insemination is also provided by the dairy development department to the improvement of local breed of buffalo and cattle in the district as well as several dispensaries and veterinary centers are operated by livestock department. Livestock extension and dairy development department offers livestock extension services and in service training on the enhancement of poultry production to the farmers.

Objectives of the study were to:

1. Identify the farmer's perception regarding livestock extension services in the study area.
2. Examine the role of livestock extension services in the study area.

Materials and Methods

This present study was conducted in district D.I. Khan of Khyber Pakhtunkhwa. The population for this study was consisted of total number of livestock farmers in D.I. Khan. In present study sampling was drawn by multistage sampling method. District D.I. Khan consists of five tehsils. Out of which tehsil Dera Ismail Khan was selected purposively because the researcher belongs to the area, and more livestock farmers were present there. In D.I. Khan tehsil there are 21 Union councils in which three union councils namely Dewala, Lachra and Muryali were selected purposively as the large number of livestock farmers are existed in these union councils. In these three Union councils, there are 56 villages amongst which, two villages from each union council were selected randomly. A list of farmers was obtained from livestock department among them 30 percent respondents were selected who were in close contact with livestock department using proportionate allocation technique.

$$n_i = \frac{N_i}{N} \times n \dots \dots \dots 2.1$$

The collected data were transferred to computer and analyzed with the help of Statistical Package for Social Sciences (SPSS) Version 20 and complete results were obtained in the form of counts and percentages. Chi-square tests were applied for data analysis.

Chi- Square

In order to investigate the association between various variables i.e. age, education level, farming experience, income, Chi-square test was also performed with 5% level of significance. Chi-square test is defined in equation (3.2), for convenience:

$$\chi^2 = \sum_{i=1}^r \sum_{j=1}^c \frac{(O_{ij} - e_{ij})^2}{e_{ij}} \dots \dots \dots (3.2)$$

Results and Discussions

Age composition

Age is an important factor, which decides the responsibility of a person in all fields of life. Ability of taking good decisions is an important process which depends upon the age. The

youngster will more rapidly embrace the developments and will more responsible on their duty in correspondence and comprehensions (Basant, 1988; Tsur *et al.*, 1990).

Table 3.1 Age of respondents (in years)

Villages	upto 30	31-40	41-50	above 50	Total
Dhap Wala Basti	11 (8.8)	8 (6.2)	5 (4.0)	5 (4.0)	29 (23.2)
Basti Ustarana	8 (6.4)	6 (4.8)	4 (3.2)	3 (2.4)	21 (16.5)
Zafir Abad I	7 (5.6)	10 (8.0)	3 (2.4)	0 (0.0)	20 (16.0)
Zafir Abad II	2 (1.6)	6 (4.8)	5 (4.0)	3 (2.4)	16 (12.5)
Wanda Mucha Wala	9 (7.2)	10 (8.0)	2 (1.6)	1 (0.8)	22 (17.5)
Balochnagar	2 (1.6)	6 (4.8)	6 (4.8)	4 (3.2)	18 (14.3)
Total	39 (31.2)	46 (36.4)	25 (20.0)	16 (12.4)	126 (100)

Source: Field survey 2020, The values in parenthesis are percentages

Table 3.1 shows that 36.4% respondents were fall in the age group of 31-40 years. About 31.2% respondents were fall in the age group of up to 30 years, 20% respondents were fall in the age group of 41-50 years and 12.4% respondents were fall in the age group of above 50 years belonged to old age category. Result indicates that majority (36.4%) farmers were in the middle age group showed great potential, interest and understand the economic and social importance of livestock.

Education

Education is also significant in the development of a country. It is significant in the behavioral properties of people, and the dairy animal rearing groups. The development of developed countries was marked by the history of direct dependence of the country on education. More development will be enjoyed in countries where there is higher education. It should be stated that we have our religion, Islam, which tends to learn the significance of education.

Table 3.2 Educational level of respondents

Villages	Illiterate	Primary	Middle	Matric	Intermediate	Graduate	Total
Dhap Wala Basti	13 (10.4)	1 (0.8)	4 (3.2)	5 (4)	4 (3.2)	2 (1.6)	29 (23.2)
Basti Ustarana	6 (4.8)	6 (4)	3 (2.4)	3 (2.4)	2 (1.6)	1 (0.8)	21 (16.5)
Zafir Abad I	1 (0.8)	0 (0)	5 (4)	6 (4.8)	5 (4)	3 (2.4)	20 (16.0)
Zafir Abad II	6 (4.8)	0 (0)	1 (0.8)	6 (4.8)	1 (0.8)	2 (1.6)	16 (12.5)
Wanda Mucha Wala	3 (2.4)	1 (0.8)	4 (3.2)	2 (1.6)	6 (4.8)	6 (4.8)	22 (17.5)
Balochnagar	5 (4)	3 (2.4)	3 (2.4)	3 (2.4)	2 (1.6)	2 (1.6)	18 (14.3)
Total	34 (27.2)	11 (8)	20 (16)	25 (20)	20 (16)	16 (12.8)	126 (100)

Source: Field survey 2020

Table 3.2 shows that 27.2% respondents were illiterate and the remaining 72.8% respondents were literate in the study area. Out of literate 8% respondents were educated up to primary, 16% respondents were educated to Middle, 20% respondents were educated to Matric, 16% respondents were educated to intermediate and the remaining 12.8% beneficiaries were educated up to graduation. The analyzed data in this regards is encouraging able in the study area.

Household size of the sample Respondents

Decisions making in the usage of natural resources and on the settlement of social, economic and political organizations depend upon human behavior. Household size is related to skills and awareness of people in the field of agriculture and livestock.

Table 3.3 Household Size of respondents (family members)

Villages	1-5	6-10	11-15	16-20	Total
Dhap Wala Basti	2 (1.6)	14 (11)	13 (10)	0 (0)	29 (23.2)
Basti Ustarana	3 (2.4)	8 (6.4)	10 (8)	0 (0)	21 (16.5)
Zafir Abad I	0 (0)	11 (8.8)	9 ((7)	0 (0)	20 (16.0)
Zafir Abad II	3 (2.4)	7 (5.60)	5 (4)	1 (0.8)	16 (12.5)
Wanda Mucha Wala	2 (1.6)	10 (80)	10 (8)	0 (0)	22 (17.5)
Balochnagar	2 (1.6)	9 (7.2)	5 (4)	2 (1.6)	18 (14.3)
Total	12 (9.6)	59 (47)	52 (41)	3 (2.4)	126 (100)

Source: Field survey 2020

Table 3.3 will reveal that, 47 percent of all respondents have a household size ranging between 6 and 10 members. This does not imply that the majority of the household size of farmers in the study area was 6 to 10. The number of persons in the household ranges between 11 and 15 with the percentage of about 41%. Nine point six percent of the farmers were those whose household size was 1 to 5 members, and 2.4% respondents had the household size of 16 to 20 members which was the small household size of the study area.

Main Source of Income

The issue of the source of income contributes significantly to stabilizing the financial situation among the respondents. Smoothing the financial situation of the respondents will undoubtedly raise the use of new skills and technologies. Those respondents who are financially sound will have a significant impact on the diffusion rate and the rate of adoption.

Table 3.4 Farmers' source of income

Villages	Agriculture	Non Agriculture	Both	Total
Dhap Wala Basti	11 (8.8)	6 (4.8)	12 (9.6)	29 (23.2)
Basti Ustarana	9 (7.2)	5 (4)	7 (5.6)	21 (16.5)
Zafir Abad I	12 (9.6)	1 (0.8)	7 (5.6)	20 (16.0)
Zafir Abad II	7 (5.6)	2 (1.6)	7 (5.6)	16 (12.5)
Wanda Mucha Wala	12 (9)	4 (3)	6 (4.8)	22 (17.5)
Balochnagar	11 (8.8)	1 (0.8)	6 (4.8)	18 (14.3)
Total	62 (49)	19 (15)	45 (36)	126 (100)

Source: Field survey 2020

Table 3.4 depicts that 49% respondents depend upon agriculture for their livelihood. While 36% respondent's livelihood source were both agriculture and non-agriculture. However, 15% respondent's income sources were non agriculture. In this study it was found that male member contributes more as compare to female in their family income. Female worked on farms on part time bases where their males were engaged in other activities or jobs.

Source of information

Relevant market information, technology, pricing, successful experiences as well as credit institutions, government services and policies, climate, crops, livestock and protection of natural resources in the society can be effectively spread with the use of the information and communication technology. The data received can have a significant impact on agricultural

activities and food security (Girard, 2003). The exchange of knowledge and information with agricultural communities, educational modules, input acquisition, market and market prices, credit, business, networks and partnership strengthening, spreading interconnection of development interventions, and livestock production can be increased with the help of modern ICTs. Internet, web-based tools, cell phones, and computer-mediated networks are some of the tools used by Africa in giving solutions on development concerning livestock (Munyua, 2008).

Table 3.5 Information source of the livestock farmers

Villages	Livestock Ext. Department	Radio/TV	NGOs	Self motivation	Fellow Farmers	Total
Dhap Wala Basti	12 (9.6)	2 (1.6)	7 (5.6)	2 (1.6)	6 (4.8)	29 (23.2)
Basti Ustarana	11 (8)	1 (0.8)	6 (4.8)	1 (0.8)	2 (1.6)	21 (16.5)
Zafir Abad I	8 (6.4)	0 (0)	4 (3.2)	1 (0.8)	7 (5.6)	20 (16.0)
Zafir Abad II	8 (6.4)	1 (0.8)	4 (3.2)	1 (0.8)	2 (1.6)	16 (12.5)
Wanda Mucha Wala	13 (10.4)	0 (0)	6 (4.8)	1 (0.8)	2 (1.6)	22 (17.5)
Balochnagar	9 (7.2)	1 (0.8)	5 (4)	1 (0.8)	2 (1.6)	18 (14.3)
Total	61 (48)	5 (4)	32 (25.6)	7 (5.6)	21 (16.8)	126 (100)

Source: Field survey 2020

The data in Table 3.5 show that 48% respondents were said that livestock extension department provides them knowledge about modern technologies followed by NGOs (25.6%), fellow farmers (16.8%) self motivation (5.6%) and radio and TV (4%) about modern technologies which are used in livestock.

Extension services availability to farmers

It is the responsibility of livestock extension staff to bring changes in the behavior, knowledge, skills, internal relations, attitude in the farming community to improve the livestock management and technologies and raise the production of their existing number of animals and livestock productivity. Different management activities were performed by livestock extension agents like deworming, vaccination, food and fodder improvement, management and husbandry practices etc.

Table 3.6 Types of livestock extension services available to farmers in research area

Villages	Artificial insemination	Vaccination	Food and fodder improvement	Dewarming	Total
Dhap Wala Basti	11 (8.8)	13 (10.4)	2 (1.6)	3 (2.4)	29 (23.2)
Basti Ustarana	8 (6.4)	9 (7.2)	1 (0.8)	3 (2.4)	21 (16.5)
Zafir Abad I	8 (6.4)	6 (4.8)	3 (2.4)	3 (2.4)	20 (16.0)
Zafir Abad II	5 (4)	6 (4.8)	1 (0.8)	4 (3)	16 (12.5)
Wanda Mucha Wala	10 (8)	12 (9.6)	0 (0)	0 (0)	22 (17.5)
Balochnagar	7 (5.6)	7 (5.6)	0 (0)	4 (3)	18 (14.3)
Total	49 (39)	53 (42.4)	7 (5.8)	17 (13)	126 (100)

Source: Field survey 2020

As Table 3.6 data revealed, 42.4 percent majority of the respondents reported that the livestock extension and dairy development department offers such services as vaccination. Some 39 percent of the respondents reported that the livestock extension departments provided them with artificial insemination, and 13 percent reported receiving dewarming facility, offered by the livestock extension and dairy departments. These findings are in conjunction with the affirmation of Idrees et al. (2007) who stated that 45 percent and 11 percent of the participants asserted that artificial insemination and dewarming were available respectively. There is a reason why 5 percent of them reported food and fodder services improvements.

Satisfaction level of respondents from the services provided by livestock department

Extension service providers have a responsibility to ensure that farmers are satisfied with the services provided. To improve the loyalty and trust of farmers, feedback from the extension is increasingly important (Azikiwe *et al.*, 2013).

Table 3.7 Satisfaction level of respondents from the services provided by livestock department

Villages	Yes	No	Total
Dhap Wala Basti	19 (15)	10 (8)	29 (23.2)
Basti Ustarana	12 (9.6)	9 (7.2)	21 (16.5)
Zafir Abad I	13 (10.4)	7 (5)	20 (16.0)
Zafir Abad II	10 (8)	6 (4.8)	16 (12.5)
Wanda Mucha Wala	17 (13.6)	5 (4)	22 (17.5)
Balohnagar	13 (10.4)	5 (4)	18 (14.3)
Total	84 (67)	42 (33)	126 (100)

Source: Field survey 2020

The famers had been enquired on the perception of their perceived level of services that livestock extension department had offered them. Table 3.7 shows that majority 67% of the respondents were satisfied with the services of livestock extension department. Nonetheless, 33% of the respondents were not satisfied with the livestock department. Once they knew them those contented farmers as a result of the services, they were then questioned further on the degree of satisfaction. The findings were similar to those of Idrees et al. (2007) who observed that most (53.33) of the respondents were satisfied with the extension services of livestock and dairy development department and 46.86% were not.

Table 3.7.1 Level of satisfaction on the service provided by livestock Department

Villages	Extremely satisfied	Very satisfied	Somewhat satisfied	Unsatisfied	Very Unsatisfied	Total
Dhap Wala Basti	7 (5.6)	5 (4)	6 (4.8)	0 (0)	0 (0)	18 (14.4)
Basti Ustarana	4 (3.2)	2 (1.6)	7 (5.6)	1 (0.8)	0 (0)	14 (11.2)
Zafir Abad I	5 (4)	4 (3.2)	5 (4)	0 (0)	0 (0)	14 (11.2)
Zafir Abad II	3 (2.4)	2 (1.6)	3 (2)	1 (0.8)	1 (0.8)	10 (8)
Wanda Mucha Wala	2 (1.6)	8 (6)	6 (4.8)	0 (0)	0 (0)	16 (12.8)
Balohnagar	4 (3.2)	2 (1.6)	6 (4.8)	0 (0)	0 (0)	12 (9.6)
Total	25 (20)	23 (18)	33 (26)	2 (1.6)	1 (0.8)	84 (67.2)

Source: Field survey 2020

As presented in Table 3.7.1, of the farmers who responded to the services 26% indicated that they were somewhat satisfied with the services which is provided by livestock department, with

the next one being extremely satisfied (20%) very satisfied (18%) unsatisfied (1.6%) and only (0.8) respondents. The number of farmers who were not satisfied with these services did not go below 33 percent and they were asked, why they were not satisfied. Table 3.7.2 provides data that presents in this aspect.

Table 3.7.2 Dissatisfaction level of respondents

Villages	They usually visit landlord and progressive farmers	They never visit	They rarely visit	Have no interest	They themselves do not know about the better recommendations	Total
Dhap Wala Basti	4 (3.2)	1 (0.8)	4 (3.2)	2 (1.6)	1 (0.8)	12 (9.6)
Basti Ustarana	1 (0.8)	0 (0)	2 (1.6)	2 (1.6)	1 (0.8)	6 (4.8)
Zafir Abad I	3 (2.4)	1 (0.8)	3 (2)	0 (0)	0 (0)	7 (5.6)
Zafir Abad II	3 (2.4)	1 (0.8)	2 (1.6)	1 (0.8)	0 (0)	7 (5.6)
Wanda Mucha Wala	1 (0.8)	1 (0.8)	2 (1.6)	0 (0)	0 (0)	4 (4.8)
Balochnagar	1 (0.8)	2 (1.6)	3 (2)	0 (0)	0 (0)	6 (4.8)
Total	13 (10.4)	6 (4.8)	16 (12)	5 (3.2)	2 (1.6)	42 (33.6)

Source: Field survey 2020

The findings in Table 3.7.2 show that 12 percent of the respondents said that only livestock extension worker hardly visits them. Conversely 10.4 percent of the respondents held the opinion that they tend to visit landlord and progressive farmers as opposed to those 4.8 percent respondents who indicated that they were never visited by livestock extension workers. The percentage of respondents who replied that extension worker is not interested in their work is 3.2%. The rest 1.6% of the respondents stated that livestock extension workers are not aware of what the better recommendations are.

Farmer's perception regarding the role of livestock extension services in the study area

In Pakistan and other developing nations, the aspect under which livestock extension plays has been overlooked as a bridge between farmers and new technologies. As such, the role of extended service support and provision, particularly in the developing countries, should be revisited. The source of information to farmers in Pakistan rural areas is scarce and as the spreading of animal husbandry and farming technology enhances. Agriculture Extension has failed to do its part. Due to this reason, rural farmers predominantly use their traditional knowledge and information disseminated by their fellow farmer. Conversely, agricultural extension workers also find it hard to confront the farmers because of limited resources due to their visits. Nevertheless, the livestock extension department has not been entirely idle in the rural regions like supplying new and better livestock rearing techniques. In this instance, the

farmers were questioned on the role played by the livestock extension department to develop the capacity of farmers to embrace new livestock technology and new technologies.

Table 3.8 Farmers' perception regarding the role of livestock extension services in the study area

The role of livestock Extension is to:	1	2	3	4	5
1. Conduct awareness meetings with farmers on livestock management.	47 (37.6)	33 (26.4)	35(28)	7 (5.6)	4(3.2)
2. Conduct field days to publicize new and improved technologies of livestock and disease management.	5 (4)	73 (59.2)	30 (24)	14 (11.2)	4 (3.2)
3. Conduct demonstrations in order to train farmers on new knowledge and skills on livestock management.	23 (18.4)	59 (47.2)	29 (23.2)	11 (8.8)	4 (3.2)
4. Use farmer to farmer extension method to promote awareness and adoption of best practices in livestock management.	18 (14.4)	59 (47.2)	26 (20.8)	19 (15.2)	4 (3.2)
5. Disseminate information on livestock related problems and early warning to small farmers for better planning and management.	28 (22.4)	41 (32.8)	29 (23.2)	20 (16)	8 (6.4)
6. Use livestock farmer field school (LFFS) to train farmers.	29 (23.2)	60 (48)	28 (22.4)	9 (7.2)	0 (0)
7. Build capacity and create awareness to its livestock extension staff on livestock so they have knowledge and skills.	21 (16.8)	44 (35.2)	31 (24.8)	18 (14.4)	12 (9.6)
8. Use information communication technologies (ICTs) such as the radio and cell phones to create awareness among farmers on livestock issues.	54 (43.2)	33 (26.4)	23 (18.4)	12 (9.6)	4 (3.2)

Use a Likert scale of 1= strongly agree; 2= agree; 3= dont know; 4= disagree; and 5= strongly disagree
Source: Field survey 2020, The values in parenthesis are percentages.

The number of the identified 08 roles was determined by the perception of Farmer with respect to the position of livestock extension services in the study area. The findings given in Table 3.8 illustrate that 37.6% of the respondents strongly agreed with the statement conduct awareness meeting with farmers on livestock management followed by agree (26.4%). Unaware (28%), disagree (5.6%), and strongly disagree (3.2%). The result of carrying out awareness meetings as significant role of agricultural extension was condoned by Magrath and Sukali (2009) and Mandleni and Amin (2011) who reported that knowledge and information about livestock allow farmers to make informed decisions in regard to livestock adaption technologies. On the same note, 59.2% majorities of the respondents agreed that the livestock extension department can hold

field day to popularize new and improved technologies of livestock and disease management. Then there were strongly agree (4%), don't know (24%), disagree (11.2%), and strongly disagree (3.2%). Such findings were comparable to those given by Okunada who found the days of the fields as effective extension teaching techniques in the production of attitude change towards new agricultural technologies by the farmers. Results in table illustrates that 47.2 percent of the respondents agreed with statement that livestock department carry out demonstrations in efforts to impart new knowledge and skills on how to handle livestock. Next came strongly agree (18.4%), don't know (23.2%), disagree (8.8%), and strongly disagree (3.2%). Equally 47.2% had agreed with this statement when it was said that promising awareness and adoption of best practices in livestock management, use farmer to farmer extension method. Subsequently there was the strongly agree (14.4%), don't know (20.8%) and disagree (15.2) and strongly disagree (3.2) group. Agreement to this statement was made by about 32.8% respondents who said that livestock extension and dairy department disseminate information on livestock related problems and early warning to small farmers in order to plan and manage better. Next were strongly agree (22.4%), don't know (23.2%), disagree (16%), and strongly disagree (6.4%). Result describes that 48% of the respondents agreed with the fact that livestock extension department trains farmers using livestock farmer field school (LFFS). Strongly agree followed by don't know (23.2) and disagree (7.2) then strongly disagree (0). Findings in Table 4.8 portray that 35.2 percent of the respondents agreed on 35.2 percent that livestock extension department build capacity and do awareness creation to the livestock extension staff so that they have knowledge and skills. Strongly agree (16.8%), don't know (24.8%), disagree (14.4%), and strongly disagree (9.6%), followed by 43.2% answered strongly agreed to that statement that use information communication technologies (ICTs) like the radio and cell phones to create awareness among livestock issues among farmers. Subsequently agree (26.4), don't know (18.4), disagree (9.6) and strongly disagree (3.2).

Conclusions

Resting on the results of the current research work, it will be concluded that farmers are quite satisfied with the work of Livestock Department, yet the livestock sector continues to have numerous issues and challenges such as livestock production, marketing challenges, low importance in the planning level. The beneficiaries of Livestock Department are having problems in availing the livestock inputs and are somewhat constrained in terms of awareness on poor breeding technology and disease prevalence in animals. It was also concluded that most of the respondents were not aware of the livestock extension services of the public sector and offered high priced services of livestock input privately. The control financial issues were the key issues of the farmers.

Recommendations

Based on the findings of the study, it is recommended that:

- Strengthen Public Livestock Extension Services and Awareness Campaigns
- Improve Access to Livestock Inputs and Veterinary Care
- Provide Financial Support and Subsidy Programs for Farmers

References

Azikiwe, I., N. Monde, A. Obi, and O. Sunday. 2013. Quality of extension services: A case study of farmers in Amathole. *Journal of Agricultural Science*. 5(2): 204-208.

Balochistan Times. 2010. Rank of Pakistan in milk production in the world.

- Basant, R. 1988. Indigenous knowledge and technology diffusion: a case study of agro-mechanical technology in Gujarat. The Gujarat Instt. Area Planning. Working paper No. 16, Ahmadabad. Pp 1-15.
- GoP. 2018-19. Pakistan Economic Survey Ministry of Finance, Economic advisors wing, finance division, Islamabad, Pakistan. Pp. 26-29.
- Idress, M., Z. Mahmood, D. Hussain, M. Shafi and U. Sidique. 2007. General problems regarding extension services with livestock and dairy farmers of Peshawar District, Pakistan. *Sarhad J. Agric.* 23(2): 528-531
- Idress, M., Z. Mahmood, M. Shafi and U. Sidique. 2007. Performance evaluation of extension services of livestock and dairy development in District Peshawar. *Sarhad J. Agric.* 23(2): 519-526.
- Magrath, J., and E. Sukali. 2009. The Winds of Change: Climate change, poverty and the environment in Malawi. *Oxfam Policy and Practice: Agriculture, Food and Land.* 9(4): 1-52.
- Mandleni, B., and F. D. K. Anim. 2011. Climate change awareness and decision on adaptation measures by livestock farmers in South Africa. *Journal of Agricultural Science.* 3(3): 258
- Moaeen-ud Din, M. and M. E. Babar. 2006. Livestock Farming in peri-urban areas of Faisalabad. *Livestock research for rural development.* 18(1): 12-24.
- Munyua, H. 2008. Final Report. ICTs and small-scale agriculture in Africa: a scoping study, Report prepared on behalf of the International Development Research Centre (IDRC), <http://ideas.repec.org/p/iim/iimawp/2005-11-04.html> Retrieved on 30th September.
- Ongachi, W., R. Onwonga, H. Nyanganga, S. Wangia and E. Chimoita. 2018. Farmer's perception of video mediated learning. *International journal of education and development using information and communication technologies.* 14(2): 195 - 210.
- Rosegrant, M. W., B. D. McIntyre, H. R. Herren, J. Wakhungu and R. T. Watson. 2009. Looking into the future for agriculture and AKST (Agricultural Knowledge Science and Technology). In *Agriculture at a crossroads*, Pp. 307-376.
- Steinfeld, H., P. Gerber, T. Wassenaar, V. Castel, M. Rosales, and C. de Haan. 2006 *Livestocks long shadow: environmental issues and options.* Rome, Italy: FAO. Pp. 20 -21.
- Thornton, P. K., P. G. Jones, T. M. Owiyo, R. L. Kruska, M. Herrero, P. Kristjanson, A. Notenbaert, N. Bekele, V. Orindi, B. Otiende, A. Ochieng, S. Bhadwal, K. Anantram, S. Nair, V. Kumar and U. Kulkar. 2006. Mapping climate vulnerability and poverty in Africa. Nairobi (Kenya): ILRI. 9(1): 74-88.
- Tsur, Y., M. Sternberg, and E. Hochman. 1990. Dynamic modeling of innovation process: Adoption with risk aversion and learning. *Oxford Econ. Papers.* 42(1): 336-355.