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Descriptive Analysis of the Effectiveness of Livestock Extension Services Delivery among Dairy Farmers in District Peshawar

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Authors' contributions

This work was carried out in collaboration between all authors. Author AN performed the research under the supervision of author MZK, who provided guidance at each step of the study. Author MZK also helped in designing of the study. Author RU helped in data collection, data analysis and overall write-up of the manuscript with author AN while author AR formatted and submitted the manuscript and also revised its final version. All authors read and approved the final manuscript.

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ABSTRACT

The instant study analyzes farmer's perception about the livestock extension services in district Peshawar. Multi-stage sampling technique was used to select three villages and proportional allocation method was utilized to select 80 dairy farmers from the three selected villages. Primary data was collected through interview schedules from the selected respondents. Field data showed that 36% of the respondents contacted livestock and 67% of the respondents responded that livestock officer paid visit to them. Majority of the respondents (69%) were not satisfied from the services of livestock and dairy development department. The study concludes that livestock and dairy development department did not provide satisfactory facilities nor training regarding improved

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dairy technologies was provided. Livestock extension officers were also not found fulfilling their jobs accordingly by visiting the farmers on regular basis which compels the dairy farmers to consult private clinics at high cost. It is suggested therefore that independent monitoring unit should be established to ensure livestock officer to pay regular and frequent visits to the farmers to educate the dairy farmers which will build and restore the trust and confidence of the dairy farmers on livestock extension department alongside improving their dairy production.

Keywords: Livestock extension services; dairy production; improved dairy technologies.

1. INTRODUCTION

Livestock sector is an integral part of agricultural economy of Pakistan that provides net source of foreign earnings. Historically livestock has been dominated by small holders to meet their needs of milk, food security and cash income on daily basis. Moreover, livestock is considered a source of employment generation at rural level, helping to reduce income variability. It is central to the livelihood of the rural poor in the country and can play an important role in poverty alleviation and keep in uplifting the socio-economic condition of our rural masses. Livestock accounts for 55.4 percent to the agricultural value added and 11.9 percent to national GDP. Gross value addition of the livestock sector is Rs. 756 billion [1].

Because of high milk demand there emerges excess demand for milk. To overcome the shortage of milk, powdered milk is imported every year. Furthermore, milk collected from urban area is not sufficient to meet the entire urban demand, more milk is collected from rural areas and also the remaining deficit is met through imported powdered milk [2]. One of the major causes of low production is lack of proper extension services and hence non adoption of improved livestock technologies among the livestock farmers [3]. [4] in their study reported that unawareness about improved livestock technologies, lack of capital and high prices of inputs as the major constraints in the adoption of modern livestock practices.

In developing countries like Pakistan, dairy development has played an essential role by increasing milk production, improving income level, producing employment opportunities and improving the nutritional standards of small and marginal farmers in rural areas. The milk yield in Pakistan is far behind the marginal yield or potential yield which might be due to the fact that dairy farming in Pakistan is facing massive problems that include lack of proper management practices, health care facilities, lack of high quality breeds, lack of proper dairy programme to improve the existing dairy cattle resources, high inputs cost and lack of proper knowledge with the farmers about the latest technologies and their management.

Lack of livestock extension services can also be one of the major causes of low dairy production because of not properly educating farmers regarding livestock i.e. farmers are unaware of the improved livestock management technologies. In the light of the utmost importance of these constraints of livestock sector due to weak linkages with livestock extension department the present study was thus formulated to investigate the dairy farmer's perception about the livestock extension services.

2. MATERIALS AND METHODS

The present study was conducted in 2014 and the universe of the study was district Peshawar. The district lies between 33° 44' and 34° 15' North latitude and 71° 22' and 71° 42' East longitude [5]. Multi-Stage sampling technique was employed for the selection of three sampled villages i.e. Masma, Timberpura and Nasirpur. The 80 dairy farmers were selected through proportional allocation method from the three sampled villages. Primary data were collected through pre-tested interview schedules with the dairy farmers and secondary data were accumulated from various published and unpublished sources. Data was presented in simple percentages and frequencies.

3. RESULTS AND DISCUSSION

3.1 Respondents' Contact with Livestock Department

The provision of extension services to dairy farmers is mainly the government's role. It is meant to improve production capabilities of smallholder farmers but a large number of smallholder farmers are still unable to access

these services [6]. Data regarding respondents' contact with livestock department is presented in Table 1. The data shows that 36.2% of the respondents contacted the livestock department to report their problems and 63.8% of the respondents did not contact livestock department for the solution of their problems. Nearly opposite results were reported by [7] who found that 54% respondents have contact with extension personnel while 46% of the respondents did not contacted the extension personnel.

Table 1. Distribution of respondents regarding their contact with livestock department

Contact with livestock department to report problems	Frequencies	Percentages
Yes	29	36.2
No	51	63.8
Total	80	100

Source:- Survey data

3.2 Type of Problem Reported to Livestock Department

The dairy farmers in the present study contacted the livestock and dairy development department for either both treatment and vaccination or one of them. Table 2 represents data regarding type of problem reported when the dairy farmers contact livestock department. The data shows that 63.8% of the respondents did not contact the livestock department and 22.5% of the respondents reported that they contacted livestock department for the treatment of dairy animals only. Similarly 2.5% of the respondents reported that they contacted livestock department for vaccination only and 11.2% of the respondents contacted livestock department for both treatment and vaccination of dairy animals.

3.3 Satisfaction Level of Advice

The satisfaction of farmers is important so that the farmers may act as a living advertisement for the need for and usefulness of the extension personnel. Satisfied farmers will not only augment the reputation of the extension personnel, but will lead to the creation of more progressive farmers. The data regarding satisfaction level of the advice when the respondents contact livestock department is presented in Table 3. The data shows that 32.5% of the respondents reported that they were satisfied to great extent from the advice given by the livestock department. The results further reveal that 3.8% of the respondents were satisfied to some extent from the advice given by the livestock department. It is remarkable that majority (63.8%) of the respondents did not contact livestock department.

Table 2. Distribution of respondents regarding type of problem reported

Type of problem reported to livestock department	Frequencies	Percentages
No contact	51	63.8
Treatment	18	22.5
Vaccination	2	2.5
Treatment + vaccination	9	11.2
Total	80	100

Source:- Survey data

Table 3. Distribution of respondents regarding satisfaction level of advice

Satisfaction level of advice	Frequencies	Percentages
No contact	51	63.8
To great extent	26	32.5
To some extent	3	3.8
Total	80	100

Source:- Survey data

3.4 Frequency of Contacts with Livestock Department

Timely and frequently visits of farmers to extension personnel ensures the solution of their problems. It also helps in making a friendly relationship where farmers can share their problems with the extension personnel. Frequency of contacts with livestock department of the respondents is presented in Table 4. The data shows that 63.8% of the respondents did not contact livestock department and 13.8% of the respondents contact regularly when they have a problem. The results also showed that 20% of the respondents reported that they contacted occasionally while 2.5% respondents contacted livestock department seasonally.

3.5 Reasons for No Contact with Livestock Department

The data regarding reasons for not contacting with livestock department is presented in Table 5. The results show that 43.1% of the respondents stated that most of the time the

livestock officer did not present at the dispensary as a main reason for not contacting livestock department for their problems while 15.7% of the respondents stated the reason that private doctor is more competent than government doctor. 9.8% of the respondents reported that there is no facility available at the dispensary. 31.4% of the respondents which belong to Timberpura responded that in our village there is no dispensary and we have to cover a distance of 2-3km. However, it is not sure that the livestock doctor may be present at the dispensary.

Table 4. Distribution of respondents regarding frequency of contacts with livestock department

Frequency of contacts with livestock department	Frequencies	Percentages
No contact	51	63.8
Regularly	11	13.8
Occasionally	16	20
Seasonally	2	2.5
Total	80	100

Source:- Survey data

3.6 Frequency of Livestock Officer Visit

Table 6 represents the data of frequency of livestock officer visits. The data shows that 32.5% of the respondents reported that livestock officer did not visit their farm while 3.8% of the respondents stated that livestock officer visited their farm once a week. It is because of nearby dairy farms with the livestock dispensary. 7.5% of the respondents reported that livestock officer visit to our farms once in a two week. 45% of the respondents reported that livestock officer visit to our farms once a month or more. 11.2% of the respondents stated that livestock officer visit us on our call. Our results are in conformity with that of [8] who also reported that 62.9% of the respondents were never visited by extension staff.

3.7 Source of Most Information Regarding Dairy Production

Table 7 represents data regarding source of most information regarding dairy production. The data shows that 12.5% of the respondents reported that they got most information from the livestock and dairy development department and 32.5% received information from private livestock doctor clinic. More than half 55% of the respondents reported that they obtained information from fellow farmers regarding dairy production. It is remarkable to mention that there no more sources like TV, Radio, Newspaper etc. for the dairy farmers in the study area except these three sources.

3.8 Type of Livestock Extension Services Available to Dairy Farmers

Data regarding type of livestock extension services available to dairy farmers are presented in Table 8 which shows that 12.5% of the respondents reported that no livestock extension

Table 5. Distribution of respondents regarding reasons for no contact with livestock department

Reasons of not contacting with livestock department	Frequencies	Percentages
Most of time staff is not available at dispensary	22	43.1
Veterinary doctor at private time facilitate us more than official time	8	15.7
No facility available	5	9.8
No dispensary at our village	16	31.4
Total	51	100

Source:- Survey data

Table 6. Distribution of respondents regarding frequency of livestock officer visit

Frequency of livestock officer visit	Frequencies	Percentages
No visit	26	32.5
After one week	3	3.8
After two weeks	6	7.5
After one month or more	36	45
On call	9	11.2
Total	80	100

Source:- Survey data

Table 7. Distribution of Respondents regarding source of most information about Dairy production

Source of information regarding dairy production	Frequencies	Percentages
Livestock and dairy development department	10	12.5
Private livestock doctor clinic	26	32.5
Progressive/fellow farmer	44	55
Total	80	100

Source:- Survey data

Table 8. Distribution of respondents regarding type of livestock extension services available

Livestock extension services available to dairy farmers	Frequencies	Percentages
No services	10	12.5
Vaccination	41	51.2
Health + Vaccination +A.I.	19	23.8
Health + Vaccination	10	12.5
Total	80	100

Source:- Survey data

services were available in the study area. More than half 51.2% of the respondents stated that only vaccination facility was available and 12.5% of the respondents reported that health and vaccination services were available. Moreover 23.8% of the respondents reported that health, vaccination, and Artificial Insemination as livestock extension services were available in the study area.

4. CONCLUSIONS AND RECOMMENDATION

From the present study it was concluded that most of the respondents didn't contact livestock extension department to report their problem which might be the reason of not getting proper solution from them or their availability in the office. It was also concluded that the facilities provided by the livestock extension department were not up to the mark to satisfy the needs of the dairy farmers. Furthermore livestock extension officers were also not found fulfilling their jobs accordingly by visiting the farmers on regular basis which compels the dairy farmers to consult private clinics at high cost. It is suggested therefore that independent monitoring unit should be established to ensure livestock officer to pay regular and frequent visits to the farmers to educate the dairy farmers which will build and restore the trust and confidence of the dairy farmers on livestock extension department alongside improving their dairy production. Well-structured laboratory having basic livestock treatment facilities with appropriate working staff availability should be ensured so easy and economical services can be availed by the dairy farmers.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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