
Constraints Faced By Dairy Farmers in Dairy Production Management in District Dera Ghazi Khan

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ABSTRACT

Dairy production is the strongest tool for the rural community to improve their social and financial status in rural areas of Pakistan. This study was led to explore the constraints faced by small scale dairy farmers in district Dera Ghazi Khan (Punjab, Pakistan). The area comprises of 4 Tehsils, 7 Markaz and 48 associated union councils. A pre-tested questionnaire was developed to collect the data by 140 respondents who were selected by using a simple random sampling technique. The data were analyzed by using statistical package for social sciences. As regards constraints related to general management practices, most (40-47.86%) of the respondents were facing problems due to lack of knowledge, skills and high cost of labor. The green fodder problem is increasing in the study area. Illiterate people have not too much awareness and highly required training about vaccination and breeding services. Due to the large distance and poor veterinary administrations in emergency clinic dairy ranchers had confronted issues in animal health. There is a need to conduct training programs in rural areas and direct some projects and training for dairy farm management in rural areas to fulfill their needs and limit their issues.

KEYWORDS: *Constraints, dairy production management, dairy problems, livestock activities*

INTRODUCTION

Dairying is one of the important enterprises, which supports rural households by providing profitable employment and steady income. Dairying is a solid way to build up the small scale economy in rural areas (Afzal, 2008; Shamsuddin et al., 2007; Uddin, Uddin, Al Mamun, Hassan, & Khan, 2012) to improve livelihoods and alleviate poverty. It was examined that about 40-45 million of Pakistan's population lived in rural areas that are engaged with the dairy sector (Nosheen, Ali, Ahmad, & Nawaz, 2008). The dairy sector offers diverse and multidimensional benefits to the rural poor (Afzal, 2008) and it is expected to rise the demand for dairy products by 17.5% by 2030 worldwide (FAO, 2006). The dairy sector has an important contribution to the livelihoods of rural poor (Akhtar, Younas, Iqbal, & Alam, 2008; Batool et al., 2014; Hayat et al., 2017; Khan & Usmani, 2005; Millar & Photakoun, 2008; Upton, 2004) as a most secure and permanent source of cash income (Hasnain & Usmani, 2006) that is considered as more vulnerable to poverty (Upton, 2004). Moreover, in the overall national development of the country last year, this sector contributed a significant share of

about 55.9 percent of the agriculture sector and its share in GDP stood at 11.9%, higher than crop sector share (Wing, 2014).

Dairy production is increased rapidly by improving practices related to livestock market management (Davis et al., 2015; Thornton, 2010; Vishwanath, 2003). In dairy production, different obstacles were observed by dairy farmers while adopting various activities in their dairy enterprises. Constraints identification will support the administrators and directors to build up the projects, training and programs as per the necessities of small scale dairy farmers. In the study, the limitations and constraints are identified to overcome the issues related to dairy techniques (Manoharan, Selvakumar, & Pandian, 2003; Rathod, Landge, Nikam, & Vajreshwari, 2012). If these constraints are identified, these will be helpful in the adoption of the latest dairy techniques by dairy farmers. Though the management is necessary however it has to concentrate on market interaction for the best business (Cortez-Arriola et al., 2016; Hutchings & Nordblom, 2011). It was proposed to explore the constraints obstacle faced and priorities, market problems (Nagrале, Datta, & Chauhan, 2015; Shamsuddin et al., 2007) by small scale dairy farmers during dairy management. The present study was designed to explore the constraints faced by dairy farmers in the rural areas.

MATERIALS AND METHODS

The present study was investigated in region Dera Ghazi Khan which is located in Punjab Province (Pakistan). The area comprises of 4 tehsils, are Markaz and 48 associated union councils. The simple random sampling technique was used to obtain sample size, in all seven Markaz one union council having a rural area was chosen randomly, and two villages were selected by the nominated union council. From each chosen village, ten respondents were chosen valuably. Accordingly, the entire respondents were 140 that have participated in this study. The data was collected through a well-designed, structured, validated and pre-tested interview schedule with face to face interview method. The questionnaire was pre-tested to modify the questions and minimize the errors. Questions were primarily originated in English but asked in local languages. The collected information was examined through Microsoft excel and statistical package for social science 20. (SPSS) to discover the results and conclusions.

RESULTS AND DISCUSSION

Demographic results of the respondents

All the respondents were male, as in the study area it was not easy to collect data from females as there are some cultural, religious and family restrictions (Ilakal, Jagrathi, Hugar, Patil, & Kammar, 2013; Kale, Tekale, & Gaikwad, 2013). Half (52.10%) of the respondents had their ages between 40-50 years and one-third (35%) of the respondents were between 30-40 years. As the results show, half (55.7%) of the respondents have education below the middle standard, a small number (17.1%) of the respondents have matric level of their education (**Fig.1**). For dairy purpose, large number (69.3%) of the respondents have three Kanals (Kanal is a unit of area which is equivalent to one-eighth of an acre, used in northern India and Pakistan) and one-fifth (23.6%) of the respondents showed their land size up to five Kanals as shown (**Fig. 1**). Experience has an important role in livestock activities as well, the

data shows that one-third (30%) of the respondents have experienced more than 15 years in livestock and dairy activities and perform as their main occupation (**Fig. 1**)

Constraints faced by dairy farmers related to general management practices

In case of constraints faced by dairy farmers in general management practices, most (40-47.86%) of the respondents had faced problems due to lack of availability of loans, Lack of knowledge, high cost of labor, lack of investment and market problems at medium level. Lack of advisory services and high energy prices were almost the same as (Hayat et al., 2017). A large number (66.43%) of the respondents had faced problems due to a lack of advisory services. The results are almost the same as the past study findings (Kale et al., 2013). The constraints with top three ranking order which were faced by the respondents were lack of advisory services, unawareness of weather forecasting, lack of training and skills with 2.52, 2.46, 2.22 and 2.21 respectively (**Table 1**).

Constraints faced by dairy farmers related to breeding and feeding practices

The survey showed that half (50%) of the respondents had a problem due to the unavailability of quality crossbred bulls and a vast number (61.43%) of the respondents faced problems at a high level due to unavailability of artificial insemination services in the local area. However, most (45.71%) of the respondents faced problems at a medium level due to a lack of knowledge about animal breeds. The results are almost the same as Yadav *et al.* (2014). In feeding practice, most (47.14-50.71%) of the respondents had a problem due to fodder growing and cutting practices. Mohapatra *et al.* (2012) too observed the same findings. Nagrale *et al.* (2015) revealed that the lack of availability of green fodder was found as a major feeding constraint. Sagar *et al.* (2012) stated that the major problem of the dairy farmers was the availability of green fodder round the year. One-fourth (26.43%) of the respondents had faced problems for feeding to newly born calves (**Table 2**).

Constraints faced by dairy farmers related to health and selling activities

In dairy practices, more than half (51.43-53.57%) of the respondents had faced constraints at a high level due to the unavailability of vaccination at the proper time, non-availability and high cost of veterinary medicine and distant location of veterinary hospitals. (Durgga & Subhadra, 2009; Subhadra, 2009) also found the same values about the high cost of veterinary medicines. (Hayat et al., 2017) also found that poor veterinary services in the hospital were major problems for dairy farmers in rural areas. The highest mean value of problems faced by dairy farmers was (2.10-2.94) which is caused by unawareness of veterinary services, no provision for testing of animals, distant location of veterinary hospitals and poor veterinary services in local hospitals. (Hasnain & Usmani, 2006) also concluded that training facilities of staff and farmers are not satisfactory at livestock research and experimentation stations. They further concluded that poor training capacities of the staff and poor participation of the farmers in livestock programs are the major obstacles being faced by the majority of the livestock farmers in Pakistan. In the selling of milk, most (38.57-50%) of the respondents have faced problems at a high level due to market competition, preference of buffalo's milk and poor transportation facilities in rural areas with mean value 1.95, 2.11 and 2.27 respectively. (Raziq, Younas, & Rehman, 2010) reported that marketing, as well as storage facilities for dairy products, were very limited and poor. (Patil, Gawande, Nande, & Gobade, 2009) also found almost the same results (**Table 3**).

CONCLUSION

It is concluded that dairy farmers were general management constraints due to lack of knowledge, skills and poor advisory services. Most of the respondents in rural areas as the distance between the veterinary hospital and their dairy farm so, due to a large distance, much of the farmers have a lack of awareness about the veterinary facilities. Unavailability of artificial insemination and vaccination service was also major constraints faced by dairy farmers during dairy practices. In rural areas, most of the dairy farmers do not know feed newborn calves. As most of the rural people are earning a part of the income with dairy products but they have not skills to compete for the market due to transportation facilities, knowledge about by-products and payment issues. There is a need to train the dairy farmers according to their needs to minimize the problems faced by dairy farmers. The dairy farmers should be trained to vaccinate their animals and engaged with the veterinary services to improve their dairy production. Training programs should be formulated by considering some important aspects like the needs of dairy farmers, time, place and interval, etc. There should be organized some programs to motivate young rural people to the modern dairy system. There is a need to study the push and pull factors that are affecting the small scale dairy farmers to adopt new techniques as well.

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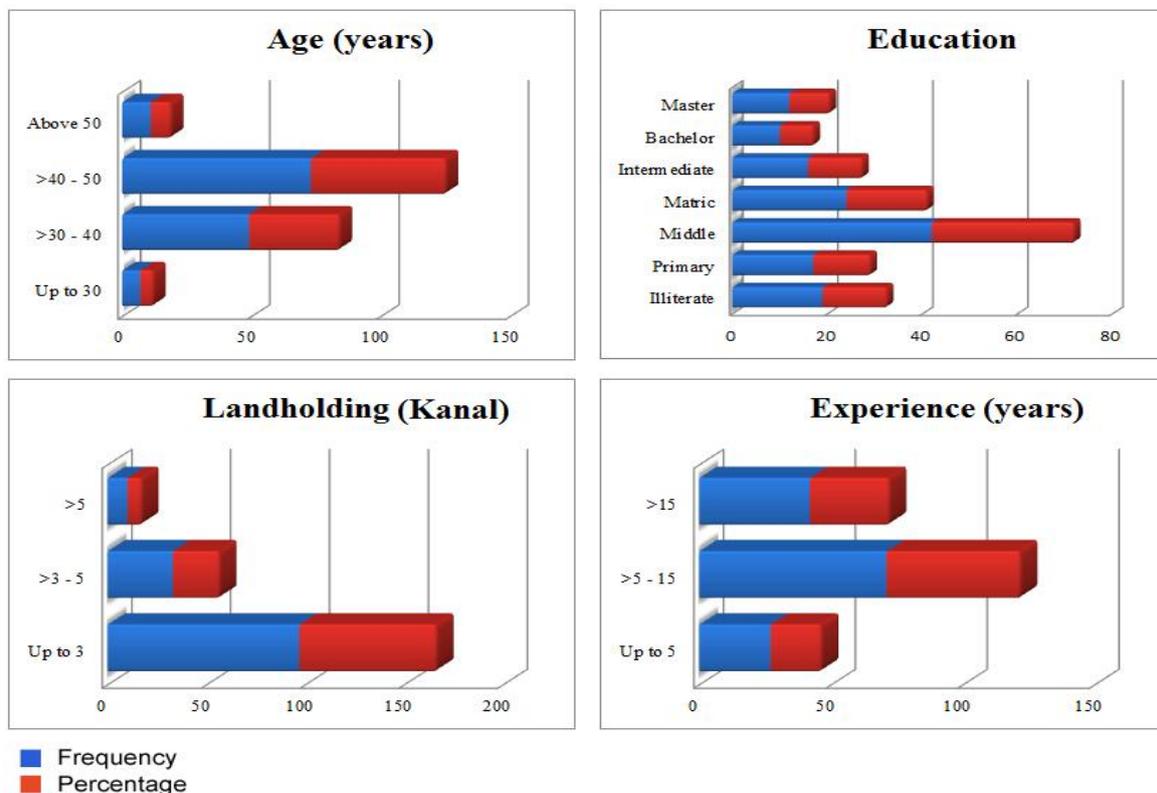


Figure 1 : Demographic characteristics of the respondents

Table 1: Constraints faced by dairy farmers during general management practices

Variables	L	M	H	M*	SD	R
	%					
General management problems						
Lack of advisory services	12.86	25.00	66.43	2.52	0.81	1
Unawareness of weather forecasting	4.29	28.57	61.43	2.46	0.83	2
Lack of training facilities	2.86	33.57	50.71	2.22	1.00	3
Lack of Skills	11.43	32.14	48.57	2.21	0.94	4
Lack of availability of loan	6.43	40.00	42.14	2.13	0.97	5
Distance between veterinary hospital	12.14	37.14	40.71	2.09	0.96	6
High energy prices (electricity etc.)	24.29	32.86	32.86	1.89	0.98	7
Lack of knowledge	22.86	42.32	28.57	1.84	0.96	8
High cost of labor	19.29	43.57	23.57	1.77	0.96	9
Lack of investment	21.43	46.43	20.71	1.76	0.91	10
Market problems	27.14	47.86	13.57	1.64	0.86	11

NOTE: L = Low, M = Medium, H = High, M* = Mean, SD = Standard Deviation, R = Rank

Table 2: Constraints faced by dairy farmers during breeding and feeding practices

Variables	L	M	H	M*	SD	R
	%					
Problem during breeding						
Unavailability of AI services	12.86	25.00	61.43	2.39	0.93	1
Unavailability of quality crossbred bulls	8.57	34.29	50.00	2.27	0.90	2
Lack of knowledge of breeds	4.29	45.71	38.57	2.11	0.94	3
Improper detection of heat	4.29	47.14	35.71	2.06	0.96	4
Pregnancy Diagnosis	15.71	49.29	30.71	1.95	0.99	5
Problems during feeding practices						
Fodder cutting	4.29	30.71	57.14	2.37	0.89	1
Fodder growing	5.00	28.57	57.14	2.34	0.94	2
Inadequacy of green fodder round the year	21.43	17.14	50.71	2.08	1.07	3
Use of Mineral Mixture/Common Salt	6.43	35.00	42.86	2.05	1.06	4
High cost of quality concentrate feeds	19.29	20.00	47.14	2.01	1.10	5
Feeding of pregnant animals	12.14	33.57	38.57	1.95	1.07	6
Unavailability of feed	11.43	40.71	32.86	1.91	1.02	7
Unavailability of fodder seed at proper time	22.86	22.86	39.29	1.86	1.10	8
Newly born calves feeding	24.29	26.43	35.71	1.84	1.06	9

NOTE: L = Low, M = Medium, H = High, M* = Mean, SD = Standard Deviation, R = Rank

Table 3: Constraints related to animal health and selling of milk

Variables	L	M	H	M*	SD	R
	%					
Health Care						
Unawareness of veterinary services	2.86	55.71	26.43	1.94	0.95	1
No provision for testing of animals	4.29	30.71	51.43	2.20	1.03	2
Distant location of veterinary hospital	4.29	27.14	53.57	2.19	1.07	3
Lack of veterinary services in hospitals	4.29	32.14	47.14	2.10	1.08	4
Non availability and high cost of medicines	27.14	11.43	52.14	2.06	1.08	5
Unavailability of veterinary doctors in emergency	16.43	43.57	37.14	2.01	1.03	6
Unavailability of vaccination at proper time	14.29	4.29	51.43	1.97	0.96	7
Improper Deworming practice	8.57	40.71	35.00	1.95	1.03	8
Isolation of infected animals	5.00	50.00	25.71	1.82	1.03	9
Selling of milk						
Low milk prices	0.00	46.43	30.00	1.88	1.04	1
Lack of transport facilities	8.57	34.29	50.00	2.27	0.90	2
Consumers preference for buffalo milk	7.25	33.57	46.43	2.11	1.05	3
Payment issues	4.29	47.86	32.86	1.99	0.99	4
Market competition	12.14	33.57	38.57	1.95	1.07	5

NOTE: L = Low, M = Medium, H = High, M* = Mean, SD = Standard Deviation, R = Rank