CONSTRAINTS PERCEIVED BY DAIRY MEMBERS IN ADOPTION OF NEW TECHNOLOGIES IN DAIRY FARMING IN RAJASTHAN

O.P. Meena[1], N.K. Sharma[2], N. K. Jeph[3] and D.S. Meena[4]
Department of Veterinary and Animal Husbandry Extension Education, College of Veterinary and Animal Science
Rajasthan University of Veterinary and Animal Sciences, Bikaner-334 001, Rajasthan, India

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ABSTRACT

The present study was conducted on a total 80 dairy farmers having minimum three milch animals selected from eight villages of Dausa and Jaipur districts of Rajasthan to ascertain the constraints perceived by dairy members in adoption of new technologies in dairy farming. The information was collected by conducting personal interviews of the livestock farmers with the help of well-structured and pre-tested interview schedule. It has been observed that majority (42.5 per cent) of the dairy members faced high level of constraints followed by medium (38.7 per cent) and low (23.8 per cent) regarding infrastructure. In case of technical constraints, majority (45.0 per cent) of the dairy members were perceived as high level of constraints followed by medium (33.8 per cent) and low (21.2 per cent) level of constraints. With respect to economic constraints, majority (38.8 per cent) of the dairy members faced medium level of constraints followed by high (35.0 per cent) and low level of constraints (26.2 per cent).

Key word: Constraint, dairy members, economic, infrastructure, technical

Introduction

Animal husbandry and dairying are the integral parts of agriculture and play a significant role in poverty alleviation. The total share of livestock sector is 25.6 per cent in agricultural GDP and contributing 4.1 per cent in national GDP (GOI, 2015). Dairying is found to provide about 20 per cent of farm employment and about 30 per cent of family income. Despite impressive growth in milk production during the past three decades, productivity of dairy animals continues to remain very low and milk marketing system is primitive.

The productive potential of animals depends crucially on the quality of nutrition, genetic makeup and the animal health system (Ahuja *et al.,* 2003). Initially low genetic potential and low plane of nutrition due to lack of concentrate, feed and fodder both in quantity and quality particularly green fodder are considered major cause of low productivity. Technology plays pivotal role in improving the production and productivity of milch animals. In this view it is essential to transfer the scientific dairy farming practices and technologies to the farmers for profitability in dairy farming. The dairy farmers had to depend on limited resources available. Still milk producer farmers face a lot of constraints in dairying with respect to infrastructure, technical and economical. Keeping this in view, the present study was conducted to identify the dairying constraints perceived by dairy members in adoption of new technologies in dairy farming in Rajasthan.

Materials and Methods

The present study was conducted in the Dausa and Jaipur districts of Rajasthan. These districts were selected purposively on the basis of prospective rate of dairying and livestock wealth status. From Jaipur district Amber and Chomu blocks and from Dausa district Dausa and Lalsot blocks were selected randomly. From each block two villages selected randomly. Thus, a total of eight village selected for the study. Out of which, 10 respondents (members of DCS) were selected, randomly from each village. Thus, a total of 80 respondents, who were active member of "Jaipur Zila Dugdh Utpadak Sahakari Sangh Ltd. (Jaipur Dairy)" for at least ten years were selected from eight villages. Who possessed of livestock for their livelihood, were selected for purpose of the study. The major constraints were faced by dairy members were categorized in different sub areas viz. infrastructural, technical and economical in the study area. The degree of constraints faced by dairy members for the above aspects were analyzed by taking a 3 point continuum i.e. most serious, serious, not so serious with their respective scores as 2, 1, 0. The respondents were categorized as low, medium and high on the basis of equal intervals between maximum and minimum knowledge scores. The important constraints were identified by comparing their weighted mean score and ranking was also given based on their weighted mean score.

$$\text{Weighted mean score} = \frac{\text{Total score obtained of all members in each item of constraints}}{\text{Total Maximum possible score for each item of constraints}} \times 100$$

Results and Discussion

Commonly occurring constraints were studied under the three major heads i.e. Infrastructural constraints, technical constraints and economic constraints.

1. Infrastructural constraints perceived by dairy members

It has been observed from Table 1 that the most serious infrastructural constraint was lack of high quality semen with weighted mean score 75.0 and Ranked 1st. It may due to malpractices adopted by unauthorized para vet in study area. Lack of high yield variety fodder seed perceived as 2nd most

#Part of M.V.Sc. Thesis and corresponding author, email: mr.o.p.meena@gmail.com, [1] Veterinary Officer, Department of Animal Husbandry, Rajasthan; [2]Assistant Professor; [3]Assistant Professor, Department of Veterinary Medicine, PGIVER, Jaipur; [4] Associate Professor, Department of Veterinary Medicine, PGIVER, Jaipur, RAJUVAS, Bikaner.

Table 1: Infrastructural constraints perceived by dairy members in adoption of new technologies in dairy farming in terms of WMS

S. No.	Infrastructural constraints	Members (N = 80)	Rank
		WMS	
1.	Lack of veterinary hospital	44.3	VI
2.	Lack of veterinary expert	47.5	IV
3.	Lack of quality of free medicine	52.5	III
4.	Lack of water for irrigation	52.5	III
5.	Lack of high yield variety fodder seed	55.0	II
6.	Lack of land for growing of fodder	45.0	V
7.	Lack of pasture land	44.3	VI
8.	Lack of regular power supply	43.7	VII
9.	Lack of milk chilling facilities	41.8	VII
10.	Poor infrastructure of road	43.7	VIII
11.	Poor facility of dairy transport system	36.8	IX
12.	Lack of high quality of semen	75.0	I

(WMS: Weighted Mean Score)

Table 2: Technical constraints perceived by dairy members in adoption of new technologies in dairy farming in terms of WMS

S. No.	Technical constraints	Members (N = 80)	Rank
		WMS	
1.	Lack of knowledge about high yield fodder crop	49.3	XIII
2.	Lack of knowledge about breeding	55.0	IX
3.	Lack of knowledge about housing management	40.6	XV
4.	Late puberty in buffalo	70.0	V
5.	Lack of knowledge about balance ration	48.7	XIV
6.	Lack of knowledge about prevention of seasonal disease	50.6	XII
7.	Lack of knowledge about vaccination	59.3	VII
8.	Lack of knowledge about clean milk production	54.3	X
9.	Anestrous is common problem	80.6	II
10.	Poor adaptability of exotic/cross breed cow	53.7	XI
11.	Long inter calving period of buffalo/desi cattle	73.7	III
12.	Silent heat is major problem in buffalo	71.8	IV
13.	Repeat breeding is common problem	87.5	I
14.	Lack of technical guidance	66.2	VI
15.	Milk of cross breed cow poor acceptability to consumer	57.5	VIII

serious constraint by dairy members (weighted mean score 55.0). The analysis of results also indicated that lack of free medicine and lack of water for irrigation in study areas was perceives as 3rd most serious constraint (weighted mean score 52.5) by the members dairy farmers. Kumar and Dahiya (2014) reported that most important problem was shortage of water for production of green folder. Lack of veterinary expert, lack of land for growing fodder crop, lack of veterinary hospital and lack of pasture land were also perceived as serious constraint and ranked IV, V, VI and VII, respectively by dairy members. It may be due to vacant post of veterinary doctors in dairy cooperative society and govt. veterinary hospital. It could be observed from the results that lack of land was the serious constraint faced by all the respondents for growing fodder crop. This might be due to that fragmentation of land and reduction of concept of joint family system lead to small holding size.

Majority of the respondents perceived lack of hospital/A.I. centres as a serious constraint which may be due to inadequate Govt. veterinary facilities as well as insufficient fund utilization in the study area. These finding were similar with findings of Mohapatra *et al*. (2012) and Singh *et al*. (2012).

2.Technical constraints perceived by dairy members

The results presented in Table 2 indicated that repeat breeding was most serious constraints with weighted mean score of 87.5 faced by dairy members and ranked first. Anestrous perceived as serious constraint II ranked with weighted mean score 80.6. Long inter calving period of buffalo/ desi cattle, silent heat is major problem in buffalo, late puberty in buffalo and lack of technical guidance perceived as serious constraints with III, IV, V and VI rank, respectively by dairy members. Lack of knowledge about vaccination and prevention of seasonal disease were perceived as constraints with weighted mean score 59.3 and 50.6, respectively. Furthers analysis of results showed that poor acceptability of milk crossed breed cattle with weighted mean score 57.5 and ranked VIII. It may be due to low fat per cent in milk. Lack of knowledge about breeding perceived as serious constraint by dairy members with weighted mean score 55.0 and ranked IX. It was found that lack of knowledge about clean milk production perceived as serious constraint by dairy members with weighted mean score 54.3 and ranked X. Majority dairy farmers faced poor adaptability and high susceptibility to disease of cross bred cattle as a serious constraint with weighted mean score 53.7. It may be due to low knowledge level of dairy farmers regarding feeding, breeding, management and health care of cross-bred cattle. However, low level of constraints faced by dairy members related to lack of knowledge about high yield fodder crop, lack of knowledge about balance ration and housing management with XIII, XIV and XV rank. Majority of dairy members has lack of training about scientific dairy

Table 3: Economic constraints perceived by dairy members in adoption of new technologies in dairy farming in terms of WMS

S. No.	Economic constraints	Members (N = 80)	
		WMS	Rank
1.	Lack of credit facilities	52.5	VII
2.	High bank interest	54.3	V
3.	High charge of services	55.6	IV
4.	High price of cattle feed	68.1	II
5.	Less price of milk offered by Dcs	69.3	I
6.	Lack of insurance facilities for dairy animal	50.6	VIII
7.	Mode of payment is inconvenient	53.1	VI
8.	Irregular measurement and incorrect testing of milk fat	60.6	III

Table 4: Distribution of Members of DCS according to intensity of constraints faced in adoption of new technologies in dairy farming

Constraints scores	Intensity of constraints	No. of Members	Per cent
Infrastructure constraints			
Below 8	Low	19	23.8
From 8 to 14	Medium	27	38.8
Above 14	High	34	42.5
Technical constraints			
Below 14.33	Low	17	21.3
From 14.33 to 21.66	Medium	27	33.8
Above 21.66	High	36	45.0
Economic constraints			
Below 6.67	Low	21	26.3
From 6.67 to 11.34	Medium	31	38.8
Above 11.34	High	28	35.0

management practices due to lack of awareness about training facilities available at nearby area. These findings are in substantial support with findings of Singh and Chauhan (2006).

3.Economic constraints perceived by dairy members

The data presented in Table 3 indicated that price of milk offered by dairy cooperative society was perceived most serious constraint by dairy members with weighted mean score 69.3 and ranked first followed by high price of cattle feed and irregular/incorrect testing of milk fat with 68.1 and 60.6 weighted mean score, respectively. It may be due to lack of transparency in the system and miss handling of measuring equipment's at different levels. These findings were substantial supported with findings of Patel *et al*. (2013) and Kumhar *et al*. (2013).

The problems such as high charges of services (Veterinary services), high bank interest and mode of payment inconvenient were ranked IV, V and VI by majority of the respondents respectively. These finding were similar with finding of Kumar and Dahiya (2014). Furthers analysis of results showed that least constraints faced by dairy members such as lack of credit facilities and lack of insurance facilities for dairy animals with weighted mean score 52.5 and 50.6 respectively. These findings were similar with findings of Kolekar *et al*. (2013) and Varaprasad *et al.* (2013).

Infrastructure constraints it has been observed that majority (42.5 per cent) of the dairy members faced high intensity of constraints followed by medium (38.7 per cent) and low (23.8 per cent) regarding infrastructure. In case of technical constraints, majority (45.0 per cent) of the dairy members were perceived as high intensity of constraints followed by medium (33.8 per cent) and low (21.2 per cent) intensity of constraints. With respect to economic constraints, majority (38.8 per cent) of the dairy members faced medium intensity of constraints followed by high (35.0 per cent) and low intensity of constraints (26.2 per cent).

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