Research Article

Constraints perceived in adoption of recommended management practices by buffalo owners in the Jaipur district of Rajasthan

Abstract

A field survey was conducted to collect the first-hand information on the constraints being perceived by buffalo owners in Jaipur district of Rajasthan. The data were collected from 160 buffalo rearers randomly selected from two tehsils of Jaipur district by means of pretested and pre-designed interview schedule. As inferred from a pooled RBQ analysis, the farmers' negligence in vaccinating the animals was one of the main constraints faced by buffalo owners. The RBQ value of this constraint was 62.12 and the constraint was ranked first in both Amber and Phulera tehsil. Repeat breeders were ranked as the second most serious constraint, with the RBQ value of 57.75 on pooled RBQ basis. Based on distribution of RBQ values, this constraint was ranked second in both Phulera and Amber tehsils. Lack of AI centers, poorly equipped AI centers, and their poor service were the third most serious constraint in the area surveyed, with the RBQ value of 54.68. This constraint ranked third in Amber and fifth in Phulera tehsil, respectively.

Keywords: survey, buffaloes, RBQ, constraint, repeat breeder

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Abbreviations: RCDF, rajasthan co-operative dairy federation; RBQ, rank based quotient

Introduction

Livestock rearing and crop growing are the two well documented components of mixed farming that influence agricultural economy, leading to sustainable agriculture and being complementary to each other. Buffaloes are the principal dairy animals of India ("black diamond"). Buffaloes hold the greatest promise to protein-rich raw milk, its production for human consumption and sustainable development in the 21st century, as these animals form an integral part of the typical farming system in India. In this country, cattle have been the backbone of rural economy. Livestock sector plays a crucial role in shaping the rural economy of India. It is a major continuous income-generating activity for the rural households. The buffalo owners selected for the present study had a wide range of experience and, therefore, problems perceived and reported by them would be of worth consideration. With this point in view, an attempt has been made to study various constraints perceived by buffalo owners in the selected study area.

Materials and methods

A field survey was conducted to collect the information on constraints being perceived by the buffalo owners of the Jaipur district of Rajasthan (India). The district comprises 13 tehsils (blocks), out of which two tehsils, i.e. Phulera and Amber, were selected randomly. Further, four villages (Bhojpura kalan, Jobner, Doongri, Asalpur) from Phulera and four villages (Mundota, Raithal, Rojda, Khora beesal) from Amber tehsil were selected, and from each village 20 respondents were selected randomly. The entire sample consisted of 160 respondents. The data were collected through personal interview technique from each of the selected respondents. An interview

schedule was prepared with the help of College of Veterinary and Animal Science in Bikaner, Rajasthan Co-operative Dairy Federation (RCDF), District Animal Husbandry Department, and experts on the subject.

Rank based quotient (RBQ)

Using the ranks provided by the farmers, a Rank Based Quotient (RBQ) for each constraint was calculated at village level on the basis of the formula:[1]

$$RBQ = \sum_{i=1}^{n} \frac{fi(n+1-i)}{Nn} \times 100$$

Where fi=the frequency of farmers for the ith rank of the constraint,

N=the numbers of farmers,

n=the number of ranks.

Similarly, the RBQ values at tehsil level and the pooled RBQ values of the two tehsils were calculated using weighted average of village and tehsil level values. The RBQ values helped in easy identification of the constraints and their ranking of seriousness. The constraints having higher RBQ values may be indicated as more serious constraints.

Results and discussion

Pooled and tehsil-wise RBQ values for two tehsils are presented in Table 1 & Table 2. As evident from the results, the farmers' negligence in vaccinating the animals was one of the main constraints faced by buffalo rearers on pooled RBQ basis. The RBQ value of this constraint was 62.12, and the constraint was ranked first in both Phulera and Amber tehsil.[2] Repeat breeder was ranked as the second most serious constraint, with a RBQ value of 57.75 on pooled RBQ basis. Based on

distribution of RBQ values, this constraint was ranked second in both Phulera and Amber tehsils.

Table 1 Pooled RBQ values of different constraints

Constraints	Constraint Code	Values	Rank
Repeat breeders	1	57.75	2
Distant location of the veterinary hospital	2	52.12	8
Lack of AI centers, poorly equipped AI centers, and their poor service	3	54.68	3
Lack of knowledge of concentrate feeding in milk production	4	53.87	4
Lack of proper marketing of milk	5	51.12	10
Lack of knowledge of deworming practices	6	53.5	5
Lack of good breedable buffalo bulls	7	51.43	9
Lack of knowledge of full-hand milking	8	52.18	7
Farmers' negligence in vaccinating the animals	9	62.12	1
Lack of knowledge of proper sanitation and hygiene	10	52.5	6

Table 2 Tehsil-wise RBQ values of different constraints

Phulera			Amber		
Constraint code	RBQ	Rank	Constraint code	RBQ	Rank
1	58.5	2	1	57	2
2	48.4	9	2	55.87	5
3	52.52	5	3	56.88	3
4	51.12	7	4	56.62	4
5	52.5	6	5	49.75	10
6	53.5	3	6	53.5	8
7	48.37	10	7	54.5	6
8	50.62	8	8	53.75	7
9	64.25	1	9	60	1
10	52.87	4	10	52.12	9

Lack of AI centers, poorly equipped AI centers, and their poor service were the third most serious constraint in the area surveyed. It had the RBQ value of 54.68. This constraint ranked fifth in Phulera and third in Amber tehsil, respectively.

Lack of knowledge of concentrate feeding in milk production was the fourth serious constraint identified (pooled RBQ value=53.87) in the study area. Based on tehsil-wise RBQ values, the constraint was ranked seventh in Phulera and fourth in Amber tehsil.

Lack of knowledge of deforming practices was the fifth rank constraint in the surveyed area. Based on district-wise RBQ values, the constraint was ranked third in Amber and eighth in Phulera tehsil. The pooled RBQ value for this constraint was 53.50 Other constraints, such as the lack of knowledge of proper sanitation and hygiene, lack of knowledge of full-hand milking, distant location of the veterinary hospital, lack of good breedable buffalo bulls, and lack of proper marketing of milk were ranked 6, 7, 8, 9, and 10, respectively.

Conclusion

The conclusion that may be drawn from the above results is that the lack of awareness and poor service for AI, as well as repeat breeders, were very serious constraints in adoption of recommended breeding practices. These constraints can be overcome by strengthening the AI centres and proper training for awareness among the buffalo keepers. Regarding milking management practices, the lack of knowledge of full-hand milking, or the lack of proper marketing of milk are serious constraints. To overcome the above-identified serious constraints, awareness about full-hand milking should be increased and the network of Rajasthan Co-operative Dairy Federation should be extended for providing remunerative price of milk to milk producers.

Acknowledgements

Conflict of interest

Author declares that there is no conflict of interest.

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