

CONSTRAINTS PERCEIVED IN ADOPTION OF RECOMMENDED MANAGEMENT PRACTICES AND THEIR POSSIBLE SOLUTIONS

R. S. RATHORE¹ AND P. S. TANWAR²
Krishi Vigyan Kendra, P.B. No. 15, Abusar-Jhunjhunu (Rajasthan)

Received : 26.10.2013

Accepted : 27.02.2014

ABSTRACT

The study was carried out in Jhunjhunu district of Rajasthan to find out the various constraints perceived by the crossbred cattle keepers in adoption of recommended management practices and possible solutions to overcome the intensity of constraints. The results of the study depicted that distant location and poor services at A.I. centres (1.55 MS), anoestrus and repeat breeding (1.52 MS), poor conception rate of A.I. (1.35 MS) and costly treatment of breeding related problems (1.18 MS) were the major constraints in adoption of breeding management practices. The overall breeding management practices mean score was 1.10. High cost of fodder and concentrate (1.61 MS), non-availability of balance concentrate and mineral mixture (1.44 MS), inadequate irrigation and small land holding for green fodder production (1.30 MS) and lack of extra green fodder for hay and silage preparation (1.28 MS) were the main constraints in feeding management practices. The overall feeding management practices mean score was 1.13. High cost of veterinary medicines (1.46MS), non-availability of veterinary doctor at posting place (1.44MS), distant location of veterinary hospitals (1.12MS) and low awareness about deworming practices (1.10MS) were the major constraints. Constraints regarding overall health care management practices had mean score 1.06. To overcome the constraints, strengthening of A.I. centres, Gopal Yojna, castration of scrub male calf, availability of mineral mixture, green fodder production, pasture land development, increase the number of veterinary hospitals and strengthening of district veterinary mobile unit should be promoted.

Key words: Constraints, adoption, recommended management practices, possible solutions and mean score.

Livestock comprising mainly cattle and buffalo have a complementary, supplementary and sustainable relationship with crops under mixed farming system in our country. Crop production gives seasonal employment and income after harvesting whereas dairy farming gives regular and

continuous income, reduce un/under employment, less dependent on climatic factors, less capital intensive, provide nutritious diet to the family, best utilization of crop by products and other farm resources. India has prestigious cattle breeds but due to lack of proper breeding policy and ignorance of cattle keepers, about 80 per cent cattle are of non-descript type whose milk production is very low in comparison to pure bred and exotic crossbred cattle. The Jhunjhunu district

¹Asstt. Prof. (Animal Science), KVK-Abusar, Jhunjhunu(Raj.)-333001

Email:drranjeetrathore@gmail.com;

Mob. no. – 09414630109 Correspondence Author

² Deputy Director, KVK, Barnala (Punjab)

had 174918 cattle heads. Out of which 51.46 per cent cattle were crossbred i.e. Holstein Friesian cross and Jersey cross⁴.

Keeping this in view, an attempt has been made to study various constraints faced by crossbred cattle keepers in adoption of recommended management practices in the area of breeding, feeding and health care and suitable strategies has been found out to overcome the constraints and increase production and productivity of crossbred cattle.

MATERIAL AND METHODS

The present study was conducted in Jhunjhunu district of Rajasthan. Jhunjhunu district comprises six tehsils. Out of which four tehsils i.e. Chirawa, Nawalgrah, Udaipurwati and Jhunjhunu were selected. Three villages from each tehsil and 25 crossbred cattle keepers from each village were selected randomly. Thus, making a total sample of 300 respondents for study purpose. The constraints were categorized as breeding, feeding and health care. The schedule was prepared and the personal interview technique was adopted for the collection of data. The identified constraints were administered through a three-point continuum as very serious, serious and not serious with a score 2, 1 and 0, respectively. On the basis of score obtained by the respondents constraints were ranked.

In addition to the crossbred cattle keepers, 30 experts engaged in technology development as well as in transfer of technology who had experience of more than 5 years were selected to seek their valuable suggestions to increase production and productivity of crossbred cattle.

RESULTS AND DISCUSSION

An attempt has been made to find out the various constraints in adoption of recommended

crossbred cattle management practices viz. breeding, feeding and health care management practices. On the basis of seriousness of constraints, possible solutions were drawn to increase the production and productivity and overcome the constraints.

Constraints in Adoption of Breeding Practices:

The figures presented in table-1 reveals that distant location and poor services at A.I. centres was perceived as very serious constraint with mean score 1.55 and ranked first in constraints hierarchy. The data shows that 65.67 per cent of the respondents faced this constraint as very serious. The second importance was given to anoestrus and repeat breeding with mean score 1.52. About 60.67 per cent of the respondents perceived it as very serious constraint followed by poor conception rate of A.I. with mean score of 1.35 and costly treatment of breeding related problems (MS 1.18), which were ranked third and fourth, respectively. The fifth rank was given to lack of awareness about exotic breed blood per centage in semen straw for A.I. with the mean score of 1.06.

In the study area less importance was given to presence of scrub bulls in the village with mean score 0.8 and scarcity of resources to maintain crossbred milch (MS 0.80) and ranked ninth & tenth, respectively. Regarding overall breeding management constraints, 42.70 per cent of the crossbred cattle keepers perceived as very serious followed by not serious (32.50%) and serious (24.80%) with the constraint mean score of 1.10.

It can be concluded from the table that distant location and poor services at A.I. centres, anoestrus and repeat breeding, poor conception rate of A.I. and costly treatment of breeding related diseases were the major constraints in breeding management practices. These findings are in line with the findings of ^{3, 10, 8, 19, 2, 5, 6, 11, 17, 15, 1, 12, 9, 14 & 20}.

Constraints perceived in adoption of management practices

Constraints in Adoption of Feeding Practices:

The data given in table-2 indicates that high cost of fodder and concentrate obtained the mean score of 1.61 and it was ranked first. More than two-third (71.33%) of the respondents faced this constraint as very serious. The second rank was awarded to non-availability of balanced concentrate and mineral mixture in the village with mean score of 1.44 as. 61.67 per cent of the cattle keepers perceived it as very serious. The constraints of inadequate irrigation and small land holding for green fodder production occupied third rank with mean score of 1.30. The fourth rank was obtained by lack of extra green fodder for hay and silage preparation with mean score 1.28. The fifth rank was given to lack of knowledge about preparation of balanced concentrate mixture at home with the mean score of 1.18.

Lack of knowledge about concentrate feeding according to milk production and lack of knowledge about extra feeding of advance pregnant cows were given less importance by the respondents with 0.79 and 0.55, respectively. Regarding overall constraints to feeding management practices, about half (44.50%) of the crossbred cattle keepers faced the feeding constraints as very serious followed by not serious (31.60%) and serious (23.90%) with the constraints mean score of 1.13.

The inference may be drawn from the above results that high cost of fodder and concentrate, non-availability of balance concentrate and mineral mixture, inadequate irrigation and small land holding for green fodder production and lack of extra green fodder for hay and silage preparation were the serious constraints which impede the balance feeding of crossbred cattle as well as increased the input cost of milk production. These

findings are in conformity with the earlier results of 3, 7, 8, 13, 2, 6, 11, 18, 21, 15, 1, 12, 14 & 20.

Constraints in Adoption of Health care Management Practices:

It is evident from the table-3 that 67.00 per cent of the respondents perceived high cost of veterinary medicines as a very serious constraint with mean score 1.46 and it was ranked first. The second rank was occupied by non-availability of veterinary doctor at posting place with the mean score of 1.44. More than half (56.33%) of the crossbred cattle keepers felt this constraint as very serious. Distant location of veterinary hospitals obtained the third rank with mean score of 1.12 and about two-third (63.67%) of the respondents realized this constraint either very serious or serious. Low awareness about deworming of dairy animals, lack of knowledge regarding first aid of animals and inadequate and untimely supply of vaccines had 1.10, 1.07 & 1.05 mean score and ranked fourth, fifth and sixth, respectively. The constraints perceived less important by the respondents were problem of quacks practicing in the village and lack of knowledge about cleanliness of dairy cattle shed with mean score of 0.85 & 0.60 and ranked ninth and tenth in constraints hierarchy. Overall constraints in the health care management practices 39.63 per cent respondents perceived as very serious followed by not serious (33.80%) and serious (26.57%) with mean score of 1.06.

From the present findings it can be concluded that high cost of veterinary medicines, non-availability of veterinary doctor, distant location of veterinary hospitals, lack of deworming and lack of knowledge regarding first aid of animals were the serious constraints in adoption of recommended health care management practices. The present results got support from the findings of 3, 8, 19, 2, 18, 16, 12 & 20.

Suggestions to Overcome the Constraints:

To overcome the constraints perceived by the crossbred cattle keepers some measures has been suggested by the crossbred cattle keepers himself as well as the experts involved in technology development and transfer.

Breeding Management Practices:

- A.I. centres should be strengthened by providing necessary facilities and qualified staff.
- Gopal Yojna should be extended in the district so that Gopalak will cover each Gram Panchayat for A.I. as well as first aid to animals after training.
- For breed improvement scrub male calf should be castrated or vasectomies.
- Infertility and sterility remedies camps should be organized at gram Panchayat level at least once in a year.
- Training camps should be organized to adopt recommended breeding practices.

Feeding Management Practices:

- Balance feeding by incorporation of mineral mixture, green fodder etc. round the year.
- To encourage the cattle keepers to grow green fodder round the year in irrigated area, minikits should be provided.
- Cattle keepers should be encouraged for plantation of fodder trees like *Ardu (Allianthus excelsa)* in rain fed area to fulfill the green fodder requirement round the year.
- Availability of balanced concentrate mixture, mineral mixture and urea molasses mineral

bricks should be provided through milk collection centres of Rajasthan Cooperative Dairy Federation or village co-operative society on subsidised rate.

- Subsidies should be provided during drought condition on fodder and balanced concentrate mixture.
- Pasture land existed in the villages should be developed by forest department with nutritious grasses and fodder plants on co-operative share basis.
- Training camps should be organized to aware the animal owners for balance feeding, hay and silage making, preparation of balance concentrate mixture at home etc.

Health care Management Practices:

- Number of veterinary hospitals/sub centers should be increased for prompt veterinary services at doorstep of animal owners.
- Extra honorarium should be given to veterinary doctor and other staff posted in rural veterinary hospital and sub centres.
- Adequate and timely supply of vaccine should be ensured and vaccination camps should be organized on large scale prior to time of seasonal diseases.
- District veterinary mobile unit should be strengthened to organize more animal treatment camps in the rural areas.
- Vocational training camps should be organized by the district training institutes to increase awareness in the cattle keepers about diseases and their management.

Constraints perceived in adoption of management practices

Table1: Constraints faced by the crossbred cattle keepers in adoption of breeding practices N*-300

Sl.No	Constraints area	Very serious		Serious		Not serious		Total constraint score	Mean score	Rank order
		f	%	f	%	f	%			
1.	Distant location and poor services at A.I. centres	197	65.67	72	24.00	31	10.33	466	1.55	I
2.	Poor conception rate of A.I. in crossbred cows	162	54.00	81	27.00	57	19.00	405	1.35	III
3.	Anoestrus and repeat breeding	182	60.67	91	30.33	27	9.00	455	1.52	II
4.	Belief that PD through rectal palpation is harmful for pregnant cows	117	39.00	68	22.67	115	38.33	302	1.01	VI
5.	Lack of knowledge about right time of conception	105	35.00	57	19.00	138	46.00	267	0.89	VII
6.	Costly treatment of breeding related problems	135	45.00	83	27.67	82	27.33	353	1.18	IV
7.	Lack of awareness about exotic breed blood per centage in semen straw	121	40.33	75	25.00	104	34.67	317	1.06	V
8.	Presence of scrub bulls in the village	93	31.00	59	19.67	148	49.33	245	0.82	IX
9.	Large number of villages under the veterinary hospital.	97	32.33	62	20.67	141	47.00	256	0.86	VIII
10.	Scarcity of resources to maintain crossbred milch animals.	72	24.00	96	32.00	132	44.00	240	0.80	X
	Total (Overall)	1281	42.70	744	24.80	975	32.50	3306	1.10	-

*Total number of respondents

Table2: Constraints faced by the crossbred cattle keepers in adoption of feeding practices N*-300

S. No.	Constraints area	Very serious		Serious		Not serious		Total constraint score	Mean score	Rank order
		f	%	f	%	f	%			
1.	Lack of knowledge about balance feeding of animals	102	34.00	77	25.67	121	40.33	281	0.94	VIII
2.	Lack of knowledge about preparation of balance concentrate mixture at home.	144	48.00	65	21.67	91	30.33	353	1.18	V
3.	High cost of fodder and concentrate	214	71.33	54	18.00	32	10.67	482	1.61	I
4.	Lack of awareness about treatment of poor quality roughages to improve its nutritive value.	132	44.00	72	24.00	96	32.00	336	1.12	VI
5.	Non-availability of balance concentrate and mineral mixture in the village	185	61.67	63	21.00	52	17.33	433	1.44	II
6.	Lack of knowledge about extra feeding of advance pregnant cow	45	15.00	76	25.33	179	59.67	166	0.55	X
7.	Lack of knowledge about concentrate feeding according to milk production	75	25.00	87	29.00	138	46.00	237	0.79	IX
8.	Availability of green fodder round the year	121	40.33	81	27.00	98	32.67	323	1.08	VII
9.	Lack of extra fodder for hay and silage preparation	150	50.00	85	28.33	65	21.67	385	1.28	IV
10.	Inadequate irrigation and small land holding for green fodder cultivation	167	55.67	57	19.00	76	25.33	391	1.30	III
Total (Overall)		1335	44.50	717	23.90	948	31.60	3387	1.13	-

*Total number of respondents

Constraints perceived in adoption of management practices

**Table3: Constraints faced by the crossbred cattle keepers in adoption of health care management practices
N*-300**

Sl. No	Constraints area	Very serious		Serious		Not serious		Total constraint score	Mean score	Rank order
		f	%	f	%	f	%			
1.	Distant location of veterinary hospitals	144	48.00	47	15.67	109	36.33	335	1.12	III
2.	Non-availability of veterinary doctor at posting place	169	56.33	94	31.33	37	12.33	432	1.44	II
3.	High cost of veterinary medicines	201	67.00	37	12.33	62	20.67	439	1.46	I
4.	Lack of knowledge regarding first aid of animals	124	41.33	72	24.00	104	34.67	320	1.07	V
5.	Low awareness about deworming of dairy animals	128	42.67	75	25.00	97	32.33	331	1.10	IV
6.	Lack of knowledge regarding timely treatment of sick animals	92	30.67	81	27.00	127	42.33	265	0.88	VIII
7.	Problem of quacks practicing in the village	76	25.33	102	34.00	122	40.67	254	0.85	IX
8.	Belief that vaccination reduces the milk yield in cows	107	35.67	90	30.00	103	34.33	304	1.01	VII
9.	Inadequate and untimely supply of vaccines	114	38.00	86	28.67	100	33.33	314	1.05	VI
10.	Lack of knowledge about cleanliness of dairy cattle shed	34	11.33	113	37.67	153	51.00	181	0.60	X
Total (Overall)		1189	39.63	797	26.57	1014	33.80	3175	1.06	-

*Total number of respondents

CONCLUSION

It can be concluded from the study that distant location and poor services at A.I. centres, anoestrus and repeat breeding problems, poor conception rate, high cost of fodder and concentrate, lack of balance concentrate mixture and mineral supplements, ignorance of green fodder production and feeding, costly veterinary

treatment and non-availability of veterinary doctors were the major constraints in crossbred cattle rearing. To overcome the constraints, strengthening of veterinary hospital, balance feeding through incorporation of green fodder and mineral supplement in ration and vocational training camps were identified to overcome these constraints.

REFERENCES

1. Aulakh, G.S. (2011). Constraints faced by the buffalo owners in adoption of recommended breeding and feeding practices in Punjab. Paper presented in National Symposium on emerging management concepts for sustainable livestock and poultry production, held at Ludhiana from 02-04 Nov., 2011.pp.156-157.
2. Bardhan, D.; Srivastava, R.S.L. and Dabas,Y.P.S. (2005). A study of constraints perceived by farmers in rearing dairy animals. *Indian J. Dairy Sci.* **58** (3): 214-218.
3. Chaudhary, M.and Intodia,S.L. (2000). Constraints perceived by cattle owners in adoption of modern cattle management practices. *Indian J. Anim. Res.* **34**(2): 116-119.
4. Livestock Census (2007). Department of Animal Husbandry, Government of Rajasthan.
5. Malik,B.S.; Meena,B.S. and Rao,S.V.N. (2005). Study of existing dairy farming practices in Uttar Pradesh. *J.Dairying Foods & H.S.* **24**(2): 91-95.
6. Manhas, P (2006). Transfer and adoption of buffalo management practices in Haryana: A constraints analysis. M.V.Sc. Thesis, CCS Haryana Agricultural University, Hisar.
7. Manoharan, R.; Selvakumar, K.N. and Pandian, A.S.S.(2003). Constraints in milk production faced by the farmers in Pondicherry Union Territory. *Indian J.Anim. Res.* **37**(1): 68-70.
8. Meena, H.R. and Fulzele, R.M. (2004). Constraints experienced by the Meena tribes in adoption of improved dairy farming practices. *J. Dairying Foods & H.S.* **23**(2): 94-99.
9. Meena, K.L. and Chauhan T.R. (2012). Problems faced by the trained livestock owners in adoption of scientific practices. Paper presented in International Conference on extension education in the perspectives of advances in natural resources management in agriculture (NaRMA-IV), held at Bikaner from19-21 Dec., 2012. pp-41(C-82)
10. Misra, R.K. and Pal, P.K. (2003). Prospects and constraints of dairying in rural Bengal: A case study. *Indian Dairy man.***55** (12): 55-59.
11. Mohi, A. and Bhatti, J.S. (2006). Constraints encountered by dairy farmers in adoption of improved dairy farming practices. *J. Dairying Foods & H.S.* **25**(1): 47-50.
12. Murai, A.S. and Singh, B.K. (2011). Differential adoption of scientific dairy farming practices and related constraints. *Indian Res. J. Ext. Edu.* **11**(2):46-49.
13. Natchimuthu, K. and Kumar, R. (2004). Constraints in the utilization of dairy development programme in Pondicherry. *Indian J. Dairy Sci.* **57**(3): 198-202.
14. Patel, R.N.; Patel, V.T. and Prajapati, M.R. (2012). Constraints experienced by dairy farm women in adoption of dairy farming practices. Paper presented in International Conference on extension education in the perspectives of advances in natural resources management in agriculture (NaRMA-IV), held at Bikaner from19-21 Dec., 2012. pp-76(C-152)
15. Rathore, R.S.; Singh, R.; Kachwaha, R.N and Kumar, R. (2009). Constraint perceived by the cattle keepers in adoption of recommended breeding, feeding & housing management practices. *Indian J. Anim. Sci.* **79** (5): 530-533.
16. Rathore, R.S.; Singh, R. and Kachwaha, R.N. (2009). Constraints perceived by the cattle keepers in adoption of recommended milking, calf rearing and health care management practices. *Indian J. Dairy Sci.* **62**(3):240-244.

Constraints perceived in adoption of management practices

17. Singh, B and Tailor, S.P. (2006). Current status of breeding management practices and their constraints of dairy bovines in eastern Rajasthan. *Indian J. Dairy Sci.* **59**(5): 346-348.
18. Singh, M and Chauhan,A (2006). Constraints faced by dairy owners in adoption of scientific dairy farming practices. *Indian J. Dairy Sci.* **59**(1): 49-51.
19. Singh, P.; Singh, M. and Jaiswal, R.S. (2004). Constraints and strategies in rural livestock farming in Almora district of hilly Uttaranchal. *Indian J. Anim. Res.* **38**(2): 91-96.
20. Sreedhar, S and Lavanya, A. (2012). Constraints faced by dairy farmers in the adoption of animal husbandry practices. Paper presented in International Conference on extension education in the perspectives of advances in natural resources management in agriculture (NaRMA-IV), held at Bikaner from 19-21 Dec., 2012. pp-88(C-175)
21. Suresh, J.; Rao, B.V.R. and Raghuram, P.(2007). Constraints of small farmers in dairy farming in Chittoor district of Andhra Pradesh. Paper presented in National Symposium on recent trends in policy initiatives and technological interventions for rural prosperity in small holder livestock production systems, held at Tirupati from 20-22 June,2007.pp.206.

★ ★ ★