

ADOPTION OF LIVESTOCK TECHNOLOGY BY THE FARMERS OF THAR DESERT

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ABSTRACT

Animal production is considered as one of the most important activities for socio-economic upliftment of poor farmers. The study revealed that out of seven improved livestock practices, deworming against parasite and immunization against different bacterial and viral diseases were found to be the most adopted technologies by the farmers. Reason of practical adoption or discontinuation was found to be high cost of technology or huge monetary involvement. The main cause of non-adoption of technology was observed to be lack of technical knowledge. Moreover, farmers need more exposure about the latest practices of animal husbandry. So, motivation from extension personnel and scientific workers is essential for this purpose.

INTRODUCTION

Livestock sector is an important source of livelihood in Rajasthan for rural masses and generates regular income to the farmers. The population of bovines in the state during the period 1983 to 2003, registered positive growth rate of 0.43 per cent per-annum mainly triggered by high growth rates in the population of buffalo and crossbred cattle (Gupta et. al. 2007). The percentage share of bovine in the total livestock varied from 14 per cent in arid western zones to as high as 88 per cent in the flood prone zone. It is found that certain technologies which are known to the farmers are not adopted by them. Sometimes old technologies are being practiced for long time without using latest modern technologies. Although lot of livestock technologies is developed in this century, all are not adopted by the livestock owners of farmers at the same level due to various reasons. Hence, the present study was undertaken to examine the existing the completed adopters, partial adopters and non adopters of different livestock technologies in rural areas of Barmer district of western Rajasthan.

RESEARCH METHODOLOGY

For the study, two villages were selected, out of which one was the adopted village of Krishi Vigyan Kendra, Danta-Barmer named Kalyanpur and another was Non-Adopted Village named

Charlai. Both the villages were located in the Balotra block of Barmer district. The list of farmers under three major categories on land-holding basis i.e. marginal, small and large were developed from selected villages. The ratio of these categories was found out and thirty farmers were selected accordingly. Out of total farmers of each category selection of required number of farmers was made at an equal interval. Thus, thirty farmers were selected in non adopted village also. Data were collected from the selected farmers through a common questionnaire on farmers family size, land holding, livestock holding, milk yield and adoption of different improved livestock practices. The data obtained were analyzed for mean percentage and standard error as per standard procedure (Snedecor and Cochran, 1980).

RESULTS AND DISCUSSION

The average land holding, livestock holding and family size were presented in Table 1. Land holding of the farmers in adopted village was 4.80 ± 1.20 and in non adopted village it was 9.70 ± 1.0 acre/family. Milk production was higher in farmer families of adopted village which was due to the fact that majority of farmers rear the dairy animals on scientific line.

Different livestock practices followed by the farmers in the adopted and non-adopted village and nature of adoption were delineated in Table 2. Most

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Table 1. Existing livestock farming system in adopted and non-adopted village

Attributes	Adopted Village	Non-Adopted Village	Average
Family size (number)	4.70 ± 6.70	8.00 ± 1.00	7.33 ± 0.73
Land holding (acre/family)	4.80 ± 1.2	9.70 ± 1.0	7.27 ± 1.61
Livestock holding (number/family)	9.10 ± 0.40	11.00 ± 7.60	11.65 ± 3.51
Milk production (L/d /family)	43.80 ± 34.70	10.20 ± 2.10	26.98 ± 17.40
Milk Production (L/d /animal)	5.60 ± 0.90	4.80 ± 0.53	5.16 ± 0.43

of the farmers (83%) practiced immunization against animals and 80 per cent farmers adopted deworming for their domestic animals in adopted village. Adoption of feeding practice for feeding animals

was also very high (70%) in adopted village. Least adoption (50%) took place in case of use of improved housing. In non-adopted village deworming was completely adopted by most of the

Table 2. Distribution of livestock owners according to their adoption of livestock practices

S. No.	Name of Practices	Adopted Village (n=30)			Non-adopted village (n=30)			Pooled (n=60)		
		Complete adopters	Partial adopters	Non adopters	Complete adopters	Partial adopters	Non adopters	Complete adopters	Partial adopters	Non adopters
1.	Improved breed	16 (53)	9 (30)	5 (16)	11 (36)	10 (33)	9 (30)	27 (45)	19 (31)	14 (23)
2.	Breeding Practices	20 (66)	6 (20)	4 (13)	16 (53)	8 (26)	6 (20)	36 (60)	14 (23)	10 (16)
3.	Improved housing	15 (50)	0 (0)	15 (50)	12 (40)	0 (0)	18 (60)	27 (45)	0 (0)	33 (55)
4.	Improved care and management	18 (60)	5 (16)	7 (23)	14 (46)	5 (16)	11 (36)	32 (53)	10 (16)	18 (30)
5.	Feeding practices	21 (70)	8 (26)	01 (3)	16 (53)	12 (40)	2 (6)	37 (61)	20 (33)	3 (5)
6.	Deworming	24 (80)	4 (13)	2 (6)	18 (60)	6 (20)	6 (20)	42 (70)	10 (16)	8 (13)
7.	Immunization	25 (83)	4 (13)	01 (3)	17 (56)	8 (26)	5 (16)	42 (70)	12 (20)	6 (10)

Figures in Parenthesis indicate Percentages.

farmers (60%) followed by immunization (56%). When data of both the villages were pooled it was observed that deworming and immunization were the most common practices adopted (70% each) by the farmers followed by the use of feeding practice (61%) and breeding practices (60%). Shinde et. al. (1994) reported that level of adoption was high in case of management (60.77%) followed by breeding (57.42%) and health covers (55.75%). Least level of adoption was found in case of use of the improved breed and improved housing (40% each). This might be due to high capital involvement.

Regarding partial adoption or discontinuation in adopted village 30 percent farmers discontinued

the use of improved breed and use of feeding practices (26%). This might be due to huge monetary involvement. In non-adopted village 40 per cent livestock owners discontinued feeding practices followed by use of improved breeding (33%). When the data of both the villages were pooled it was found that use of feeding practice (33%) and use of improved breeding (31%) were mostly discontinued by the farmers. Use of improved housing was mostly non-adopted practice by the livestock owners both in adopted village (50%) and in non-adopted village (60%) and therefore, same trend was observed when data were pooled (55%). This might be due to high cost of technology and due to poor economic status

Table 3. Cause of partial adoption or discontinuation by the farmers

Particulars	Adopted Village (n=30)		Non-Adoptive Village (n=30)		Pooled (n=60)	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Un-economical	13	43	14	46	27	45
Optimum result	12	40	8	26	20	33
Unavailability	5	16	8	26	13	21

of farmers. The second most non-adopted practice was use of improved care and management (30%). It might be due to lack of technical knowledge and motivation.

From Table 3 it was observed that the most important cause of partial adoption of technology in adopted village (43%) and non-adopted village (46%) was high cost of technology. Since most of the farmers were marginal and small, due to high cost of technology, initially the technologies were adopted but afterwards those farmers discontinued those practices like use of feeding practices and use of improved breeding. The second important

cause was optimum results i.e. some farmers did not get much benefit after adoption of technology by 40 per cent and 26 per cent in adopted village and non adopted village respectively.

From Table 4 it could be inferred that most important factors for non-adoption of technology in adopted village (AV) was optimum result (50%) obtained, lack of fund (26%). But in non-adopted village, lack of knowledge (70%) about the new technology or new practice of animal husbandry was the main cause of non-adoption. Sagar and Dohare (2000) reported that knowledge of farmers was positively related with extent of adoption of

Table 4. Reasons of non-adoption of technology by the livestock owners

Particulars	Adopted Village (n=30)		Non-Adopted Village (n=30)		Pooled (n=60)	
	f	%	f	%	f	%
1. Lack of Knowledge	2	6	21	70	23	38
2. Lack of Fund	8	26	6	20	14	23
3. Unavailability of inputs	5	16	3	10	8	13
4. Optimum Result	15	50	0	0	15	25

health care practices. When data of both the villages were pooled and found that lack of knowledge (38%), lack of fund (23%) and optimum result (25%) were the main three causes for the non-adoption of technology.

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