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Study on the Role of Human Resources in Cattle Rearing Practices and the Marketing Practices in Relationship to Herd Size of Cattle in Non Tribal Area of Udaipur District of Rajasthan

Shweta Choudhary[1], M.L. Gurjar[2], Vikas Choudhary[3], Kavita Rohlan[4], Padma Meel[5] and Subha Ganguly[6*]

[1]M.V.Sc. Scholar, [2]Assistant Professor & In-charge, [3]Ph.D. Research Scholar, Department of Livestock Production Management, College of Veterinary and Animal Science, (Rajasthan University of Veterinary and Animal Sciences, Bikaner), Navania, Vallabhnagar, Udaipur - 313601, Rajasthan, India

[3]Veterinary Officer, Veterinary Hospital (Govt. of Rajasthan), Palasara, Sikar – 332001, Rajasthan, India

[4]M.V.Sc. Scholar, Department of Veterinary Anatomy and Histology, College of Veterinary and Animal Science, (Rajasthan University of Veterinary and Animal Sciences, Bikaner), Bikaner - 334001, Rajasthan, India

[6]Associate Professor, Department of Veterinary Microbiology, Arawali Veterinary College (Affiliated to Rajasthan University of Veterinary and Animal Sciences, Bikaner), N.H. – 52 Jaipur Road, V.P.O. Bajor, Sikar – 332001, Rajasthan, India

*Corresponding Author E-mail: ganguly38@gmail.com

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ABSTRACT

The present study was conducted on a group of 160 cattle rearers in Mavli and Vallabhnagar tehsils of Udaipur district of Rajasthan. Information collected on various operations of cattle management practices performed by family members in surveyed area revealed that maximum operations like sale of animal, milking, cleaning, feeding, care of young stock, grazing, care of sick animal, protection against external parasites, service mating/insemination, deworming were carried out (51.25, 61.25, 85.62, 58.75, 63.75, 48.12, 47.50, 66.88, 58.75 and 52.50%, respectively) by women whereas, sale of milk was performed (65.62%) by male members of family. The role of children in cattle management was observed to assist men and women to complete the operations. Regarding marketing practices followed it was observed that 91.25 per cent of total respondents sale their animals and 8.75 per cent keep them in their herd. The cattle rearers used village market for selling their animals and fix rate of their animals for marketing on milk yield basis and physical appearance. Results revealed that 66.25 per cent respondents sale cattle milk as such followed by 22.50 per cent of respondents who sell or use it after mixing with buffalo, goat milk and 6.88 per cent of total respondents who use it for house hold consumption and 4.38 per cent who use cattle milk after transforming into various milk products.

Key words: *Role, Human Resources, Marketing practices, Herd size, Non-tribal area, Udaipur, Village*

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INTRODUCTION

Livestock are highly proficient users of available biomass as they consume grasses and other plants that cannot otherwise be consumed by humans and convert it to a range of valuable products viz. milk, meat, wool, leather, manure and draught power. On an average animal husbandry contributes about 25.6 per cent to agricultural gross domestic product (GDP) of the country, whereas, the contribution is much higher in hot semi-arid and arid region where conventional crop production is always a gamble due to uncertain and scanty rainfall. The rising per capita income, urbanization and lifestyle, women involvement in labour market and change in taste and preference are the` important causes for the growth of livestock related products. The demand for animal related products such as milk, meat, wool and eggs have increased faster in India. A symbiotic relationship exists between men, land and livestock. As with many of the livestock species maintained by the rural families, there is a socio-cultural linkage with cattle also. Lack of market facilities and unawareness of scientific cattle management practices are the major hurdles in rural areas. There is a need of developing programs for introducing improved and scientific management practices and for solving the problems encountered.

MATERIALS AND METHODS

The study was conducted in two selected non tribal tehsils, Mavli and Vallabhnagar, of Udaipur district of Rajasthan. Further, four villages (Gadoli, Garda ki Bhagal, Golwara, Rahmi) from Mavli and four villages (Ranchhorpura, Siyakheri, Roopawali, Netawala) from Vallabhnagar tehsil were identified and from each village 20 respondents were selected randomly. Thus, the entire sample consists of 160 respondents from selected eight villages in two tehsils of the district. The data was collected through personal interview technique from each selected respondent with a pre prepared interview schedule. The respondents were categorized on the basis of herd size of cattle possessed by them. The adult cattle units were calculated as either milch, dry, pregnant cattle or bull assumed as one adult unit and heifer and calf were assumed as 0.5 and 0.25 adult units, respectively and respondents were classified as small (up to 1.5 units), Medium from (1.6 to 4.5 units) and Large (above 4.5 units) group. Role of human resources in cattle management practices was recorded on percentage basis and herd size was statistically correlated with existing marketing management practices by using Chi Square (χ^2) Snedecor and Cochran[14].

RESULTS AND DISCUSSION

Table 1.1. Role of human resources for feeding operations

Particulars				
Tehsils	**Men**	**Women**	**Children**	**Total**
Vallabhnagar	21(26.25)	52(65.00)	7(8.75)	**80(100.00)**
Mavli	27(33.75)	42(52.50)	11(13.75)	**80(100.00)**
Overall	**48(30.00)**	**94(58.75)**	**18(11.25)**	**160(100.00)**

(Figures in parenthesis indicate tehsil wise percentage)

The overall results indicated that mainly women, 58.75 per cent, were involved in feeding cattle at home, after grazing, followed by men and children in 30.00 per cent and 11.25 per cent cases, respectively. The tehsil wise data showed that children played almost same role in feeding at both tehsils. Similar findings were also reported by Choudhary and Bharat[2], Pathodiya[9] and Rathore *et al*[11].

Table 1.2. Role of human resources for cleaning of shed

Particulars				
Tehsils	Men	Women	Children	**Total**
Vallabhnagar	3(3.75)	71(88.75)	6(7.50)	**80(100.00)**
Mavli	5(6.25)	66(82.50)	9(11.25)	**80(100.00)**
Overall	**8(5.00)**	**137(85.62)**	**15(9.38)**	**160(100.00)**

(Figures in parenthesis indicate tehsil wise percentage)

The data revealed that women played major role in cleaning of sheds, 85.62 per cent women were engaged in this management practice. Involvement of men and children were 5.00 and 9.38 per cent, respectively. The tehsil wise data indicated that the role of women in cleaning was predominant at both tehsil as compared to men and children. Similar findings were also reported by Pathodiya[9], Gurjar and Pathodiya[3], Bhardwaj and Chauhan[1], Gurjar[4], Mohanasundarraj and Tripathi[7] and Kumar[5].

Table 1.3. Role of human resources for milking operations

Particulars				
Tehsils	Men	Women	Children	**Total**
Vallabhnagar	31(38.75)	48(60.00)	1(1.25)	**80(100.00)**
Mavli	27(33.75)	50(62.50)	3(3.75)	**80(100.00)**
Overall	**58(36.25)**	**98(61.25)**	**4(2.50)**	**160(100.00)**

(Figures in parenthesis indicate tehsil wise percentage)

It was indicated from the data that role of women in milking process was maximum 61.25 per cent of total families. In 36.25 per cent households, the milking operations of cattle was done by man and only 2.50 per cent by children in the surveyed area. The role of women in milking in all tehsils was dominant. Children did not play much role in milking of cattle in the surveyed tehsils. The present findings are higher than the findings of Mohanasundarraj and Tripathi[7] and Singh[13].

Table 1.4. Role of human resources for grazing operations

Particulars				
Tehsils	Men	Women	Children	**Total**
Vallabhnagar	22(27.50)	41(51.25)	17(21.25)	**80(100.00)**
Mavli	31(38.75)	36(45.00)	13(16.25)	**80(100.00)**
Overall	**53(33.13)**	**77(48.12)**	**30(18.75)**	**160(100.00)**

(Figures in parenthesis indicate tehsil wise percentage)

The overall results showed that grazing of cattle was done by women in 48.12 per cent households, while men and children in 33.13 and 18.75 per cent cases, respectively. Men involvement in grazing of cattle in Mavli tehsil were 38.75 per cent followed by of Vallabhnagar 27.50 per cent while, women were involved in grazing at 51.25 per cent in Vallabhanagar and 45.00 per cent in Mavli tehsil. These observations are at higher end with respect to women involvement than that found by Mohanasundarraj and Tripathi[7] and Kumar[5].

Table 1.5. Role of human resources for sale of animal

Particulars				
Tehsils	Men	Women	Children	**Total**
Vallabhnagar	45(56.25)	33(41.25)	2(2.50)	**80(100.00)**
Mavli	27(33.75)	49(61.25)	4(5.00)	**80(100.00)**
Overall	**72(45.00)**	**82(51.25)**	**6(3.75)**	**160(100.00)**

(Figures in parenthesis indicate tehsil wise percentage)

Women play a significant role in sale of animals (51.25%) whereas, the role of men was found to be 45.00 per cent. Children play minor role in sale of animal (3.75% households only). The present study closely associated with the results of Pathodiya[9] and Mohanasundarraj and Tripathi[7].

Table 1.6. Role of human resources for sale of milk

Particulars				
Tehsils	Men	Women	Children	**Total**
Vallabhnagar	58(72.50)	15(18.75)	7(8.75)	**80(100.00)**
Mavli	47(58.75)	29(36.25)	4(5.00)	**80(100.00)**
Overall	**105(65.62)**	**44(27.50)**	**11(6.88)**	**160(100.00)**

(Figures in parenthesis indicate tehsil wise percentage)

The overall data in table 1.6 revealed that sale of milk was performed by men in 65.62 per cent households followed by women (27.50%). On the other hand children were not much involved in sale of milk (6.88%). These findings are contradiction to the observation of Raghavan[10], Choudhary and Bharat[2] and Kumar[5].

Table 1.7. Role of human resources for care of young stock

Particulars				
Tehsils	**Men**	**Women**	**Children**	**Total**
Vallabhnagar	19(23.75)	54(67.50)	7(8.75)	**80(100.00)**
Mavli	21(26.25)	48(60.00)	11(13.75)	**80(100.00)**
Overall	**40(25.00)**	**102(63.75)**	**18(11.25)**	**160(100.00)**

(Figures in parenthesis indicate tehsil wise percentage)

The data regarding care of young stock (Table 1.7) indicated that overall 63.75 per cent women played role in care of young stock of cattle followed by 25.00 per cent men and 11.25 per cent children. The tehsil wise data indicated that maximum proportion of women at 67.50 per cent played role in care of young stock in Vallabhnagar, while minimum at 8.75 per cent role played by children. These findings are in consonance to the findings of Sharma[12], Pathodiya[9] and Kumar[5].

Table 1.8. Role of human resources for care of sick animals

Particulars				
Tehsils	**Men**	**Women**	**Children**	**Total**
Vallabhnagar	26(32.50)	45(56.25)	9(11.25)	**80(100.00)**
Mavli	32(40.00)	31(38.75)	17(21.25)	**80(100.00)**
Overall	**58(36.25)**	**76(47.50)**	**26(16.25)**	**160(100.00)**

(Figures in parenthesis indicate tehsil wise percentage)

Overall data about care of sick animal revealed that 47.50 per cent sick animals were cared by women. The respective proportion of men and children was 36.25 and 16.25 per cent, respectively. The tehsil wise results depicted that women played major role in care of sick animal in Vallabhnagar whereas, men in Mavli tehsil and children play minor role in this activity. Similar findings were also reported by Pathodiya[9] and Gurjar[4].

Table 1.9. Role of human resources for external parasites

Particulars				
Tehsils	**Men**	**Women**	**Children**	**Total**
Vallabhnagar	23(28.75)	50(62.50)	7(8.75)	**80(100.00)**
Mavli	18(22.50)	57(71.25)	5(6.25)	**80(100.00)**
Overall	**41(25.62)**	**107(66.88)**	**12(7.50)**	**160(100.00)**

(Figures in parenthesis indicate tehsil wise percentage)

The overall data (Table 1.9) indicated that majority at 66.88 per cent role played by women in control of external parasites followed by men at 25.62 per cent and children play minor role 7.50 per cent. The tehsil wise data showed that women predominantly active in prevention and control of external parasites infestation. These findings are in contradiction with the observations of Gurjar and Pathodiya[3] and Bhardwaj and Chauhan[1]. However, these are similar with the findings of Pathodiya[9].

Table 1.10. Role of human resources for mating/insemination

Particulars				
Tehsils	**Men**	**Women**	**Children**	**Total**
Vallabhnagar	33(41.25)	44(55.00)	3(3.75)	**80(100.00)**
Mavli	28(35.00)	50(62.50)	2(2.50)	**80(100.00)**
Overall	**61(38.12)**	**94(58.75)**	**5(3.13)**	**160(100.00)**

(Figures in parenthesis indicate tehsil wise percentage)

The overall data shows that women performed major role in breeding operations i.e. 58.75 per cent and men played role in breeding at 38.12 per cent, while children played 3.13 per cent role in surveyed area. The present observations are in contradiction with the findings of Gurjar[4], Choudhary and Bharat[2] who reported that the women did not have significant role with breeding operation.

Table 1.11. Role of human resources for deworming

Particulars				
Tehsils	**Men**	**Women**	**Children**	**Total**
Vallabhnagar	25(31.25)	44(55.00)	11(13.75)	**80(100.00)**
Mavli	31(38.75)	40(50.00)	9(11.25)	**80(100.00)**
Overall	**56(35.00)**	**84(52.50)**	**20(12.50)**	**160(100.00)**

(Figures in parenthesis indicate tehsil wise percentage)

Data of table 1.11 shows that women were playing significant role in deworming (52.50%) followed by men (35.00%). Children were playing a minor role in this activity (12.50%). Women's role is about 55.00 per cent in Vallabhnagar, whereas men's role is about 38.75 per cent in Mavli tehsil. These findings are in contradiction with the findings Gurjar[4], Singh[13] and Kumar[5].

Table 2. Marketing practices in cattle

S. No.	Practices	Small herd	Medium herd	Large herd	Overall	χ^2 value
1	**Do you sale your animal**					
a	Yes	48(85.71)	75(93.75)	23(95.83)	146(91.25)	3.407
b	No	8(14.29)	5(6.25)	1(4.17)	14(8.75)	
2	**Sale market**					
a	Inside village	48(85.71)	75(93.75)	23(95.83)	146(91.25)	NA
b	Outside village	0(0)	0(0)	0(0)	0(0)	
c	Do not sale	8(14.29)	5(6.25)	1(4.17)	14(8.75)	
3	**When do you sale your animal**					
a	Round the year	56(100)	80(100)	24(100)	160(100)	NA
b	On occasions	0(0)	0(0)	0(0)	0(0)	
4	**Criteria for fixing rate**					
a	Milk yield basis & physical appearance	56(100)	80(100)	24(100)	160(100)	NA
b	Physical appearance	0(0)	0(0)	0(0)	0(0)	
c	Any other method	0(0)	0(0)	0(0)	0(0)	
5	**Sale of milk**					
a	Yes	38(67.86)	68(85.00)	19(79.17)	125(78.13)	5.682
b	No	18(32.14)	12(15.00)	5(20.83)	35(21.88)	
6	**Use of cattle milk**					
a	Own use	8(14.29)	2(2.50)	1(4.17)	11(6.88)	8.768
b	Milk product	2(3.57)	3(3.75)	2(8.33)	7(4.38)	
c	Sale of milk	33(58.93)	57(71.25)	16(66.67)	106(66.25)	
d	Mixing with buffalo, goat milk & sold or used	13(23.21)	18(22.50)	5(20.83)	36(22.50) #	

 # Figure in parenthesis indicate horizontal percentage

**significant (p<0.05). ** significant (p<0.01)*

The association between sale of animal and herd size was found to be non significant (χ^2=3.407). The study revealed that 91.25 per cent of total respondents sale their animals and 8.75 per cent keep them in their herd. Results indicated that all the respondents who sell their animals use village market for selling them and market their animals round the year. It was found that all the respondents fix rate of animal for marketing on basis of milk yield and physical appearance. The association between practice of sale of milk and herd size was found to be non significant (χ^2=5.682). Results indicated that 78.13 per cent of total respondents sale milk while 21.88 per cent use it for household consumption. The findings are similar to that observed by Rathore *et al.*[11], Panwar *et al.*[8] and Manohar[6].

Animal husbandry is an important pillar for rural economic development and it is mainly in the hands of women, therefore it is necessary to formulate policies regarding awareness of women so that economic upgradation of rural population can be targeted. Further policies regarding development of better market for livestock and its products are needed to be formulated so

that animal husbandry could turn into a better economic enterprise.

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