

## ROLE OF RURAL WOMEN IN DAIRY FARMING OF RAJKOT DISTRICT

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### ABSTRACT

*A survey based study was carried out to ascertain the role and participation of rural women in dairy farming, using a pretested interview schedule by personal interview for sample size of 240 rural women in Jasdan, Morbi and Maliya tehsils of Rajkot district, Gujarat (India). The socio-personal study revealed that majority of the women were middle aged (55%) in joint families (65%) with 53.33 per cent being literates. Most of the respondent families were marginal farmers (33.33 %) with low annual family income (60.83 %) having agriculture (52.5 %) as the major occupation. About 30 operations of dairy farming were selected in consultation with experts and were broadly categorized into six aspects as feeding, management, breeding, health care, processing & marketing and miscellaneous. The study revealed that women participation was maximum in caring of pregnant animals (91.66%) followed by taking animals for pregnancy diagnosis (90.83 %). The study revealed that 90 per cent women involved in milking while 89.16 per cent women cared for newborn or young animals. The farmwomen actively involved in cleaning of animal sheds (89.16 %), feeding the animals (87%) and disposal of cow dung (86.66 %). The farm women participation was least in farm record maintenance (52.5%) and getting loans or credits from the banks (49.16 %). The study concluded that women participated mostly in non-financial activities and there is a need to educate farm women about scientific management practices for increasing livestock production.*

**Key Words:** Socio-personal profile; Role; Rural Women; Dairy Farming;

The contribution of women to national development in the current context and its potential is of greater significance. Involvement of Indian women in national progress at all levels is undisputable reality although the degree of involvement varies from time to time and region to region. The

prosperity and growth of a nation depends on the status and development of its women as they not only constitute nearly half of the population, but also positively influence the growth of remaining half of the population. The crucial role of women in agriculture, allied occupations and household activities has however been grossly

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underestimated and undervalued. Women play significant and crucial role in agricultural development and allied fields like dairy farming, vermi compost production, etc. Dairy farming is major occupation of rural women in Gujarat. The present investigation was designed to study the role and extent of involvement of rural women.

### METHODOLOGY

The present investigation was designed to study the role and participation of rural women in dairy farming. Purposive sampling technique was used for selecting Jasdan, Morbi and Maliya tehsils of Rajkot district on the basis of increased rate of prospective dairying through Rajkot District Co-operative Milk Marketing Federation. The secondary sources revealed that milk procurement has increased from 2.10 lacs Kg per day in 2008-09 to 3.66 lacs Kg per day during 2012-13 in this region. The study was conducted during April to October 2012. A pretested semi - structured interview schedule was used to collect the data by personal interview method. Multistage random sampling was applied for selecting sixteen respondents from each purposely selected five villages with the help of veterinary officers, key informants and village level functionaries, thus making a total of 240 rural women for the final study.

The collected data were coded, tabulated, classified and further categorized for systematic statistical analysis. The descriptive statistical tools like average and percentage were used for analysis of data. The results were interpreted accordingly.

### RESULTS AND DISCUSSION

The study revealed that 55 per cent of rural women were middle aged in the study region followed by young (35%) and old age (10 %) category. The probable reason for such distribution might be that, majority of the middle aged rural women perceived dairy farming as a profitable avenue and took up as a subsidiary occupation. The study revealed that 53.33 per cent of respondents were literates while 46.67 per cent of the women were illiterates. Regarding the type of family, majority of farm women lived in joint family (65%) while 35 per cent lived in nuclear family. About the occupation, the study found that agriculture (52.50%) was the major occupation of the family followed by labourers (28.33%). The remaining farm women included home makers (15%) and government job holders (04.17%). The study reported that 82.5 per cent of respondents were married while 9.16 per cent rural women were unmarried. The present study exhibited that 60.83 per cent of the families had low income followed by medium income category (35.83 %) and high income group (03.34 %). The study revealed that 33.33 per cent farm women families had marginal land followed by small farmers (28.34 %). It was also observed that 20.83 per cent farm women were landless and 17.60 per cent were large farmers. With regard to dairy herd size, 79.16 per cent families were in medium category while 12.5 per cent families had smaller livestock holding. The study reported that 71.66 per cent rural women had low level social participation while 20.84 had medium level social participation.

The distribution of respondents according to their personal, social and economic

traits included in the study is presented in Table 1.

**Role and participation of rural women in dairy farming:**

The study focused mainly on six major operations of dairy farming. The findings of study are depicted in Table 2.

S.No.	Characters	No.	%
1.	<b>Age</b>		
	16-29 years (Young)	84	35.00
	29-42 years (Middle)	132	55.00
	42-55 years (Old)	24	10.00
2.	<b>Education</b>		
	Literates	128	53.33
	Illiterates	112	46.67
3.	<b>Family type</b>		
	Joint	156	65.00
	Nuclear	84	35.00
4.	<b>Occupation</b>		
	Agriculture	126	52.50
	Labour	68	28.33
	Home makers	36	15.00
	Government job	08	04.17
5.	<b>Marital status</b>		
	Married	198	82.50
	Unmarried	22	09.16
	Widow	16	06.67
	Divorce	04	01.67
6.	<b>Income</b>		
	Low	146	60.83
	Medium	86	35.83
	High	08	03.34
7.	<b>Land</b>		
	Landless	50	20.83
	Marginal	80	33.33
	Small	68	28.34
	Large	42	17.60
8.	<b>Livestock holding</b>		
	Small	10	12.50
	Medium	190	79.16
	Large	20	08.34
9.	<b>Social participation</b>		
	Low	172	71.66
	Medium	50	20.84
	High	18	07.50

*N=Number of observations*

**Table-2.**  
**Distribution of the rural women on the basis of their participation in**  
**dairy farming N=240**

S. No.	Characters	No.	%
<b>1.</b>	<b><i>Feeding &amp; Watering</i></b>		
	Taking animals for grazing	198	82.50
	Fodder collection	194	80.83
	Chaffing the fodder	180	75.00
	Mixing green fodder with roughage	162	67.50
	Feeding the animals	108	86.66
	Storage of feed & fodder	186	77.50
	Watering the animals	204	85.00
<b>2.</b>	<b><i>Management</i></b>		
	Construction of animal sheds	182	75.83
	Cleaning of animal sheds	214	89.16
	Washing & grooming of animals	170	70.83
	Milking	216	90.00
	Disposal of cow dung	208	86.66
	Maintaining farm & dairy records	126	52.50
<b>3.</b>	<b><i>Breeding</i></b>		
	Taking animals for Artificial Insemination	188	78.33
	Taking animals for natural service	166	69.13
	Taking animals for pregnancy diagnosis	218	90.83
	Arranging materials during parturition	162	67.50
	Calling veterinarian during dystocia	176	73.33
<b>4.</b>	<b><i>Health Care</i></b>		
	Care of sick animals	208	86.66
	Care of pregnant animals	220	91.66
	Taking animals for treatment	198	82.50
	Vaccination/Medication	190	79.16
<b>5.</b>	<b><i>Processing &amp; Marketing</i></b>		
	Processing of livestock products	164	68.33
	Sale of milk and milk products	184	76.66
	Sale & purchase of animals	142	59.16
	Purchase of feeds and fodder	152	63.33
<b>6.</b>	<b><i>Miscellaneous</i></b>		
	Getting loans/credit from banks/cooperatives	118	49.16
	Record maintenance	126	52.50

*N=Number of observations*

**Feeding and watering:** The study revealed that most of the work regarding feeding and watering of animals was the sole responsibility of the women folk. They were responsible for the tasks like taking the animals for grazing, fodder collection, chaffing and storage of fodder etc. All the activities regarding feeding and watering were done only by women, which is in consonance with the findings of Gupta *et al.* (1986) and Rangnekar *et al.* (1992). It was observed that women in the old age category were mostly involved in taking the animals out for grazing, as they could not engage themselves in other jobs which involved physical straining. On the other hand, women in the middle age group involved themselves in all the activities equally as per the family situations. With regard to storage of fodder, women involved themselves in hay making and were not aware of the importance of silage making. Table 2 depicts the activities of rural women in dairy farming. The study revealed that 86.66 per cent of rural women were involved in feeding of animals followed by watering of animals (85%). The study exhibited that 82.5 per cent respondents were involved in taking the animals for grazing which was also reported by Toppo *et al.* (2004). The study revealed that 80.83 per cent of women involved in activities like fodder collection while 75 per cent women performed chaffing of fodder for animals. The women also looked after storage of feed and fodder (77.5 %) in the form of hay making. The act of preparing feed i.e. mixing of concentrates with roughages or fodder was performed by 67.5 per cent of rural women. Similar findings were reported by Jain and Verma (1992).

**Management:** The next major activity where women participated actively was management of livestock. The work of animal shed

construction, grooming of animals were also performed by women. It was observed that respondents majorly participated in milking of animals followed by their involvement in cleaning of milking utensils. Women actively participated in construction of animal sheds with locally available resources.

The study revealed that women performed activities like Milking (90%), cleaning of animal sheds (89.16%) and disposal of cow dung or preparation of cow dung cakes (86.66%). Similar findings were observed by Jain and Verma (1992). The farm women to the tune of 75.83 per cent women were involved in the construction of animal sheds which was also reported by Toppo *et al.* (2004). The study also revealed that 70.83 per cent women performed washing and grooming of animals. Though majority of the women were illiterate, 52.5 per cent of farm women maintained a small book or piece of paper as a record. Similar findings were reported by Yadav *et al.* (2005).

**Breeding:** Rural women participation in breeding activities was found to be least among all the selected activities due to social mores and taboos in society. The study revealed that 90.83 per cent of farm women were actively involved in taking animals for pregnancy diagnosis. The study also reported that 78.33 per cent of farm women took animals for Artificial Insemination while 69.16 per cent of rural women took the animal for natural service. Similar findings were also reported by Singh (2003). The study also revealed that 73.33 per cent respondents called the veterinarians during dystocia while 67.5 per cent respondents arranged bedding materials during parturition. These findings are in conformity with findings of Tripathi and Bhanja (2000).

**Health care:** The women in their late middle and old age actively participated in health care as they had learnt the things by seeing and out of experience. Most of the respondents interviewed were of the view that they required lot of training and knowledge with regard to the health care aspects. These results are in confirmation with the results of Adhikari (1987) and Bhurtel (1996).

The health care of animals was solely performed by women folk in the study area. The study revealed that 91.66 per cent rural women were engaged in health care of pregnant animals while 89.16 per cent respondents looked after new born or young calves. The study revealed that care of sick animals (86.66%) was exclusively performed by farm women. The findings are in conformity with the findings of Rangnekar *et al.* (1992). The study reported that women were involved in taking animals for health treatment (82.5%) and vaccination or medication (79.16 %). Similar findings were reported by Tripathi and Bhanja (2000).

**Processing and marketing:** Participation of women in processing and marketing activities was not much appreciated. The women folk rarely participated in milk processing and making other milk products like ghee, butter, khoa etc. The milk was supplied to milk collection centres of Karnataka Milk Federation. The women felt that preparation of milk products added to their existing labour. They also perceived that women required more time for processing of milk and hence, only few women took up processing on only small scale.

They produced milk products like ghee, butter and khoa only for their household consumption.

The study revealed that 76.66 per cent respondents involved in sale of milk and milk products while 68.33 per cent of farm women performed milk processing activities like ghee making and butter preparation. Similar findings were reported by Toppo *et al.* (2004). The study also revealed that women participation was less as compared to men in the areas of sale and purchase of animals (59.16 %) and purchase of feed and fodder (63.33 %). These findings are in consonance with the reports of researchers Tripathi and Arya (1995).

**Miscellaneous :** Majority of the farm women in study area were ignorant about record maintenance and hence, it was observed that only 52.5 per cent of respondents maintained records in the form of small book or piece of paper. Similar findings were observed by researcher Yadav *et al.* (2005) with regards to record maintenance. The rural women perceived the activities of getting loans/credits from the banks were the responsibility of men and hence only 49.16 per cent of women were involved in this activity. Similar findings were recorded by researcher Devaki (1999).

**Relationship between Independent Variables and Extent of Participation by Women :** To study the relationship between the extent of participation of women in dairy farming and the independent variables, correlation coefficient (r) was computed and the results are presented in the Table 3.

**Table.3.**  
**Correlation coefficient between extent of participation and independent variables**

S. No.	Independent variables	'r'
X1	Age	-0.339**
X2	Education	-0.127
X3	Family Type	+0.189
X4	Marital status	+0.236
X5	Annual income	-0.118
X6	Land holding	-0.994**
X7	Livestock holding	+0.162
X8	Social participation	-0.938**

\*\* Significant at 0.01 level of significance

Out of the independent variables put to correlation analysis, only three variables age, land holding and social participation were found to be highly significant while the remaining variables failed to attain the statistical level of significance. The variables age, education, annual income, land holding and social participation were found to be negatively correlated, whereas parameters like family type, marital status and livestock possession were found to be positively correlated.

The independent variable age was found to be negatively correlated which implies that the participation of women in livestock production and management practices decreased as age advanced due to their biological inability for more physical labour, as most of the livestock practices are labour intensive and involve drudgery and fatigue. As for the parameter education, as the educational qualification of women increases, they preferred to undertake other entrepreneurial and technical

works to the unskilled jobs of cleaning of sheds, feeding of cattle and washing of farm utensils etc. It was observed that more formally educated women were getting the employment in other sectors. Similarly with the increase in land holding, the participation of women in livestock was found to decrease, as relatively less time was available at their disposal to attend to the livestock activities. Further with the male labour migrating towards the urban areas in search of jobs, women were bestowed with taking care of the farm animals. In such conditions it was found that the respondents tend to rear a limited herd size and some of the activities were distributed among the children of the household. Women of low economic category were found to participate more in livestock operations as compared to women from high and medium income groups. It might be due to the reasons that as financial conditions improve, women incline to opt for hired labour, which in turn reduces their participation. Social participation was found to be negatively

correlated with the extent of participation. The probable reason may be due the fact that women involving themselves in other social obligation do not find enough time to devote to animal rearing and the vice versa.

The independent variables viz., marital status, family type and livestock possession was found to have a positive effect on their participation. The married women were held more responsible to take care of the livestock when compared to their unmarried counterparts. The reason may be that the institution of marriage in our society usually binds the women with more responsible roles of lending a helping hand and support to her husband's activities. In case of livestock farming she is automatically entrusted with the responsibility of taking care of the unskilled work involved in this enterprise. The unmarried respondents, on the other hand were free to make choices of their own. Similarly it was observed that with the increase in livestock holding or herd size, the participation of women automatically increased. When the total number of animals in the herd is more, works related to their care and management also increases, as such the extent of participation increases.

It was also observed that family type was found to have positive correlation with the extent of participation in livestock farming which indicates that women in joint and large families were entrusted with more responsibilities of taking care of the household, farm operations and livestock activities, whereas the male counterparts engaged themselves in other income generating activities.

**Table 1. Socio-personal profile of rural women N=240**

### CONCLUSION

Farm women handle most of the critical jobs and are considered to be the main actors in small scale farming. Though women play a significant role in dairy farming their control over livestock and its products is very minimal. The income from dairy animals does not remain in the hands of women and neither does the decision regarding sale and purchase. There is an urgent need to develop technologies which will help the respondents carry out the activities with ease since they are relatively unpleasing, back breaking, monotonous and involve drudgery, physical exertion which ultimately affects their physical and psychological well being. Farm women have to be motivated to acquire more scientific knowledge for increasing the livestock production through various extension techniques.

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