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## Effect of socio-economic characteristics and disposal pattern of milk in Haryana

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### Abstract

The present study "Socio-Economic Variables and Management of Milking in Different Farming Systems in Haryana" for this Sirsa and Jind districts of Haryana state were purposely selected for this study. The multistage stratified random sampling technique was used for selection of the respondents. The age group -wise analysis majority of the farmers were found middle aged groups in both the districts. The children were maximum contributing of family size group. It is also obvious that the number of farm animals had a positive relationship with the family size. Among all the family members, maximum percentage of female members engaged in livestock rearing was more than the male members in both the district. About education status there was inverse relationship between education status and livestock rearing. As the education status increased the number of person involved in animal management found decreases. Maximum people were illiterate who were engaged in livestock. In both the districts maximum milk was sold as fresh followed by milk converted into Ghee & other products.

**Keywords:** Socio-economic, cattle, buffalo, husbandry practices, literacy, disposal pattern

### Introduction

Animal husbandry in India is closely interwoven with agriculture and plays an important part of the rural economy. But it did not receive as much attention as crop production till the twenties when the Royal Commission on Agriculture provided an unusually comprehensive and insightful discussion on India's livestock economy. Thereafter, appropriate policy for cattle were framed and relatively little serious work was done. But now the Indian livestock sector is on a high growth trajectory and currently contributes about 29.7 percent to the agricultural gross domestic product (Ag GDP). It is of special importance as it has strong backward and forward linkages, which promote many industries like livestock-based food processing and leather industries. The development of livestock sector will not only increase its share in the agricultural and national GDP but will also assist the sector in becoming one of the major foreign exchange earners in the Indian economy in the near future. This is strengthened by the fact that India has 512.05 million livestock (largest) and 729.2 million poultry and produce annually approximately 155.5 million tons of milk (highest in the world) and 63 billion eggs (third position in world) and is a leading producer of many of the livestock products (Annual report 2017-18 Department of animal husbandry, dairying and fisheries of India). These advantages if leveraged optimally can push India to the position of a leading animal products supplier of the world. But the major thrust of livestock development strategy in India has been on achieving self-sufficiency in livestock products through import substitution. However, the policy initiatives triggered in 1991 were reoriented towards improving growth and efficiency in livestock production and processing and integration with the world economy.

Haryana occupies a significant position on the animal husbandry map of India. The per capita availability of milk in Haryana is 930 gms per day as against 355 gms per day in the country in 2016-17 (National Dairy Development Board). Among the farm animals cattle and buffaloes occupy the most pre-dominant place and constitute about 20.50 and 69.00 per cent, respectively of total livestock population in the state. Amongst the districts, Sirsa district occupies the first position with 11.85 per cent of cattle population, while district Jind has the highest contribution in buffalo population 8.63 per cent of the state, (Livestock Census, 2012).

### Methodology

The Sirsa and Jind districts of the State which form important tract for the famous Haryana breed of cattle and Murrah breed of buffaloes, and also dominate the livestock sector with higher concentration in livestock population and infrastructure were selected purposely for this study.

The multistage stratified random sampling technique was used for selection of the respondents. The selection of tehsils, cluster villages and dairy farmers formed the first, second and third stages of sampling, respectively. Sirsa and Jind districts of Haryana state were purposely selected for this study. Further one tehsil (i.e. Sirsa and Jind) each selected district and two village from each selected tehsil (i.e. Paniwala-mota and Shapurbeu from Sirsa and Ickus and Ramrai from Jind respectively)

All the dairy farmers were classified into three categories based on number of milch animals reared by them, viz. small (up to 4 milch animals), medium (4 to 8 milch animals) and large (more than 8 milch animals) by adopting the cumulative total method. About eight percent of households from each cluster were selected by probability proportional to the total number of households in each size group with a minimum of two farmers in each group. From Sirsa district 46 small, 43 medium and 11 large farmers where as from Jind district 34 small, 45 medium and 21 large farmers were selected. Thus, in all 86 small farmers, 75 medium and 39 large farmers constituted the total sample of 200 respondents for the study.

Both primary as well as secondary data were collected for this study. Primary data were collected from the sample households on well-structured and pre-tested interview schedule for a period of one year (2015-16) for the year. Whereas secondary data were collected from various published and unpublished recourses for the study. In order to ascertain the socio-economic profile of the sample households, composition of herd size, role of women, employment generation, feeding pattern of milch animals, tabular analysis was employed. Averages, percentages, range values etc. of important variables/parameters were calculated to arrive at the inferences of the study.

## Results and Discussion

### Socio-economic profile of sample households

The socio-economic characteristics of sample households have immense influence on the decision making process and profitability of dairy enterprise. In this section, age composition, the average family size and composition, family members engaged in livestock rearing, educational status of the respondents are highlighted:

### Age of the respondents

The Table 1 indicates that in Sirsa district (48.00%) respondents belonged to the middle age group (31–50 years), while 31.00 per cent of them were old (50 and above). As far as young age group is concerned, a minimum (21.00%) of respondents were of young age group, i.e. ( $\leq 30$  years). Similarly in Jind district (48.00%) respondents belonged to the middle age group (31–50 years), while 34.00 per cent of them were old (50 and above). As far as young age group is concerned, a minimum (18.00%) of respondents were of young age group, i.e. ( $\leq 30$  years). Further analysis of data revealed that majority of respondents in both the district belonged to middle age group which were engaged in livestock rearing. Mingoas *et al.* (2014) <sup>[4]</sup> also reported the same results.

### Family composition of sample respondents

The average family size and family composition of sample respondents in both selected districts shows Table 1 data pertaining to family composition revealed that the average size of the family was 8.77 members consisting of 2.97 adult males, 2.59 adult females and 3.21 children in Sirsa district and in Jind district, the average size of family was found to be 7.25 members consisting of 2.11 adult males, 2.05 adult females and 3.09 children. In the district, 36.00 and 42.00 per cent children was maximum contributing of family size followed by adult male. Bayei and Nache (2014) <sup>[1]</sup> also revealed that 69.82 per cent of the sampled population was above 50 years old with a mean age of 69.82 years and 100% were males.

### Distribution of family members engaged in livestock rearing

Distribution of family members engaged in livestock rearing is shown in Table 1 in Sirsa and Jind districts. It is apparent from the data that on an average, about 53.22 and 48.36 per cent of the female family members are engaged in livestock rearing followed by male in Sirsa and Jind districts, respectively. Similar trend were found Christy *et al* (2002) <sup>[2]</sup> and Otekhile and Verter (2017) <sup>[5]</sup>

**Table 1:** Percentage distribution of socio-economic characters of selected respondents

Sr. No.	Variable	Category	Sirsa		Jind	
			frequency	Percentage	frequency	Percentage
1.	Age (Years)	Young ( $\leq 30$ yrs)	21	21.00	18.00	18.00
		Middle (31-50 yrs)	48	48.00	48.00	48.00
		Old ( $> 50$ yrs)	31	31.00	34.00	34.00
		Total	100	100	100	100
2.	Family composition	Adult Male	2.97	33.87	2.11	29.10
		Adult Female	2.59	29.53	2.05	28.28
		Children	3.21	36.60	3.09	42.62
		Total	8.77	100	7.25	100
3.	Family members engaged in livestock rearing	Male	1.13	38.31	1.25	45.45
		Female	1.57	53.22	1.33	48.36
		Children	0.25	8.47	0.17	6.18
		Total	2.95	100	2.75	100
4.	Educational status	Illiterate	42	42.00	39	39.00
		Primary	32	32.00	28	28.00
		Middle	19	19.00	19	19.00
		Higher Secondary	5	5.00	10	10.00
		Graduate or above	2	2.00	4	4.00
		Total	100	100	100	100
5.	Disposal pattern of milk	Sold as fresh	45	45.00	63	63.00
		Converted in Ghee & other products	37	37.00	23	23.00
		Other uses	18	18.00	14	14.00
		Total	100	100	100	100

**Note:** Figures in the parentheses indicate percentages of the total respondents

### Educational Status of the sample households

The educational status of the head of families of sample respondents is presented in Table 1. The study has shown that in Sirsa district about 42 percent of the total respondents were illiterates followed by 32 per cent, 19 per cent and 5 per cent primary, middle and higher secondary respectively, only 2 per cent graduates and above. Similarly in Jind district 39 percent of the total respondents were illiterates followed by 28 per cent, 19 per cent and 10 per cent primary, middle and higher secondary respectively, only 4 per cent graduates and above. The data presented in the table reveals that inverse relationship between number of person and education status. As the education status increased the number of person involved in animal management decreases. Maximum people were illiterate who were engaged in livestock. Same trend were found by Rajender and Narinder (1999) [6] and Sheokand *et al.* (2002) [7].

### Disposal pattern of milk

The disposal of milk in milk producing household consist of milk consumption and conversion of milk in to different milk products at the producer household and the remaining is available for sale as milk in the market. The observation from sampled farms showed that in Sirsa district maximum quantity of milk sold as fresh (45.00%) followed by converted into Ghee and other products (37%) and other uses (18%). Similarly, in Jind district maximum quantity of milk sold as fresh (63.00%) followed by converted into Ghee and other products (23%) and other uses (14%). Similar findings were also observed by Ghule *et al.* (2014) [3].

### Conclusion

The age group -wise analysis majority of the farmers were found middle aged groups in both the districts. The children were maximum contributing of family size group. It is also obvious that the number of farm animals had a positive relationship with the family size. Among all the family members, percentage of female members engaged in livestock rearing was more than the male members in both the district. About education status there was inverse relationship between education status and livestock rearing. As the education status increased the number of person involved in animal management decreases. Maximum people were illiterate who were engaged in livestock. It is concluded that most of the milk was sold as fresh in both the districts.

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