

A STUDY OF MARGINAL MILK PRODUCERS IN GUJARAT STATE

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ABSTRACT

Dairying has become an important secondary source of income for more than 15 million rural families and has assumed an important role in providing employment and income generating opportunity for the most vulnerable sections of our population. For millions of small and marginal farmers as well as landless labourers, milk production provides ready cash in hand for fulfilling their daily household requirements. According to 2012 livestock census data, Gujarat had 9984 thousand cattle and 10386 thousand buffalo population. The daily milk yield per animal in the state for Cow (Crossbreed), Cow (indigenous) and Buffalo is around 9.08 kg/day, 4.19 kg/day & 5.15 kg/day respectively. The present study was conducted to evaluate the status of Marginal Milk Producers in Gujarat state. The study covered all districts of the state and information was collected by using questionnaire. After analysing the collected data it could be it can be concluded that the major characteristics of Marginal dairy farmers were- young farmers, Male dairy farmers, and educational background of SSC to Post graduation. This notable characteristic of milk producers is an excellent opportunity for delivering effective animal husbandry and dairy farming training and extension programmes. The main weakness observed was low milk yield lack of awareness of clean milk Production and Scientific Animal Husbandry practices.

KEYWORDS: Marginal Milk Producers, Gujarat Dairy, Cooperative Dairies, Dairy Business

INTRODUCTION

Indian Dairy Sector

The Indian Dairy cooperatives structure has a huge contribution in raising the milk production in the country upto approximately 146 million tonnes in the year 2014-15 from a meagre milk production 17 million tonnes in the year 1951. The per capita availability of milk in the country has increased to 340 g /day (GCMMF Annual Report 2015-16). Further, milk is the largest agricultural crop in India with market value exceeding Rs 4 lakh crore per annum and the milk group contributes the highest to the total output of our agricultural sector, surpassing the output value of wheat, rice and oilseeds

India's livestock sector is one of the largest in the world. According to 2012 livestock census data, Gujarat had 9984 thousand cattle and 10386 thousand buffalo population, which comes to around 5.23% and 9.55% of cattle and buffalo population of the country. The daily milk yield per animal in the state for Cow (Crossbreed), Cow (indigenous) and Buffalo is around 9.08 kg/day, 4.19 kg/day & 5.15 kg/day respectively; whereas that of India is 7.15 kgs, 2.54 kgs and 5.15 kgs for Cow (Crossbreed), Cow (indigenous) and Buffalo respectively. Gujarat is lucky to have good and high-yielding breeds of cattle and buffaloes. Gir and Kankrej breeds of cows and Mahesani, Jafarabadi, Banni and Surti breeds of buffaloes are well known for their high milk yielding capacity. Kankrej bullocks are famous for their "Sawai-chal" and the cows of this breed are good milk producers.

Dairying has become an important secondary source of income for more than 15 million rural families and has assumed an important role in providing employment and income generating opportunity for the most vulnerable sections of our population. For millions of small and marginal farmers as well as landless labourers, milk production provides ready cash in hand for fulfilling their daily household requirements.

In India, milk production is scattered in large number of villages in small quantity of two to four liters by milch animals. The average milk production per animal per lactation is around 1400 liters which is much below the world average of 2300 liters. (Rajorhia, G.S .2013) The milk productivity of crossbred cows, Indigenous cows and of buffaloes in India is very low. It is 6.45, 1.97 and 4.3 Kg per day respectively. The unorganized sector comprises of numerous small and /or seasonal milk producers/trader (popularly known as halwais).

METHODOLOGY

The study was being spread over the entire state and primary data was collected by way of a Questionnaire. The study covered all 26 Districts of Gujarat state, 227 talukas and further, three villages were selected from each taluka. In total 681 villages from the state were selected and data was collected from Marginal Milk producers (owning 1 to 2 animals) belonging to the villages.

RESULTS AND FINDINGS

Age Profile of Milk Producers

Table 1

Age Group of Milk Producers			
Sr. No.	Age Group	N	Percentage
1	10-19	2	0%
2	20-29	72	14%
3	30-39	161	28%
4	40-49	194	34%
5	50-59	96	18%
6	60-69	37	7%
7	70-79	4	1%
8	80-89	1	0%
9	90-99	0	0%
Total		567	100%

From the above table it can be seen that around 75% of the selected marginal milk producers fell in the Age group of 20 to 49 years. This age bracket is quite young and hence this shows the inclination of young milk producers towards Dairy Farming.

Education Qualification of Milk Producers

Table 2

Education Qualification of Milk Producers			
Sr. No.	Education Qualification	N	Percentage
1	Illiterate	30	5%
2	1 to 9	215	38%
3	SSC	124	22%
4	11	28	5%
5	HSC	108	19%

6	UG	53	9%
7	PG	9	2%
Total		567	100%

Around 57 % of the respondent milk producers had educational background of SSC to Post graduation. This notable characteristic of milk producers is an excellent opportunity for delivering effective animal husbandry and dairy farming training and extension programmes.

Main Occupation of Milk Producers

Table 3

Sr. No.	Main Occupation	N	Percentage
1	Only Dairying/ Animal Husbandry	45	8%
2	Animal Husbandry + Farming	448	79%
3	Animal Husbandry + Service	36	6%
4	Animal Husbandry + service + Farming	28	5%
5	Other	10	2%
Total		567	100%

A large percentage (79%) of the respondents has their main business as “Animal Husbandry + Farming”. This indicates that “Mixed Farming” is being practiced by significant number of respondents.

Land Holding of Milk Producers

Table 4

Sr. No.	Land Holding(Vigha)	N	Percentage
1	0	84	18%
2	1-10	206	43%
3	10-20	100	21%
4	20-30	42	9%
5	30-40	17	4%
6	40-50	8	2%
7	50-60	6	1%
8	>60	13	3%
Total		476	100%

Almost 18% are landless and another 43% of the respondents had land below 10 vigha (around 2.4 hectares).

Land Holding (Irrigation Facility)

Table 5

Sr. No.	Type of Land	N	Percentage
1	Irrigated	334	85%
2	Non-irrigated	58	15%
Total		392	100%

Almost 85% of the milk producer has irrigation facility on their land. This is a good sign for mitigating fodder related problems.

Animal Holding of Milk Producers**Table 6**

Animal Holding of Milk Producers			
Sr. No.	Animal	N	Percentage
1	Cow	155	27%
2	Buffalo	359	63%
3	Cow and buffalo	53	9%
Total		567	100%

Around 63% of the respondent Marginal milk producers were having only buffaloes and 27% of the respondents had only cow and 9% had both buffalo and cow. This may be due to high maintenance cost of Crossbred cattle and low yield of indigenous cattle, whereas buffalo milk has high fat content, can fetch higher price and less maintenance compared to cow.

Breed Wise Animal Holding of Milk Producers (COW)**Table 7**

Sr. No.	Cow Breed	N	Percentage
1	Crossbred HF	46	22%
2	Gir	85	41%
3	Cross bred Jersey	29	14%
4	Kankrej	48	23%
Total		208	100%

Among cattle owners it was found that 36% of the respondent Marginal milk producers were having Cross bred cattle and remaining 64 % had Indigenous cattle namely Gir and Kankrej.

Breed Wise Animal Holding of Milk Producers (BUFFALO)**Table 8**

Animal Holding Buffalo Breed wise of Milk Producers			
Sr. No.	Buffalo Breed	N	Percentage
1	Jafrabadi	93	23%
2	Mehsani	188	46%
3	Surti	81	20%
4	Banni	41	10%
5	Murrah	9	2%
Total		412	100%

Among buffalo owners it was found that the share of Mehsani, Surti and Jafrabadi was 46%, 20% and 23% in the animal holding of the respondent Marginal milk producer.

Details of Daily Milk production**Table 9**

Milk Production			
Sr. No.	Daily Milk Production (In Litres)	N	Percentage
1	0-10	349	61.55%
2	11-20	191	33.69%
3	21-30	27	4.76%
4	Above 30	0	0.00%
5	Total	567	100.00%

Around 62% of the Marginal milk producers (who owned upto two animals) had their daily milk production below 10 litres per day and almost 95 % of the respondents had their daily milk production below 20 litres per day.

Details of Daily Milk Production - Session Wise

Table 10

Milk Production Session wise			
Sr. No.	Session	Milk Production in Litres	Percentage
1	Moring Session	2982	52%
2	Evening Session	2802.5	48%
Total		5784.5	100%

The above table shows that the milk collection in the morning and evening session is almost same.

Milk Production Fat Wise

Table 11

Milk Production Fat(%) wise			
Sr. No.	FAT% Range	Milk Quantity Falling in This Range	Percentage
1	0-3	123.5	2.27%
2	3.1-4	832.9	15.29%
3	4.1-5	790.7	14.51%
4	5.1-6	665.7	12.22%
5	6.1-7	998.7	18.33%
6	7.1-8	1175.3	21.57%
7	8.1-9	551.6	10.12%
8	9.1-10	155	2.84%
9	>10	155.7	2.86%
Total		5449.1	100.00%

Around 81% of the daily milk collection fell in the Fat range of 4 to 8% and another 16 % of the daily milk production fell in the range of “greater than 8% milk fat”.

Details of Milk Production, Self-Consumption and Distribution of Surplus Milk (Litres per Day per Animal)

Table 12

Category of Dairy Farmers	N	Total Daily Milk Production	Self-Consumption	Milk Sold to Nearby Customers	Milk Sold at VDCS	Milk Sold to Private Middle men	Milk Sold to Private Dairy	Average Milk production (Litres per day per animal)
Marginal	567	5449.1	1117.5	476	3585.1	124	146.5	5.55

From the above table it can be seen that the Average Milk production of an animal for marginal dairy farmers is 5.55 liters.

Table 13

Category of Dairy Farmers	N	Total Daily Milk Production	Self-Consumption	Milk Sold to Nearby Customers	Milk Sold at VDCS	Milk Sold to private Middlemen	Milk Sold to Private Dairy
Marginal	567	100%	21%	9%	66%	2%	3%

For Marginal milk producers, it can be seen that the most preferred raw milk selling avenue is the VDSC (66%) and around 20% of the daily milk production is kept for self-consumption.

Daily (Operating) Cost of Milk Producer (In Rs) (Per Animal)

Table 14

Average Daily cost Incurred by Marginal Dairy Farmer		
Cost Item (Rs.)	Cost in Rs.	% Cost
Green Fodder	22.10	26.02%
Dry Fodder	17.01	20.02%
Cattle feed	20.01	23.55%
De oiled Cake	10.18	11.98%
Mineral Mixture	2.71	3.18%
Medicine	1.64	1.93%
Vaccination	0.26	0.31%
AI cost	0.49	0.57%
Insurance	1.32	1.55%
Labour	9.23	10.87%
Total (Rs.)	84.94	100.00%

From the above table it can be seen that the cost of cattlefeed, Mineral mixture, Deoiled cake, Dry fodder and Green fodder were around Rs.22.10, 17.01, 20.01, 10.18 and 2.71 per day per animal respectively. Further, the cost of cattlefeed, Mineral mixture, Deoiled cake, Dry fodder and Green fodder were around 26, 20, 24, 12 and 3% of the total daily (operating) cost, respectively.

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CONCLUSIONS

From the above analysis it can be concluded that the major characteristics of Marginal dairy farmers were- young farmers, Male dairy farmers, and educational background of SSC to Post graduation. This notable characteristic of milk producers is an excellent opportunity for delivering effective animal husbandry and dairy farming training and extension programmes. The main weakness observed was low milk yield lack of awareness of clean milk Production and Scientific Animal Husbandry practices.

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