



## **A STUDY OF MEDIUM CATEGORY 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 Medium Milk Producers in Gujarat state. The study covered all districts of the state and information was collected by using questionnaire. After analyzing the collected data it could be seen that there is enormous opportunity to develop indigenous cattle as it is more suitable to our environment. Further, it can be concluded that the major characteristics of Medium dairy farmers were- "Mixed Farming" is being practiced by significant number of respondents, irrigation facility and educational background of SSC to Post graduation. The main weakness observed was low milk yield lack of awareness of clean milk Production and Scientific Animal Husbandry practices.*

**Key Words:** Medium Category Milk Producers, Gujarat Dairy, Cooperative Dairies & Dairy Business

### **1. 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).

## **2. Methodology:**

The study was 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 Medium category Milk producers (owning 5 to 6 animals) belonging to the villages.

## **3. Results and Findings:**

### **(a). Age Profile of Milk Producers:**

S.No	Age Group	No of Respondents	Percentage
1	10-19	2	1%
2	20-29	28	8%
3	30-39	101	28%
4	40-49	118	33%
5	50-59	84	23%
6	60-69	23	6%
7	70-79	4	1%
8	80-89	0	0%
9	90-99	0	0%
	Total	360	100%

From the above table it can be seen that around 69 % of the selected medium category 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.

### **(b) Education Qualification of Milk Producers:**

Education Qualification of Milk Producers			
S.No	Education Qualification	N	Percentage
1	Illiterate	16	4%
2	1 to 9	143	40%
3	SSC	97	27%
4	11	10	3%
5	HSC	63	18%
6	UG	26	7%
7	PG	5	1%
	Total	360	100%

Around 56 % 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 programs.

### **(c). Main Occupation of Milk Producers:**

Main Occupation of Milk Producers			
S.No	Main Occupation	N	Percentage

1	Only Dairying/ Animal Husbandry	28	8%
2	Animal Husbandry + Farming	285	79%
3	Animal Husbandry + Service	27	8%
4	Animal Husbandry + Service + Farming	12	3%
5	Other	8	2%
Total		360	100%

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

**(d). Land Holding of Milk Producers:**

Land Holding (Area) of Milk Producers			
S.No	Land Holding (Vigha)	N	Percentage
1	0	25	8%
2	1-10	129	43%
3	10-20	67	23%
4	20-30	45	15%
5	30-40	22	7%
6	40-50	4	1%
7	50-60	1	0%
8	>60	4	1%
Total		297	100%

Almost 8% are landless and another 43% of the respondents had land below 10 vigha (around 2.4 hectares).

**(e). Land Holding (Irrigation Facility):**

Land Holding (Irrigation) of Milk Producers			
S.No	Type of Land	N	Percentage
1	Irrigated	257	87%
2	Non-Irrigated	40	13%
Total		297	100%

Almost 87% of the milk producers have irrigation facility on their land. This is a good sign for mitigating fodder related problems.

**(f). Animal Holding of Milk Producers:**

Animal Holding of Milk Producers			
S.No	Animal	N	Percentage
1	Cow	70	19%
2	Buffalo	168	47%
3	Cow and buffalo	122	34%
Total		360	100%

Around 47% of the respondent Medium category milk producers were having only buffaloes and 19 % of the respondents had only cow and 34% had both buffalo and cow.

**(g). Breed Wise Animal Holding of Milk Producers (COW):**

S.No	Cow Breed	N	Percentage
1	Crossbred HF	48	22.3%
2	Gir	91	42.3%
3	Cross bred Jersey	15	7.0%
4	Kankrej	61	28.4%
Total		215	100.0%

The main cattle breeds owned by Medium category milk producers were – Gir (42%), Kankrej (28%), Crossbred HF (22%) and crossbred Jersey (7%)

**(h). Breed Wise Animal Holding of Milk Producers (BUFFALO):**

Animal Holding Buffalo Breed wise of Milk Producers			
S.No	Buffalo Breed	N	Percentage
1	Jafrabadi	65	20.70%

2	Mehsani	154	49.04%
3	Surti	68	21.66%
4	Banni	24	7.64%
5	Murrah	3	0.96%
	Total	314	100.00%

The main buffalo breeds owned by Medium category Milk producers were – Mehsani (49.04%), Surti (21.66%) and Jaffrabadi (20.7%).

**(i). Details of Daily Milk Production:**

Milk Production			
S.No	Daily Milk Production (In Litres)	N	Percentage
1	0-10	55	15.28%
2	11-20	137	38.06%
3	21-30	102	28.33%
4	31-40	47	13.06%
5	41-50	19	5.28%
6	51-60	0	0.00%
7	61-70	0	0.00%
8	71-80	0	0.00%
9	81-90	0	0.00%
10	91- 100	0	0.00%
11	>100	0	0.00%
	Total	360	100.00%

Around 82% of the Medium category milk producers (who owned five to six animals) had their daily milk production up to 30 litres per day and almost 95 % of the respondents had their daily milk production below 40 litres per day.

**(j). Details of Daily Milk Production - Session Wise:**

Milk Production Session wise			
Sr. No.	Session	Milk Production in Litres	Percentage
1	Moring Session	4072.1	51%
2	Evening Session	3871.04	49%
	Total	7943.14	100%

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

**(k). Milk Production Fat Wise:**

Milk Production Fat(%) wise			
S.No	FAT% Range	Milk quantity falling in this range	Percentage
1	0-3	264	3.32%
2	3.1-4	1750.14	22.03%
3	4.1-5	1043.5	13.14%
4	5.1-6	991.9	12.49%
5	6.1-7	1404.3	17.68%
6	7.1-8	1332.3	16.77%
7	8.1-9	667.5	8.40%
8	9.1-10	254	3.20%
9	>10	235.5	2.96%
	Total	7943.14	100.00%

Around 60 % of the daily milk collection fell in the Fat range of 4 to 8% and another 15 % of the daily milk production fell in the range of “greater than 8% milk fat”.

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

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	Average Milk production (Litres per day per animal)
Medium category	360	7943.14	983.3	985.14	5536.7	262	176	4.06

From the above table it can be seen that the Average Milk production of an animal for Medium category dairy farmers is 4.06 liters.

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
Medium category	360	100%	12.38%	12.40%	69.70%	3.30%	2.22%

For Medium category milk producers, it can be seen that the most preferred raw milk selling avenue is the VDCS (70 %) and around 12.38 % of the daily milk production is kept for self-consumption.

**(m). Daily (operating) Cost of Milk Producer (In Rs.) (Per Animal):**

Average Daily Cost Incurred by Medium Category Dairy Farmer		
Cost item (Rs.)	Cost in Rs.	% Cost
Green Fodder	18.40	21.50%
Dry Fodder	16.90	19.75%
Cattle feed	23.63	27.61%
De oiled Cake	11.55	13.49%
Mineral Mixture	2.71	3.17%
Medicine	2.28	2.66%
Vaccination	0.20	0.23%
AI cost	0.50	0.58%
Insurance	1.41	1.65%
Labour	8.01	9.36%
Total (Rs.)	85.59	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. 23.63, 2.71, 11.55, 16.90, and 23.63 per day per animal respectively. Also, the cost of cattlefeed, Mineral mixture, Deoiled cake, dry fodder and green fodder were around 27, 13, 3, 20 and 21% of total daily (operating) cost respectively.

**4. Conclusion:**

After analysing the collected data it could be seen that there is enormous opportunity to develop indigenous cattle as it is more suitable to our environment. Further, it can be concluded that the major characteristics of Medium dairy farmers were- “Mixed Farming” is being practiced by significant number of respondents, irrigation facility and educational background of SSC to Post graduation. The main weakness observed was low milk yield lack of awareness of clean milk Production and Scientific Animal Husbandry practices.

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