Socio-Economic Profile and Features of Diary Respondent in Telangana: An analysis of selected districts

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1. Introduction

Since independence, India has made significant progress in various rural development sectors. The Ministry of Rural Development aims to achieve rapid and sustainable development and socioeconomic transformation in rural India through an integrated approach aimed at improving the quality of life of poor rural people and ensuring equity and effective people participation. The majority of developing countries are in the process of transitioning from medieval social relations and modes of production to those of modern advanced countries. This is not unique to India. Despite achieving political freedom 75 years ago, India has yet to break free from the shackles of socioeconomic inequalities. Keeping this in mind, the first five-year plan prioritized the development of agriculture and cottage industries (1951-56). With its vast arable lands and ample irrigation potential, India must rely on agriculture and allied industries to absorb the millions of uneducated, unemployed rural Indians.

The dairy sector, one of India's most important industries, not only supports the country's economy but also employs millions of rural households. Dairying is a vital source of income for poor and landless farmers in developing economies. According to the FAO 2018 report, more than 500 million people are poor, with many of them being small and marginal dairy sector farmers. 7.7 million People are employed solely in cattle and buffalo raising, and 69 percent of those are women, accounting for 5.72 percent of all women employed in the country. Ninety-three percent of these people live in rural areas.

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India has the world's largest dairy industry, accounting for 23% of global milk production. The industry contributes 5% to the national economy and directly employs over eight crore farmers. The dairy industry in India has grown significantly over the last ten years thanks to various government initiatives. Milk production in the country increased at a 6.2% CAGR from 146.31 million tonnes (MT) in 2014-15 to 209.96 MT in 2020-21. Uttar Pradesh, Maharashtra, Himachal Pradesh, Madhya Pradesh, Punjab, Rajasthan, and Tamil Nadu are the major dairy-producing states in India. The competition in the Indian dairy industry has always been fierce.

Telangana has a sizable livestock population. Telangana's cattle and sheep population accounts for 5.52% of the total population of India. Telangana State ranks in the top ten in terms of livestock and first in terms of sheep populations. It is ranked 12th in terms of goat population and 5th in terms of poultry population. It is also ranked 17th in terms of the pig population in India. Telangana State's livestock sector provides a living for nearly 29 lakh farmers. The livestock sector is worth Rs.12403. The current price of cores is Rs.12403, 4.86% less than the GSDP. Telangana has the highest annual meat production of 5.05 million metric tonnes. Telangana is the fifth most populous state in the country. Telangana has the capacity to produce 42.07 Lakh Mets (of milk) per year. Telangana is also ranked 13th in the country for milk production. Many programs are available through the Department of Animal Husbandry to help increase the availability of animal-origin foods such as milk, eggs, and dairy products for human consumption. Scientific breeding, medical supervision, disease management, livestock feeding, and animal husbandry are all part of this.

2. Review of Literature

Patel (2017) has cited that milk production grows only 4% against consumption at around 6% annually. The increase in per capita availability of milk is substantial, with an increase from 120 gm per day per person in 1960 to 307 grams per day per person in 2013 – 2014 and a further increase to 359 grams per day per person 2014 – 2015. He highlighted that the National Dairy Development Board projected that India's milk demand might increase to 200

million tonnes by 2021-2022. He also expressed his concern that India, the largest producer of milk in the world, had an insignificant share in the global export market.

Sethumadhavan (2017) concluded that the productivity of Indian cows and buffaloes is very low. The average milk yield from local cows, buffaloes, and crossbreed cows is 3 to 3.5 liters, 3.96 to 5.39 liters 5.82 to 7.80 liters per day, respectively. The milk yield is found to be significantly lower than cattle in developed countries, and the feed conversion efficiency is high in developed countries. The best-run farms in the world produce 1.6 kilograms of milk for every kilogram of feed, which is less than a kilogram in India.

Kumar and Shukla (2017) analysed the milk production function and the resource use efficiency in Bulandshahr of Western Uttar Pradesh. The elasticity of milk production was significant for green fodder and concentrates for both the regional producers. The study found that all the input variables were overutilized by the different farm categories, which shows that the producers used only some of the input variables at the optimum level. To increase the net returns from the milk, there should be more usage of concentrates needed.

Chakravarty (2017) has preferred indigenous dairy cattle despite their low productivity because indigenous cattle are more sustainable than crossbreed cattle. He further said indigenous cattle are more tolerant of heat, comparatively resistant to many diseases, have low maintenance costs, and have higher feed conversion efficiency. He also added that indigenous cattle milk contains the A2 allele, which is good for human health. He also claims that an intense selection of dairy animals for higher milk production and milk quality has shown a decline in reproductive performance, including the fertility of dairy animals.

Chandel (2017) had studied the total factor productivity of milk production in Haryana. The results showed that among the different categories of dairy farmers, the total factor productivity was higher for the large dairy farmers because of the increased scale of production and the adoption of high-yielding animals. The herd size, fixed cost, and the concentrates were the major factors that affected the productivity of animals. They also mentioned a connection between infrastructure and fixed cost on the total factor productivity.

Musliu et al (2019) Using the Stochastic Production Frontier analysis, they analysed the technical efficiency of milk production in the Kosovo area. The concentrate feed and the pre-

production cost are the two factors that significantly affect milk production, and any increase in these two variables will increase milk production. The study suggested that the inefficiency effects are much more significant on Cobb-Douglas production function, indicating that commercial dairy plants can increase their efficiency. However, the study needed to examine the factors which affect technical efficiency.

Parida et al. (2021), analyzed that the dairy sector is one of the important sectors in the rural economy that enhances the economic condition of 80 million landless, small, and marginal farm households in India. The sector also helps to reduce rural poverty and inequality and ensures nutrition to poor rural households. The livestock sector also contributes about 4.11 percent to India's GDP and 25.6 percent to total agriculture GDP, whereas the dairy sector claims a major share by contributing 67 % to total livestock output. Notably, milk output is more than 20.6 percent of the combined output of paddy, wheat, and pulses.

3. Objectives of the Study

1. To discuss the Socio-Economic profile of the dairy entrepreneurs
2. To analyse the problems of rural households in the management of dairy units.

4. Data and Methodology

4.1 Data

The study is prepared based on primary data as well as secondary data.

4.2 Primary data: The primary data has been collected 337 from three selected mandals. The purposive sampling method is adopted to select the sample.

4.3 Selection of sample:

The sample was selected from the villages of Karimnagar district, and 337 respondents were selected. Out of 337 samples, Saidapur Mandal 112 households, Veenavanka Mandal 112 households, and Manakondur Mandal 113 households were selected.

4.4 Secondary data:

The secondary data is significant for the present research inquiry. The secondary data collected from sources including being: APEDA (Agricultural and Processed Food Products Export Development Authority), Annual Report of DAHD 2020-21, Government of India, FAO (Food and Agriculture Organization) Reports, Annual Administration Report 2020-21, Veterinary and Animal Husbandry Department, Government of Telangana. Further, articles, journals, magazines, newspapers, and internet sources were also used to obtain the related information for the research study. The data period for the study is from 2010 to 2020.

4.5 Sampling Technique

The cluster sampling method was employed for the study. This was done to collect a sample of selected villages in the Karimnagar district. Cluster sampling helped to include various variables like gender, age, education, marital status, occupation, income, socio, and economic condition of the respondents.

Table-1.1
Selected Mandalas in Karimnagar District

S.No	District	Mandalas		samples
1		Manakondur	Annaram	113
2			Gangipalli	
3	**KARIMNAGAR**	Saidapur	Godisala	112
4			Vennampalle	
5		Veenavanka	Veenavanka	112
6			Mamidalapally	
	Total			337

Socio-Economic Profile of the Dairy Respondents

An attempt is made in this chapter to discuss the Socio-Economic profile of dairy entrepreneurs. The said analysis of the profile includes Social Category, Age, Occupation, Education, Gender, Size of the farmer, Size of the herd, Risk-taking behavior, Management Orientation, and Technology inducement behavior. The Social category is divided into OC, including other castes belonging to socially advanced castes, BC containing socially backward castes, SC, and STs. Age-wise distribution is presented as Up to 25 years, 26-40 years, and above 40 years. Only these age ranges are considered since most dairy entrepreneurs are relatively young. Occupation is divided into two, namely main occupation and sub-occupation. Those entrepreneurs whose primary business is dairy are covered under the main occupation, and those who manage dairy units as secondary to their primary occupation are covered under sub occupation. Education as a variable is categorized into literate, up to school level, intermediate, Under Graduation, and above Under Graduation. The word literate is defined as the status of a participant's ability to read and write. The rest of the education is classified on formal educational qualifications. Gender is categorized into male and female. The size of the farmer is divided into Marginal farmer (up to 2.5 acres), small farmer category (2-5 to 5 acres), medium farmer (5-10 acres), and big farmer category (Above 10 acres). The size of the herd is defined in terms of the number of animals. The categories under Size of the herd include up to 5, 5-10, and above 10 animals on average. Risk taking behavior of the respondent is measured in terms of propensity to take risk on a three-point Likert Scale [Low=1, Moderate=2 and High=3] in the form of self-reporting of the respondents. Management orientation of the respondent is measured in terms ability to plan, administer and ability to manage the scarce resources on a three point Likert Scale [Low=1, Moderate=2 and High=3] in the form of self-reporting of the respondents and Technology inducement behavior of the respondent is measured in terms of whether new technology induces them or not and its inducement level on a three point Likert Scale [Low=1, Moderate=2 and High=3] in the form of self-reporting of the respondents.The analysis of the respondents' socio-economic background will also be of immense use in examining the cross relationships among different variables, which further serve as critical inputs in policy making and operationalization of the programs.

2 RESULTS AND ANALYSIS

Table-1: Social category of the respondents

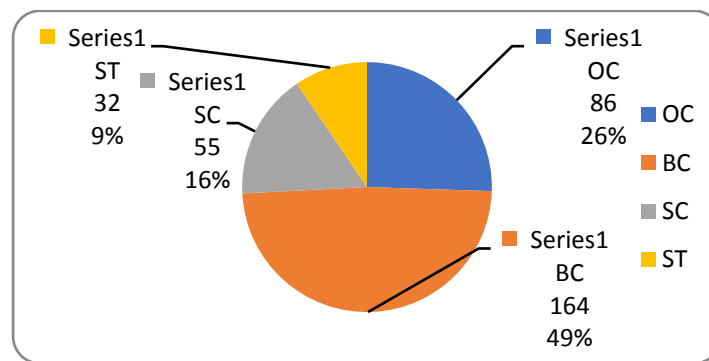| Category	Frequency	Per cent
OC	86	25.5
BC	164	48.7
SC	55	16.3
ST	32	9.5
Total	337	100.0

Source: Field study

Table-1 shows the distribution of the social category of the dairy entrepreneurs and found that 25.5 percent of the dairy entrepreneurs are drawn from socially advanced castes, 48.7 percent are from socially backward castes, 16.3 percent are from scheduled castes, 9.5 percent are from scheduled tribes. It can be concluded that most household samples belonged to the Backward caste (BC).

Table-2: Distribution of Respondents by Age

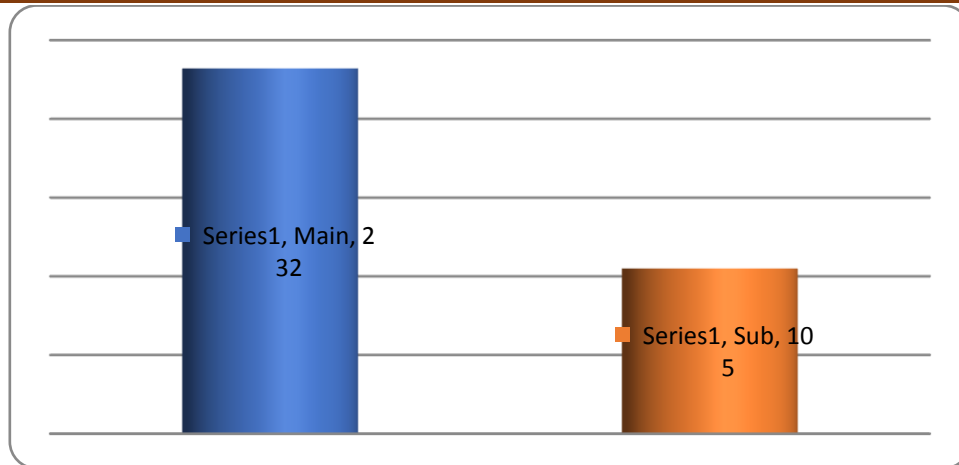| Years	Frequency	Per cent
Up to 25	49	14.5
26-40	170	50.4
Above 40	118	35.0
Total	337	100.0

Source: Field study

Table-2 shows the distribution of the main and sub-occupation of the dairy entrepreneurs and found that 68.8 percent of the dairy entrepreneurs are from the category of dairy as the main occupation, and 31.2 percent are from the category of dairy as the sub-occupation. About 70 percent of respondents' main occupation was dairy or milk production.

Table-3: Educational background of the Respondents

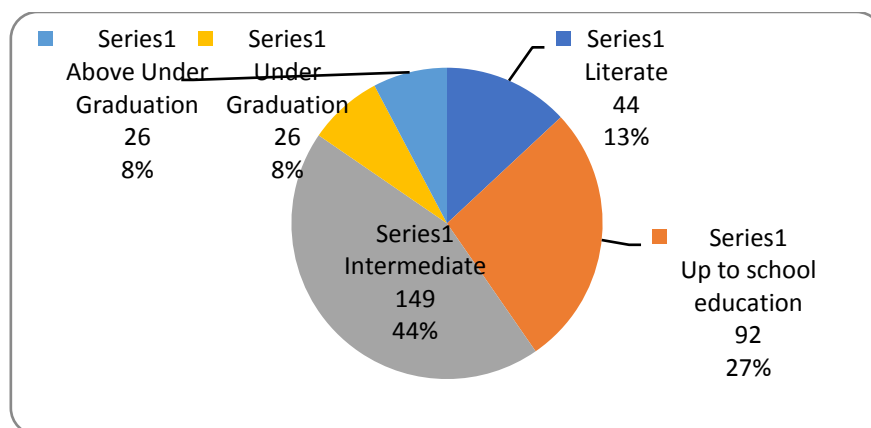| Level	Frequency	Percent
Literate	44	13.1
Up to school education	92	27.3
Intermediate	149	44.2
Under Graduation	26	7.7
Above Under Graduation	26	7.7
Total	337	100.0

Source: Field study

Table-3 shows the distribution of education of the dairy entrepreneurs and found that 13.1 percent of the dairy entrepreneurs are just literate, followed by 27.3 percent are equipped with up to school education, 44.2 percent with intermediate education, 7.7 percent with Under Graduation level education, and 7.7 percent with above Under Graduation level education. It concluded that most of the respondents' education was intermediate, and about 45 percent had not completed intermediate.

Table-4: Gender of the Respondents

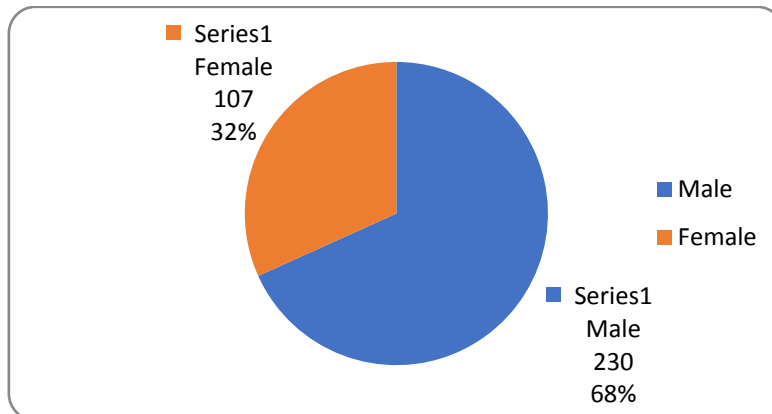| Gender	Frequency	Per cent
Male	230	68.2
Female	107	31.8
Total	337	100.0

Source: Field study

Table-4 shows the distribution of gender of the dairy entrepreneurs and found that 68.2 percent of the dairy entrepreneurs are male, and 31.8 percent are female.

Table-5: Distribution of farmers by landholding

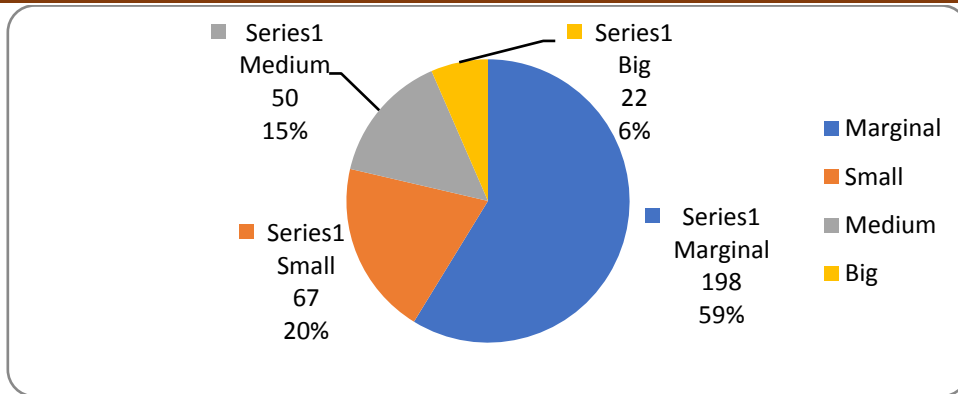| Size of the farmer	Frequency	Per cent
Marginal	198	58.8
Small	67	19.9
Medium	50	14.8
Big	22	6.5
Total	337	100.0

Source: Field study

Table-5 shows the distribution of the size of the dairy entrepreneurs and found that 58.8 percent of the dairy entrepreneurs are from the marginal farmer category, followed by 19.9 percent from the small farmer category, 14.8 percent from the medium, and 6.5 percent from the big farmer category. Most of the farmers were marginal farmers (59 percent).

Table-6: Size of the herd of the Respondents

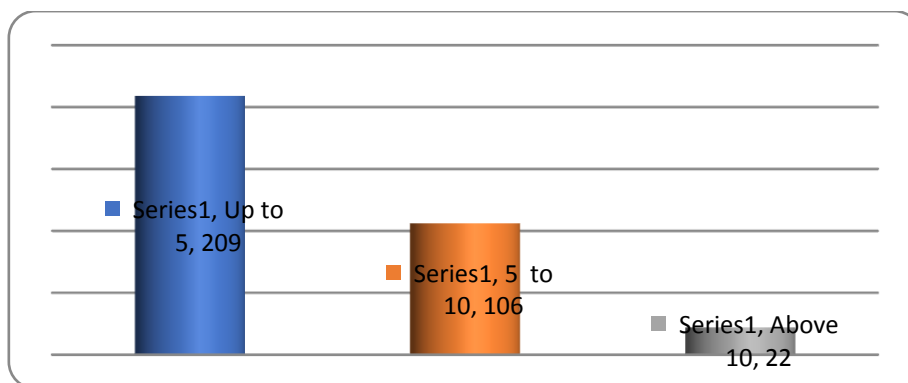| Number of animals	Frequency	Per cent
Up to 5	209	62.0
5-10	106	31.5
Above 10	22	6.5
Total	337	100.0

Source: Field study

Table-6 shows the distribution of the size of herds of the dairy entrepreneurs and found that 62 percent of the dairy entrepreneurs are from up to 5 animals' category, followed by 31.5

percent from 5-10 animal category, and 6.5 percent are from above 10 animals' category. It is found that most of the dairy farmers owned up to 5 animals.

Table-7: Risk taking behavior of the Respondents.

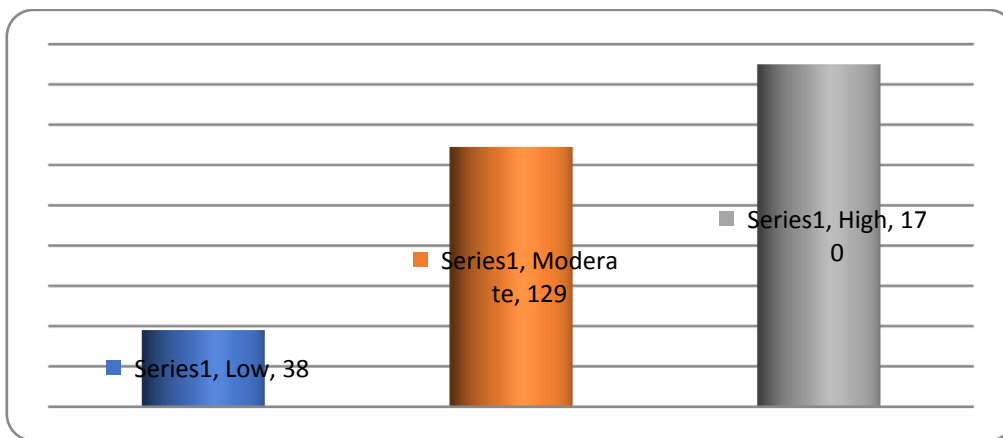| Response level	Frequency	Per cent
Low	38	11.3
Moderate	129	38.3
High	170	50.4
Total	337	100.0

Source: Field study

Table-7 shows the distribution of dairy entrepreneurs by their risk-taking behavior and found that 11.3 percent of the dairy entrepreneurs are with low level, and the same is moderate for 38.3 percent and high for 50.4 percent of the dairy entrepreneurs. Nearly half of the respondents were high risk-taking nature. Most of the dairy farmers were high-risk behaviors which is 50.4 percent.

Table-8: Technology inducement behavior of the Respondents

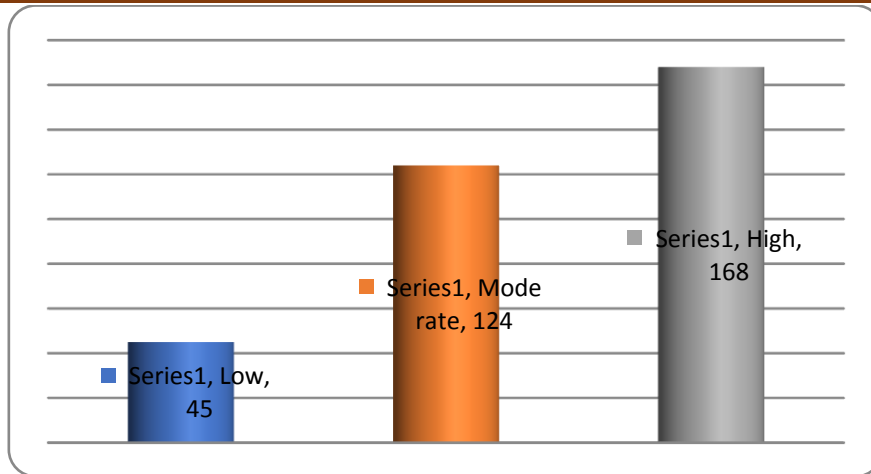| Level	Frequency	Per cent
Low	45	13.4
Moderate	124	36.8
High	168	49.9
Total	337	100

Source: Field study

Table-8 shows the distribution of the dairy entrepreneurs by their level of technology inducement behavior and found that 13.4 percent of the dairy entrepreneurs are with low level. Around 37 percent are in the moderate category, and half of the respondents are in the higher technology-induced category.

Features of Economics of Dairy Units

An attempt is made in this section to explain the economics of Dairy units managed by rural households. The aspects covered under the economics of dairy units include Cost per animal, Income per animal, Profit per animal, Employment, and Plough back ratio. The cost per animal is defined as the average cost incurred on the animal in the form of paid-out costs. It did not consider the implicit costs of the inputs in the management of the dairy business. The income per animal is defined as the average income generated through the means of selling milk and animal waste, which further serves as organic manures to improve soil fertility. Profit is the difference between average income yields and average paid-out costs. Employment is defined in men and the one-man day is 8 hours of male work, 10 hours of female work, or 15 hours of child work. The Plough back ratio is defined as the ratio of the number of profits reinvested in the dairy unit to the total amount of profits. Higher the plough ratio higher will be the rate of expansion of the business. It is further attempted to analyze the aspects covered under the economics of dairy units that are being cross-examined with reference to the social status, age, occupation, size of the herd and the level of risk-taking behavior of the sample respondents. Understanding the results of cross-examination helps

interpret the relations, like whether the economics of dairy management is socially neutral, size neutral or occupational neutral.

RESULTS AND ANALYSIS

Table-9: Cost per Animal

Rs	Frequency	Per cent
Up to 25000	27	8.0
26001-50000	238	70.6
Above 50000	72	21.4
Total	337	100.0

Source: Field study
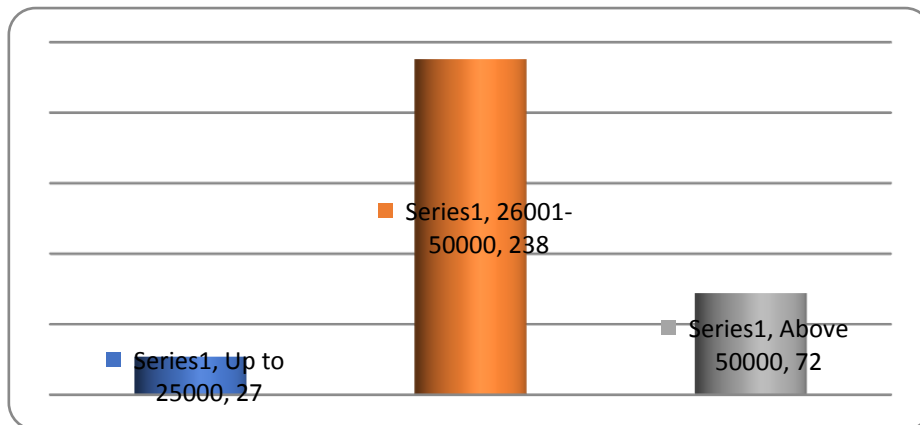
Table-9 deals with the cost incurred per animal by the dairy owners and found that cost incurred per animal is below Rs. 25,000 for 8 percent of the dairy owners. The Cost per animal is in the range of Rs. 26,001 – 50,000 for 71 per cent of farmers, and for 21 per cent of farmers the cost per animal is above Rs. 50,000.

Table-10: Income generated per Animal.

Rs	Frequency	Per cent
Up to 30000	39	11.6
30001-40000	214	63.5
Above 40000	84	24.9
Total	337	100.0

Source: Field study
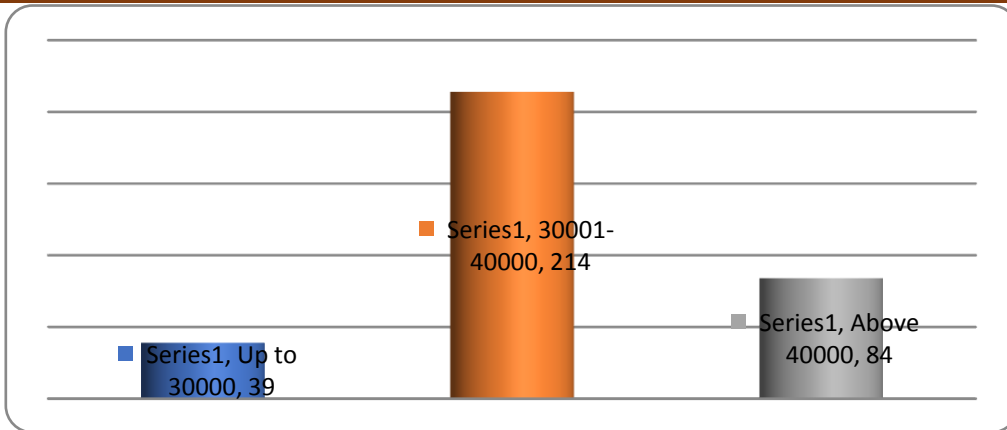
Table-10 deals with the income earnings per animal of the dairy owners and found that income earnings per animal arebelow Rs. 30,000 for 11.6 percent of the dairy owners. Rs. 30,001-40,000 rupees in case of 63.5 percent and above Rs.40,000 rupees in case of 24.9 percent of dairy owners.

Table-11: Profit per Animal

Rs	Frequency	Per cent
Up to 15000	33	9.8
15001-25000	231	68.5
Above 25000	73	21.7
Total	337	100.0

Source: Field study
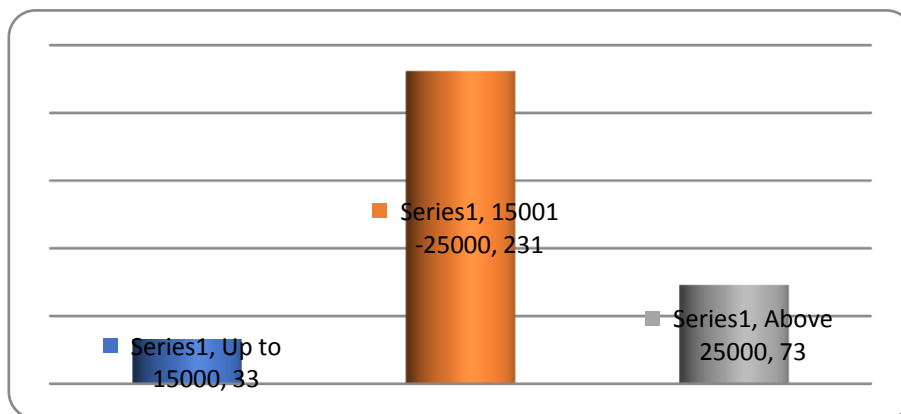
Table-11 deals with the profit per animal of the dairy owners and found that profit per animal is below Rs. 15000 for 9.8 percent of the dairy owners, Rs. 15001-25000 in case of 68.5 percent and above Rs. 25000 in case of 21.7 percent of dairy owners.

Table-12: Employment of Dairy Owners

Man days	Frequency	Per cent
Up to 240	101	30.0
241-300	203	60.2
Above 300	33	9.8
Total	337	100.0

Source: Field study
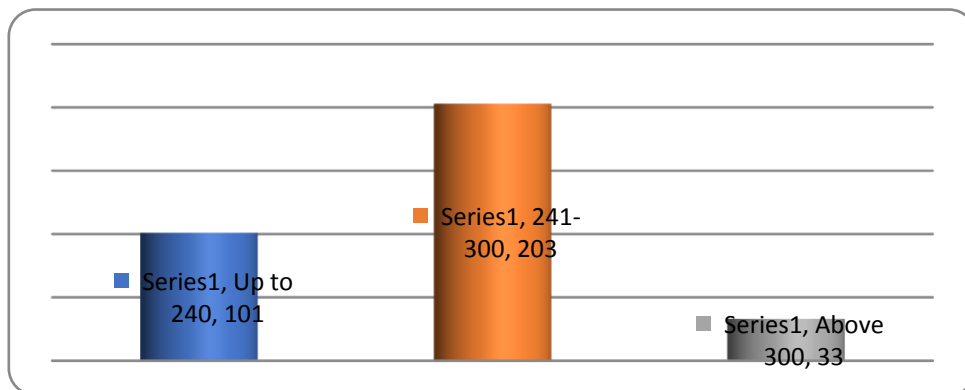
Table-12 deals with the employment of the dairy owners and found that employment is below 240-man days in the case of 30 percent of the dairy owners, 241–300-man days in case of 60.2 percent, and above 300-man days in case of 9.8 percent of dairy owners.

Table-13: Plough back rate

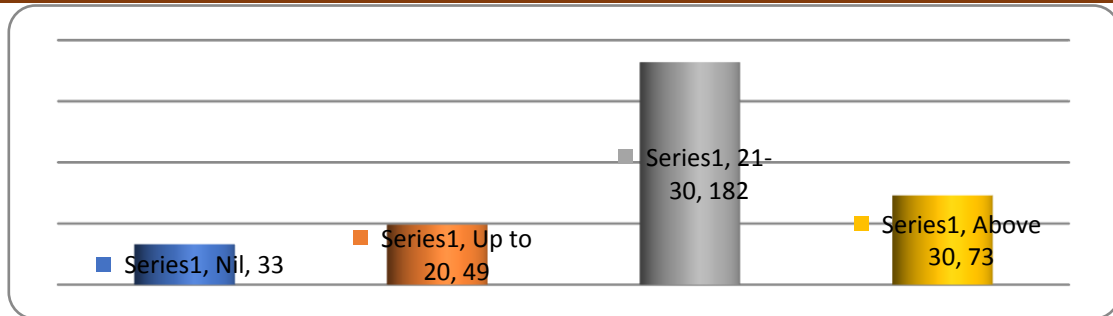| %	Frequency	Per cent
Nil	33	9.8
Up to 20	49	14.5
21-30	182	54.0
Above 30	73	21.7
Total	337	100.0

Source: Field study

Table-13 deals with plough back rate maintained by the dairy owners and found that plough back rate is nil in the case of 9.8 percent of the dairy owners, up to 20 percent in case of 14.5 percent, 21-30 percent in case of 54 percent and above 30 percent in case of 21.7 percent of dairy owners.

Table-14: Social Category and Cost per Animal

Social category	Cost per animal			Total
	Up to 25000	26001-50000	Above 50000	
OC	5	64	17	86
	5.8%	74.4%	19.8%	100.0%
	18.5%	26.9%	23.6%	25.5%
BC	16	121	27	164
	9.8%	73.8%	16.5%	100.0%
	59.3%	50.8%	37.5%	48.7%
SC	6	38	11	55
	10.9%	69.1%	20.0%	100.0%
	22.2%	16.0%	15.3%	16.3%
ST	0	15	17	32
	.0%	46.9%	53.1%	100.0%
	.0%	6.3%	23.6%	9.5%
Total		238	72	337
	8.0%	70.6%	21.4%	100.0%
	100.0%	100.0%	100.0%	100.0%

Source: Field study. Chi-Square= 24.4, DF=6, ρ=0.000, r=0.107

Table-14 shows a positive relationship between the dairy owners' social category and the dairy unit's economics with reference to cost per animal is positive (r=0.107), and the relationship between the said variables is statistically dependent. The probability value is (ρ=0.000) less than 5 percent, and the null hypothesis was rejected, and accepted the alternative hypothesis. It means there is a positive association between the social category of dairy owners and the cost per animal.

Table-15: Social category and Income per Animal

Social category	Income per Animal			Total
	Up to 30000	30001-40000	Above 40000	
OC	6	40	40	86
	7.00%	46.50%	46.50%	100.00%
	15.40%	18.70%	47.60%	25.50%
BC	33	120	11	164
	20.10%	73.20%	6.70%	100.00%
	84.60%	56.10%	13.10%	48.70%
SC	0	38	17	55
	0.00%	69.10%	30.90%	100.00%
	0.00%	17.80%	20.20%	16.30%
ST	0	16	16	32
	0.00%	50.00%	50.00%	100.00%
	0.00%	7.50%	19.00%	9.50%
Total	39	214	84	337
	11.60%	63.50%	24.90%	100.00%
	100.00%	100.00%	100.00%	100.00%

Source: Field study. Chi-Square= 76.3, DF=6, ρ=0.000, r=-0.005

Table-15 shows that the correlation between the social category of the dairy owners and economics of dairy unit with reference to income per animal is negative (r=-0.005), and the relationship between the said variables is statistically dependent.

Table-16: Social category and Profit per Animal

Social category	Profit per animal			Total
	Up to 15000	15001-25000	Above 25000	
OC	6	63	17	86
	7.00%	73.30%	19.80%	100.00%
	18.20%	27.30%	23.30%	25.50%
BC	22	108	34	164
	13.40%	65.90%	20.70%	100.00%
	66.70%	46.80%	46.60%	48.70%
SC	0	43	12	55
	0.00%	78.20%	21.80%	100.00%
	0.00%	18.60%	16.40%	16.30%
ST	5	17	10	32
	15.60%	53.10%	31.20%	100.00%
	15.20%	7.40%	13.70%	9.50%
Total	33	231	73	337
	9.80%	68.50%	21.70%	100.00%
	100.00%	100.00%	100.00%	100.00%

Source: Field study: Chi-Square= 13.3, DF=6, ρ=0.039, r=0.043

Table-16 shows that the correlation between the social category of the dairy owners and economics of dairy unit with reference to profit per animal is positive (r=0.043), and the relationship between the said variables is statistically dependent.

Table-17: Social category and Employment

Social category	Employment			Total
	Up to 240	241-300	Above 300	
OC	50	30	6	86
	58.10%	34.90%	7.00%	100.00%
	49.50%	14.80%	18.20%	25.50%
BC	29	119	16	164
	17.70%	72.60%	9.80%	100.00%
	28.70%	58.60%	48.50%	48.70%
SC	16	28	11	55
	29.10%	50.90%	20.00%	100.00%
	15.80%	13.80%	33.30%	16.30%
ST	6	26	0	32
	18.80%	81.20%	0.00%	100.00%
	5.90%	12.80%	0.00%	9.50%
Total	101	203	33	337
	30.00%	60.20%	9.80%	100.00%
	100.00%	100.00%	100.00%	100.00%

Source: Field study. Chi-Square= 58.5, DF=6, ρ=0.000, r=0.235

Table-17 shows that the correlation between the social category of the dairy owners and economics of dairy unit with reference to employment is positive (r=0.235), and the relationship between the said variables is statistically dependent.

Table-18: Social category and Plough back rate

Social category	Plough back rate				Total
	Nil	Up to 20%	21-30%	Above 30%	
OC	5	16	42	23	86
	5.80%	18.60%	48.80%	26.70%	100.00%
	15.20%	32.70%	23.10%	31.50%	25.50%
BC	23	11	108	22	164
	14.00%	6.70%	65.90%	13.40%	100.00%
	69.70%	22.40%	59.30%	30.10%	48.70%
SC	5	6	21	23	55
	9.10%	10.90%	38.20%	41.80%	100.00%
	15.20%	12.20%	11.50%	31.50%	16.30%
ST	0	16	11	5	32
	0.00%	50.00%	34.40%	15.60%	100.00%
	0.00%	32.70%	6.00%	6.80%	9.50%
Total	33	49	182	73	337
	9.80%	14.50%	54.00%	21.70%	100.00%
	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Field study. Chi-Square= 70.1, DF=9, ρ=0.000, r=-0.023

Table-18 shows that the correlation between the social category of the dairy owners and economics of dairy unit with reference to plough back rate is negative (r=-0.023), and the relationship between the said variables is statistically dependent.

Table-19: Age and Cost per Animal

Age	Cost per animal			Total
	Up to 25000	26001-50000	Above 50000	
Up to 25	5	38	6	49
	10.20%	77.60%	12.20%	100.00%
	18.50%	16.00%	8.30%	14.50%
26-40	6	126	38	170
	3.50%	74.10%	22.40%	100.00%
	22.20%	52.90%	52.80%	50.40%
Above 40	16	74	28	118
	13.60%	62.70%	23.70%	100.00%
	59.30%	31.10%	38.90%	35.00%
Total	27	238	72	337
	8.00%	70.60%	21.40%	100.00%
	100.00%	100.00%	100.00%	100.00%

Source: Field study. Chi-Square= 13.1, DF=4, ρ=0.011, r=0.012

Table-19 shows that the correlation between the age of the dairy owners and economics of dairy unit with reference to cost per animal is positive (r=0.107), and the relationship between the said variables is statistically dependent.

Table-20: Age and Income per Animal

Age	Income per animal			Total
	Up to 30000	30001-40000	Above 40000	
Up to 25	0	32	17	49
	0.00%	65.30%	34.70%	100.00%
	0.00%	15.00%	20.20%	14.50%
26-40	34	115	21	170
	20.00%	67.60%	12.40%	100.00%
	87.20%	53.70%	25.00%	50.40%
Above 40	5	67	46	118
	4.20%	56.80%	39.00%	100.00%
	12.80%	31.30%	54.80%	35.00%
Total	39	214	84	337
	11.60%	63.50%	24.90%	100.00%
	100.00%	100.00%	100.00%	100.00%

Source: Field study. Chi-Square= 44.9, DF=4, ρ=0.000, r=0.144

Table-20 shows that he correlation between the age of the dairy owners and economics of dairy unit with reference to income per animal is positive (r=0.144), and the relationship between the said variables is statistically dependent.

Table-21: Age and Profit per Animal

Age	Profit per animal			Total
	Up to 15000	15001-25000	Above 25000	
Up to 25	11	27	11	49
	22.40%	55.10%	22.40%	100.00%
	33.30%	11.70%	15.10%	14.50%
26-40	11	114	45	170
	6.50%	67.10%	26.50%	100.00%
	33.30%	49.40%	61.60%	50.40%
Above 40	11	90	17	118
	9.30%	76.30%	14.40%	100.00%
	33.30%	39.00%	23.30%	35.00%
Total	33	231	73	337
	9.80%	68.50%	21.70%	100.00%
	100.00%	100.00%	100.00%	100.00%

Source: Field study. Chi-Square= 17.1, DF=4, ρ=0.002, r=-0.040

Table-21 shows that the correlation between the age of the dairy owners and economics of dairy unit with reference to profit per animal is negative (r=-0.040), and the relationship between the said variables is statistically dependent.

Table-22: Age and Employment

Age	Employment			Total
	Up to 240	241-300	Above 300	
Up to 25	12	32	5	49
	24.50%	65.30%	10.20%	100.00%
	11.90%	15.80%	15.20%	14.50%
26-40	46	106	18	170
	27.10%	62.40%	10.60%	100.00%
	45.50%	52.20%	54.50%	50.40%
Above 40	43	65	10	118
	36.40%	55.10%	8.50%	100.00%
	42.60%	32.00%	30.30%	35.00%
Total	101	203	33	337
	30.00%	60.20%	9.80%	100.00%
	100.00%	100.00%	100.00%	100.00%

Source: Field study. Chi-Square= 3.8, DF=4, ρ=0.433, r=-0.096

Table-22 shows that the correlation between the age of the dairy owners and economics of dairy unit with reference to employment is negative (r=-0.096), and the relationship between the said variables is statistically independent.

Table-23: Age and Plough back Ratio

Age	Plough back ratio				Total
	Nil	Up to 20%	21-30%	Above 30%	
Up to 25	6	16	16	11	49
	12.20%	32.70%	32.70%	22.40%	100.00%
	18.20%	32.70%	8.80%	15.10%	14.50%
26-40	27	10	99	34	170
	15.90%	5.90%	58.20%	20.00%	100.00%
	81.80%	20.40%	54.40%	46.60%	50.40%
Above 40	0	23	67	28	118
	0.00%	19.50%	56.80%	23.70%	100.00%
	0.00%	46.90%	36.80%	38.40%	35.00%
Total	33	49	182	73	337
	9.80%	14.50%	54.00%	21.70%	100.00%
	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Field study. Chi-Square= 45.4, DF=6, ρ=0.000, r=0.127

Table-23 shows that the correlation between the age of the dairy owners and economics of dairy unit with reference to plough back rate is positive (r=0.127), and the relationship between the said variables is statistically dependent.

Table-24: Occupation and Cost per animal

Occupation	Cost per animal			Total
	Up to 25000	26001-50000	Above 50000	
Main	10	181	41	232
	4.30%	78.00%	17.70%	100.00%
	37.00%	76.10%	56.90%	68.80%
Sub	17	57	31	105
	16.20%	54.30%	29.50%	100.00%
	63.00%	23.90%	43.10%	31.20%
Total	27	238	72	337
	8.00%	70.60%	21.40%	100.00%
	100.00%	100.00%	100.00%	100.00%

Source: Field study. Chi-Square= 23.2, DF=2, ρ=0.000, r=0.016

Table-24 shows that the correlation between the occupation of the dairy owners and economics of dairy unit with reference to cost per animal is positive (r=0.016), and the relationship between the said variables is statistically dependent.

CONCLUSION

Most dairy entrepreneurs are in the younger age group and belong to a Socially Backward Class Community. Most of the respondents completed the intermediate level of education. About 7 percent of respondents' main occupation is dairy, and it is found that male manages 68 percent of the dairy units. Nearly 60 percent of the respondents were marginal farmers, and most owned 5 animals. Nearly half of the respondents were of high-risk taking nature and were in the high technology-induced category. Cost per animal is in the range of Rs. 26000 – 50000 for 71 percent of farmers the income earned is in the range of Rs. 3000 – 4000 for 63 percent of dairy owners. The profit per animal is Rs. 15000 – 25000 for 68.5 percent of dairy owners. About 60 percent of the respondents are working in the range of 241–340-man days in dairy activity. The plough back rate is found to be between 21-30 percent for more than 50 percent of dairy owners.

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