Profile of Women Dairy Farmers in Gandhinagar District, Gujarat: An in-depth Analysis

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Abstract

Dairy farming plays a crucial role in improving farmers' income in India. Women are the backbone of dairy farming activities. This study investigated the personal, social, economic, psychological, and communication profiles of women dairy farmers in Gandhinagar district, Gujarat. The study used purposive and random sampling methods to select respondents who owned at least five dairy animals at the time of investigation. The findings revealed that majority of the respondents belonged to the middle-age group (72.00%) and had secondary level of education (41.20%). Further, 55.60% of the respondents had 10-20 years of experience in dairy farming and 48.00% had large family size. Additionally, 59.20% had medium level of income and 60.40% had animal husbandry combined with agriculture as their occupation. Most respondents (44.80%) had small-sized herd (5 to 14 dairy animals), and 33.20% had up to one hectare of land. Regarding mass media exposure, 66.80% fell into the medium category. Moreover, 42.00% of the respondents had high level of scientific orientation, 42.40% had medium level of risk orientation and 44.80% had high level of credit orientation and innovativeness.

I.   Introduction

India's economy is predominantly agrarian, with animal husbandry playing a vital role. Dairy farming is recognized as a significant source of income for farmers, second only to agriculture. The Indian dairy industry has experienced substantial growth in the past three decades, with a remarkable increase in milk production. Cattle and buffalo play a major role in the Indian economy, with milk being the largest agricultural

commodity. Gujarat is one of India's leading milk- producing states, and dairy animals provide primary or secondary income for many families, especially landless and marginal farmers. These animals also serve as essential assets that provide financial security to their owners. Women are the backbone of animal husbandry activities, and dairy farming has played a significant role in socio-economic upliftment and employment generation, especially among landless small farmers and farm women groups. Therefore, this study was conducted to examine the socio-economic profile of women dairy farmers.

Objectives

To study socio-economic profile of the women dairy farmers of Gandhinagar District of Gujarat State.

II. Methodology

The study was conducted in Gandhinagar district, Gujarat, during the year 2022-23. The district is comprised of four talukas: Gandhinagar, Mansa, Dehgam, and Kalol, all of which were purposively selected. Five villages from each taluka were also purposively selected based on higher milk production. A total of 250 women dairy farmers were proportionately selected using random sampling from the total households in each village. The criteria for selecting respondents were that they should own at least five dairy animals. Various characteristics of women dairy farmers were measured using a well-structured interview schedule. Data were collected through personal interviews and analyzed using statistical tools such as percentages, mean scores, standard deviations and coefficients of correlation.

III. Results and Discussion

Age

The data in Table 1 indicate that the majority (72.0%) of the women dairy farmers belonged to the middle-age group, followed by 14.40 per cent in the old age group and 13.60 per cent in the young age group. This distribution reflected the active working age of women dairy farmers, who are also responsible for their families.

Education

Table 1 reveals that 41.20 per cent of women dairy farmers had education up to the secondary level, followed by 23.60 per cent with education up to the higher secondary level. Only 4.80% of the women dairy farmers had education up to the graduation level. This suggests the need for promoting higher education among women involved in dairy farming. Similar findings were reported by Kumar et al. (2018).

Experience in Dairy Farming

More than half (55.60%) of the women dairy farmers had medium level of experience in dairy farming, followed by 26.80 per cent with high-level of experience. This indicated that majority of the respondents had significant experience. This might be because majority of the respondents were practicing dairy farming since 10 to 20 years and even more. It provided additional regular income which motivated them to continue dairy farming. This finding was supported by the findings of Bansod et al. (2022).

Size of Family

Approximately half (48.00%) of the women dairy farmers belonged to large-sized

families (above 8 members), while 36.80 per cent were from medium-sized families (5 to 8 members). Only 15.20 per cent had small family size (up to 4 members). This finding was alike with the findings of Maurya et al. (2021).

Social Participation

More than half of the women dairy farmers were members of at least one organization, likely milk cooperative societies where they sold the milk. This finding was in concurrence with the findings reported by Krishna et al. (2020).

Annual Income

From the table 1, it could be concluded that nearly three-fifths (59.20 %) of the women dairy farmers belonged to medium annual income (150000- 300000 Rupees) group, whereas slightly more than one- fourth (26.40 %) of the women dairy farmers family had low level of annual income (<150000 Rupees) and only 14.40 per cent of women dairy farmers family had high level of annual income (>300000 Rupees). The probable reason behind this finding might be that most of the rural farm families belonged to lower to middle class and their main source of income were based on only agriculture and animal husbandry. This finding was in line with the findings reported by Prasad et al. (2019).

Occupation

Majority (60.40%) of the women dairy farmers were engaged in both animal husbandry and agriculture as their primary occupation, while 23.20 per cent were solely involved in animal husbandry. About 10.40 per cent of respondents were engaged in animal husbandry along with agriculture and job, while only 06.00 per cent practiced animal husbandry along with agriculture and business. The possible reason behind this finding might be that the respondents might have found farming and animal husbandry as an interdependent enterprise with remunerative and sustainable combination.

Herd Size

It referred to the number of milch animals such as cows and or buffaloes owned by the family of the respondents at the time of study. The data regarding herd size are presented in table 1 which indicates that 44.80 per cent of the women dairy farmers had small herd size (5 to 14 dairy animals) followed by 44.40 per cent of women dairy farmers were found with medium sized herd (15 to 30 dairy animals), while 10.80 per cent of them had large sized herd (> 30 dairy animals). This result was comparable with the findings of Pradeep and Johns (2022).

Size of Land Holding

It is apparent from the data in table 1 that approximately one-third (33.20%) of the respondents were marginal farmers, 29.60 per cent had small land holdings (1.0 to 2.0 hectares), 17.60 per cent were landless, 11.22 per cent were with large sized land holding (more than 4.0 hectares) and 8.40 per cent of the respondents had medium sized land holding (2.0 to 4.0 hectares).

Mass Media Exposure

Mass media exposure is the frequency of exposure of women dairy farmers to different mass media like radio, television, newspaper, other print media and social

media for getting latest information about animal husbandry practices. Table-.1 pointed out that majority (66.80 %) of the respondents had medium level of mass media exposure; followed by 23.60 and 09.60 per cent of the women dairy farmers with low and high level of mass media exposure, respectively primarily through sources like radio, television, newspapers, and social media. Identical findings were reported by Mahesh et al. (2020).

Extension Participation

More than half (53.20 %) of the women dairy farmers had medium level of participation in extension activity followed by 34.00 and 12.80 per cent with low and high participation in extension activities, respectively. The probable reason for above findings might be lack of time and less accessibility due to engagement in household activities along with dairy farming. The above findings were in line with the findings of Vekariya et al. (2016).

Scientific Orientation

This is characterized by belief in science and scientific approaches to solve the problems in farming. It is true that scientifically oriented women dairy farmers are always inclined to use scientific methods in dairy farming and have a favorable perception towards innovation. The data presented in table1 revealed that a significant portion (42.00%) of the women dairy farmers had high level of scientific orientation, demonstrating a propensity to use scientific methods in dairy farming, followed by 34.40 and 23.60 per cent of them with medium and low level of scientific orientation, respectively. Same findings were reported by Gour (2015).

Risk Orientation

To epitomize the result, it can be said that majority (81.20 %) of the women dairy farmers exhibited medium to high levels of risk orientation. The probable reason might be the medium extension contact and mass media exposure of the women dairy farmers. These findings are in line with the findings of Raina et al. (2016).

Credit Orientation

Table 1 points out that a substantial number (44.80 %) of the women dairy farmers had high level of credit orientation followed by 37.20 per cent of them had medium and 18.00 per cent of women dairy farmers had low level of credit orientation. From above data it can be concluded that 88.00 per cent of the women dairy farmers had high to medium level of credit orientation. This may be due to the availability of credit facilities for women dairy farmers in milk cooperative societies, village cooperative societies and banks. Similar findings were also reported by Sahu et al. (2017).

Innovativeness

Innovativeness is the degree to which an individual is relatively earlier in adopting new ideas than other members in the social system. The data given in table 1 indicates that majority (44.80 %) of the women dairy farmers had high level of innovativeness regarding dairy farming followed by 43.20 and 12.00 per cent of women dairy farmers had medium and low level of innovativeness, respectively. This finding is in accordance with findings of Gamit et al. (2015).

Table 1: Profile of Women Dairy Farmers

Sl. No.	Profile	Frequency (n = 250)	Percentage (%)
1	Age Young (Up to 35 years)	34	13.60
	Middle age (36 to 50 years)	180	72.00
	Old age (Above 50 years)	36	14.40
2	Education Illiterate	26	10.40
	Primary (1st to 7th std.)	50	20.00
	Secondary (8th to 10th std.)	103	41.20
	Higher secondary (11th to 12th std.)	59	23.60
	Graduate	12	04.80
3	Experience in dairy farming Low (Up to 10 years)	44	17.60
	Medium (between 11 to 20 years)	139	55.60
	High (above 20 years)	67	26.80
4	Size of family Small (Up to 4 members)	38	15.20
	Medium (5 to 8 members)	92	36.80
	Large (> 8 members)	120	48.00
5	Social participation No membership	12	04.80
	Membership in one organization	174	69.60
	Membership in more than one organization	62	24.80
	Holding position	02	00.80
6	Annual income Low (< `150000)	66	26.40
	Medium (`150000-300000)	148	59.20
	High (> `300000)	36	14.40
7	Occupation Animal husbandry alone	58	23.20
	Animal husbandry + agriculture	151	60.40
	Animal husbandry + agriculture + job	26	10.40
	Animal husbandry + agriculture + business	15	06.00
8	Herd size Small (5 to 14 dairy animals)	112	44.80
	Medium (15 to 30 dairy animals)	111	44.40
	Large (> 30 dairy animals)	27	10.80
9	Size of land holding Landless	44	17.60
	Marginal (Up to 1 ha.)	83	33.20
	Small (1 to 2 ha.)	74	29.60

	Medium (2 to 4 ha.)		21	08.40
	Large (> 4 ha.)		28	11.20
10	Mass media exposure	Low	59	23.60
	Medium		167	66.80
	High		24	09.60
11	Extension participation	Low	85	34.00
	Medium		133	53.20
	High		32	12.80
12	Scientific orientation	Low	59	23.60
	Medium		86	34.40
	High		105	42.00
13	Risk orientation	Low	47	18.80
	Medium		106	42.40
	High		97	38.80
14	Credit orientation	Low	45	18.00
	Medium		93	37.20
	High		112	44.80
15	Innovativeness	Low	30	12.00
	Medium		108	43.20
	High		112	44.80

IV. Conclusion

Dairy farming significantly contributed to the income generation of small and marginal farmers in Gujarat. The study revealed that the majority of women dairy farmers were middle-aged, had secondary-level education and possessed medium level of experience in dairy farming. They belonged to large families and were engaged in both animal husbandry and agriculture. Most had small-sized herds and belonged to the medium income category. Generally women dairy farmers sold the milk in co-operative society because of the well-established structure of dairy co-operative in the study area. Additionally, women dairy farmers in the region exhibited medium level of mass media exposure and extension participation, with high levels of scientific orientation, risk orientation, credit orientation, and innovativeness.

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