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Perception of farmers about dairy farming

¹Arnab Biswas, ²Aniket R. Deshpande, ³Rakesh Patel and ⁴SG Joshi

¹Assistant Professor, Department of Agriculture Extension & Communication, CPCA, SDAU, Gujarat, India

²Associate Professor, Department of Agriculture Extension & Communication, CPCA, SDAU, Gujarat, India

³Assistant Professor, DSW Office, SDAU, Gujarat, India

⁴Assistant Professor, College of Agriculture, SDAU, Gujarat, India

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Corresponding Author: Arnab Biswas

Abstract

The present study was conducted in Mehsana and Kachchh districts. A multistage random sampling design was adopted for data collection. From each district 150 respondents were randomly selected. Thus a total of 300 respondents were randomly selected for the study from these two districts. From the study it can be observed that most of the respondents were middle aged group followed by old age, 68.67 percent respondents of Mehsana district had higher secondary or above level education, where as in Kachchh it was somewhat low (44.66%) in the same group, most of the respondents of both the districts had medium size of herd, i.e. up to 10 animals, most of the respondents in Mehsana (65.33%) and Kachchh (58.00%) district had medium level of experience in dairy farming, most of the respondents from Mehsana (85.33%) and Kachchh (88.00%) districts had medium to high level of economic motivation, respondents from both the districts were mostly using input dealer as the source of information.

Most of the respondents had medium level of perception in both the district. In Mehsana district 85.33 percent of the respondents and in Kachchh district 88.00 percent of the respondents had medium to high level of perception which indicates a positive perception of the respondents towards dairy farming. By applying a Chi square test for homogeneity, we found that both the districts had homogenous perception regarding dairy farming.

Keywords: Perception, dairy, milk production, cattle

Introduction

The importance of dairy farming in India cannot be overlooked. India is the largest producer of milk in the world and the dairy farming provides opportunity of incremental income especially to the small and marginal farmers. The milk production of India has been increased to 198.4 million tonnes in 2019-20 from 239.3 million tonnes in 2024-25. There are more than 70 million rural household engaged in dairy farming in India. The strength of women in dairy has reached to the 75 per cent of the total work force. So dairy can also be an effective means for empowering the women farmers of the country. Gujarat ranks among the top five milk producing state in the country. Milk production in Gujarat during the year 2023-24 was 18.31 million tonnes and its share in country's milk production was 7.65 per cent. The successful case of Gujarat Cooperative Milk Marketing Federation resulted in quadrupling the income of dairy farmers in last seven years. But this largest milk cooperative found stagnation in the production of milk especially in Mehsana district on account of industrialisation and raising prosperity of urban area. The average milk procured by the union outside Gujarat stood at 9 lakh litres per day in June 2023 with over 8 lakh litres coming from Rajasthan and another 60000 litres from Haryana and Uttar Pradesh. Therefore, it is clearly understood that the milk production

in Mehsana district is decreasing since last decade. On the other hand, Kachchh district is known for its cattle population. Therefore, the study was designed to compare the perception of farmers about dairy farming in two different districts with following specific objectives:

1. To study the profile of the respondents
2. To know the perception of the farmers regarding dairy farming

Materials and Methods

For the present study Mehsana and Kachchh districts were selected. A multistage random sampling design was adopted for data collection. From Mehsana district 2 talukas were selected randomly. Five villages from each taluka and 15 farmers from each village were selected randomly. Thus 150 respondents were randomly selected from Mehsana district. In same way 2 talukas were randomly selected from Kachchh district and from each taluka five villages and from each village 15 farmers were randomly selected. Thus from Kachchh district also 150 respondents were selected and accordingly total 300 respondents were randomly selected for the study from these two districts. The data were collected with the help of well-structured interview schedule. The data collected were analysed in the light of the objectives for meaningful interpretation.

Results and Discussion

Selected characteristics of the farmers

The data regarding the age of the respondents are presented in table 1.

Table 1: Distribution of respondents according to their age ($n_1 = n_2 = 150$)

Category	Mehsana	Kachchh
Young (Up to 35 years)	28 (18.67)	37 (24.67)
Middle age (36 to 50 years)	83 (55.33)	68 (45.33)
Old age (Above 50 years)	39 (26.00)	45 (30.00)

(Data in parenthesis indicate percentage)

From the table it can be observed that most of the respondents from both the districts were middle aged *i.e.* 36 - 50 years of age. There are slightly more young farmers in Kachchh (24.67%) district as compared to Mehiana (18.67%), showing an interest of the youth for the dairy sector. There is a scope for the extension personnel to channelize this interest in appropriate manner so that they can sustain their livelihood through dairy farming. There were more than one fourth respondents from both the district in the old age group, in Mehiana it was 26.00 percent and in Kachchh it was 30.00 percent.

In case of education 68.67 percent respondents of Mehiana district had higher secondary or above level education, where as in Kachchh it was somewhat low (44.66%) in the

same group, indicating farmers of Mehiana district can understand higher level of abstraction and technicalities. The table indicates that special care must be taken when designing the extension message for the dairy farmers of Kachchh district, as there is slightly low level of education among the respondents.

Table 2: Distribution of respondents according to their education ($n_1 = n_2 = 150$)

Category	Mehsana	Kachchh
Illiterate	5 (3.33)	11 (7.33)
Can read and write	7 (4.67)	6 (4.00)
Primary (1 st to 8 th standard)	13 (8.67)	23 (15.33)
Secondary (9 th to 10 th standard)	22 (14.67)	43 (28.67)
Higher secondary (11 th to 12 th standard)	78 (52.00)	56 (37.33)
Graduation	21 (14.00)	8 (5.33)
Post graduation and above	4 (2.67)	3 (2.00)

(Data in parenthesis indicate percentage)

From Figure 1 it can be observed that most of the respondents of both the districts had medium size of herd, *i.e.* up to 10 animals. On the other hand, 28.00 percent of the respondents from Mehiana district and 26.00 percent of the respondents from Kachchh district had herd size up to 4 animals. In comparison of two districts, Kachchh district had higher proportion of respondents in large size herd category, indicating more conviction towards dairy farming.

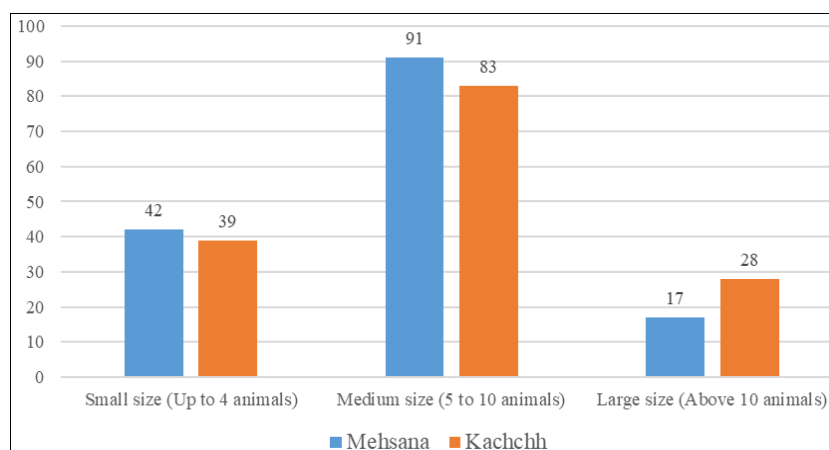


Fig 1: Distribution of respondents according to their herd size ($n_1 = n_2 = 150$)

From table 3 it can be observed that most of the respondents (84.00%) from Mehiana district had marginal to semi medium land holding. If we took a closer look of the table, we can find that respondent of Kachchh district had

comparatively larger holding than Mehiana district. The overall data of the table indicate that dairy farming is well satisfactory for the small and semi medium farmers.

Table 3: Distribution of respondents according to their land holding ($n_1 = n_2 = 150$)

Category	Mehsana	Kachchh
Marginal (Up to 1.00 ha)	24 (16.00)	15 (10.00)
Small (1.01 to 2.00 ha)	66 (44.00)	73 (48.67)
Semi- Medium (2.01 to 4.00 ha)	36 (24.00)	26 (17.33)
Medium (4.01 to 10.00 ha)	16 (10.67)	23 (15.33)
Large (above 10.00 ha)	8 (5.33)	13 (8.67)

(Data in parenthesis indicate percentage)

From the table below it can be concluded that most of the respondents in Mehiana (65.33%) and Kachchh (58.00%) district had medium level of experience in dairy farming.

Almost one fifth of the respondents from both the districts had 10 years of experience of dairy farming. There were 12.67 percent and 17.33 percent of respondent from

Mehsana and Kachchh district respectively in high level of experience group. From the above table it can be concluded that the respondent had quite good experience in managing dairy farm. There is sufficient proportion of respondent in both the districts who can guide the young dairy farmers, extension personnel can take this opportunity of using these informal resource persons.

Table 4: Distribution of respondents according to their experience in dairy farming ($n_1 = n_2 = 150$)

Category	Mehsana	Kachchh
Low (Up to 10 years)	33 (22.00)	37 (24.67)
Medium (11 to 23 years)	98 (65.33)	87 (58.00)
High (above 23 years)	19 (12.67)	26 (17.33)
Mean = 16.21 SD = 6.27		

(Data in parenthesis indicate percentage)

Table 5 represents the source of information used by the respondents for agricultural information. It is clear from the table that respondents from both the districts were mostly using input dealer as the source of information. The next most important source of information was internet and other social media. Considerable portion of the respondents from both the districts was using internet or social media as the source of information. Extension personnel can take this opportunity to reach out to the farmers. The government agencies such as KVKs and ATMA had average preference as source of information. This may be due to ease of

accessibility of the private dealers and internet than the government organisations. The other important sources of information for the respondents were Village Level Extension Workers, television and newspaper.

Table 5: Distribution of respondents according to their source of information ($n_1 = n_2 = 150$)

Source of information	Mehsana	Kachchh
Television	37 (24.67)	76 (50.67)
News paper	64 (42.67)	42 (28.00)
Agricultural Magazine	11 (7.33)	4 (2.67)
Village Level Extension Worker	83 (55.33)	53 (35.33)
Input dealer / Private company	143 (95.33)	138 (92.00)
KVK	97 (64.67)	54 (36.00)
ATMA	102 (68.00)	63 (42.00)
Internet or other social media	146 (97.33)	116 (77.33)

(Data in parenthesis indicate percentage)

It can be concluded from Figure 2 that most of the respondents from Mehsana (85.33%) and Kachchh (88.00%) districts had medium to high level of economic motivation. All the respondents were engaged in dairy but not only dairy alone, they were also engaged in agriculture to maximise their profit by diversify their investment, which indicate their economic motivation. The mean economic motivation of the respondents was 14.83 and the standard deviation was 4.35.

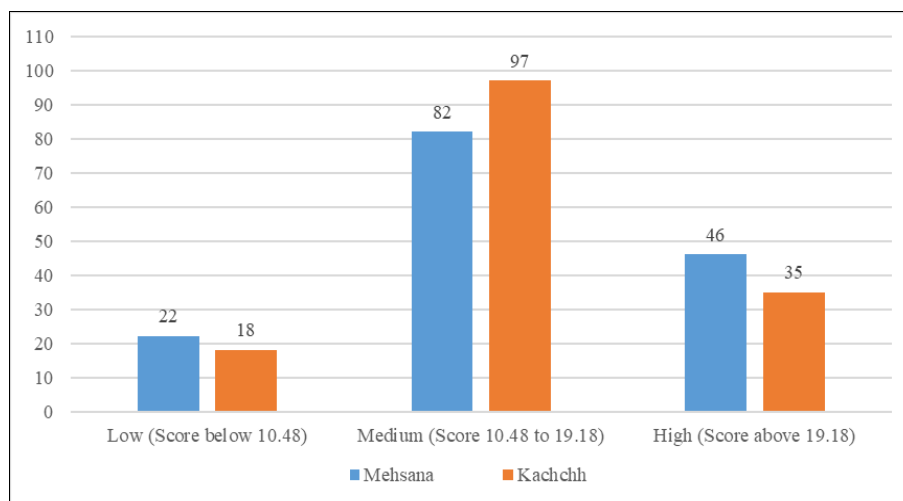


Fig. 2: Distribution of respondents according to their economic motivation ($n_1 = n_2 = 150$)

Perception of farmers regarding dairy farming

To measure the perception of the dairy farmers a scale developed by Shiroya (2014) was used with some modifications. The data in this regard are presented in table 6. It can be concluded from the table below that most of the respondents had medium level of perception in both the

district. In Mehsana district 85.33 percent of the respondents and in Kachchh district 88.00 percent of the respondents had medium to high level of perception which indicates a positive perception of the respondents towards dairy farming. This may be due to dairy farming produce additional gainful income to them with less uncertainty.

Table 6: Overall perception of the farmers regarding dairy farming ($n_1 = n_2 = 150$)

Category	Mehsana	Kachchh
Low (Score below 32.71)	22 (14.67)	18 (12.00)
Medium (Score 32.71 to 39.94)	96 (64.00)	102 (68.00)
High (Score above 39.94)	32 (21.33)	30 (20.00)
Mean = 36.47 SD = 3.76		

(Data in parenthesis indicate percentage)

When we applied a Chi square test for homogeneity, we found that both the districts had homogenous perception regarding dairy farming. As the calculated chi square value is less than the critical value at 2 degree of freedom so we can accept the null hypothesis that there is no difference in both the samples.

Chi square test result

Chi square value	0.646
df	2
CV	5.991

To assess the relation between the independent variables and the perception we used correlation coefficient. The result is presented in Table 7.

Table 7: Correlation between perception of dairy farmers and their selected characteristics

Sr. no.	Selected characteristic	Correlation coefficient (r)
1	Age	0.105 ^{NS}
2	Education	0.275*
3	Herd size	0.376*
4	Land holding	0.119 ^{NS}
5	Dairy farming experience	0.254*
6	Economic motivation	0.437**

**Significant at 1% level, * Significant at 5% level ^{NS}Non significant

Among the selected characteristics studied four variables were found significant with the perception of dairy farmers. These variables were economic motivation, herd size, education level and experience of the dairy farmers. The positive non-significant correlation of age (0.105) and land holding (0.119) observed in the present study may be attributed to the fact that these socio-economic variables definitely will not have any bearing on the perception of respondents. The highly significant positive correlation coefficient of economic motivation (0.437) and significant correlation of herd size (0.376), education level (0.275) and experience of the dairy farmers (0.254) with perception of dairy farmers may lead to conclusion that these socio-economic independent variables play a pivotal role in increasing the dependent variable.

Conclusion

From the study it can be concluded that most of the respondents were middle aged group followed by young age, had higher secondary level of education, low to medium level of farming experience, had small size of land holding and medium to high level of economic motivation. Farmers from both the districts had similar perception about dairy farming and it was of medium level. Four important variables were found significant with the perception and these four variables were economic motivation, herd size, education level and experience of the dairy farmers.

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