

RELATIONSHIP BETWEEN DAIRY FARMERS' CHARACTERISTICS AND THEIR ADOPTION OF CLEAN MILK PRACTICES

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ABSTRACT

Socio-personal characteristics of the respondents viz- age, education, farm experience, Size of family, herd size, land holding, annual income, extension participation, source of information, risk orientation, economic motivation was studied. A multistage, purposive and random sampling technique was selected for the study. The present investigation was carried out in North Gujarat. Three districts of North Gujarat viz., Banaskantha, Sabarkantha and Mehsana were purposively selected for the study. From each selected district, three talukas and two villages from each selected taluka were randomly selected for the study. Thus, eighteen villages were selected from the nine selected talukas. From each village, ten dairy farmers were randomly selected as respondents. Thus, total 180 respondents were selected for the study. The study aimed to understand the relationship between various independent variables and the extent of adoption of clean milk production practices among dairy farmers. The analysis revealed noteworthy relationships between independent variables and the extent of adoption. Education, extension participation, risk orientation, and economic motivation exhibited positive and highly significant associations with the adoption of clean milk production practices. Similarly, experience in dairy farming, herd size, annual income, and the source of information demonstrated positive and significant relationships with the extent of adoption. Conversely, the size of the family and landholding exhibited positive relationships with the extent of adoption, but these associations were non-significant. Age, on the other hand, displayed a negative and non-significant relationship with the extent of adoption, suggesting that older farmers were not significantly less likely to adopt clean milk production practices than their younger counterparts.

Keywords: socio-personal, constraints, suggestions, clean milk production, dairy farmers

INTRODUCTION

Dairy farming has been an important part of the agricultural scenario for thousands of years (Mahammad et al., 2022). India being a predominantly agrarian economy has about 70 per cent of its population living in villages, where livestock play a crucial role in the socio-economic life (Mahammad et al., 2021). Livestock provide high-quality foods such as milk, cheese, butter, ghee, etc. India is not only one of the top producers of milk in the world, but also the largest consumer of milk and milk products in the world. Due to the shortfall in supply, we have to import significant amounts of milk products to meet internal demand. Agriculture and animal husbandry have a symbiotic relationship, in which the agricultural sector provides feed and fodder for the livestock and animals provide milk, manure and draught power for various agricultural operations. Dairy sector is instrumental in bringing socio-economic transformation in India. It has created a lot of employment opportunities and also provides improved nutritional benefits. In clean milk production,

milking is the key operation on a dairy farm. Milking is an art requiring experience and skill. Milking should be conducted gently, quietly, quickly, cleanly and completely. Cleanliness of animal sheds, cleanliness of animals, cleanliness of milkers and milking pails, milking methods, transportation of milk from dairy farm to processing units are important operations to adopt by the dairy farmers.

The domestic milk production could be increased in terms of quantity and quality with adoption of Good Dairy Farming Practices (FAO, 2011). Milk quality is utmost important factor in dairying today due to consumer's awareness regarding "Quality". Although, India ranks first in milk production, quality of milk produced is not satisfactory due to lack of technical knowledge to the farmers (Ogale, 1999).

OBJECTIVES

(1) To ascertain the relationship between selected

characteristics of the dairy farmers and their adoption of clean milk production practices.

- (2) Constraints faced by the dairy farmers in adoption of CMP practices
- (3) Suggestions to overcome the constraints faced by the dairy farmers in adopting CMP practices

METHODOLOGY

The present study was carried out in North Gujarat. Out of six districts of North Gujarat, three districts were purposively selected. From each selected district, three talukas were selected randomly. Thus, total nine talukas were

selected from the three selected districts. Two villages from each selected taluka were randomly selected for the study. Thus, eighteen villages were selected from the nine selected talukas for the study. From each village ten dairy farmers were randomly selected as respondents for the study. Thus, total 180 respondents were selected for the study. Ex-Post-Facto research design was used in the present study (Kerlinger, 1976). The data were collected through pre-tested Gujarati interview schedule and investigator contacted all the data personally. The data were gathered, processed and analyzed to draw the meaningful conclusion. The statistical tools used for the analysis of the data were percentage, mean, standard deviation, correlation coefficient.

Relationship between selected characteristics of the dairy farmers and their adoption of clean milk production practices

Table 1 : Relationship between selected characteristics of the dairy farmers and their adoption of clean milk production practices (n=180)

Sr. No.	Independent variable	Correlation-Coefficient ('r' value)
X ₁	Age	-0.0396 ^{NS}
X ₂	Education	0.2000 ^{**}
X ₃	Experience in dairy farming	0.1634 [*]
X ₄	Size of family	0.1321 ^{NS}
X ₅	Herd size	0.1497 [*]
X ₆	Annual income	0.1492 [*]
X ₇	Land holding	0.0706 ^{NS}
X ₈	Extension participation	0.1996 ^{**}
X ₉	Source of information	0.1876 [*]
X ₁₀	Risk orientation	0.1967 ^{**}
X ₁₁	Economic motivation	0.1935 ^{**}

^{NS} = Non significance ^{*} = 5 % level of significance ^{**} = 1 % level of significance

Table 1 indicated that independent variables viz., education, extension participation, risk orientation, economic motivation had positive and highly significant relationship with extent of adoption of the clean milk production practices. While, experience in dairy farming, herd size, annual income, source of information had positive and significant relationship

with extent of adoption the clean milk production practices. Whereas, size of family and land holding had a positive and non-significant relationship with extent of adoption of the clean milk production practices. Only age had a negative and non-significant relationship with extent of adoption of the clean milk production practices.

Table 2 : Constraints faced by the dairy farmers in adoption of clean milk production practices (n= 180)

Sr. No.	Constraints	Frequency	Per cent	Rank
1	Lack of capital for pucca animal shed	110	61.11	II
2	Poor knowledge about CMP practices	69	38.33	VIII
3	Lack of necessary space for the separate milking area	75	41.66	VII
4	Poor knowledge about vaccination schedule	94	52.22	III
5	High cost of disinfectants, detergents and sprayers	89	49.44	IV
6	Lack of knowledge about the disease of teats udder	64	35.55	IX
7	Veterinary services are not available timely	86	47.77	V
8	Lack of incentives for production of clean and quality milk	113	62.77	I
9	Clean milk production practices increase workload	86	46.11	VI

The data presented in the Table 2 indicates that dairy farmers faced eight constraints in adoption of clean milk production practices. The constraints faced by majority of the dairy farmers in descending order of the importance were; lack of incentives for production of clean and quality milk (62.77 %), lack of capital for pucca animal shed (61.11 %), poor knowledge about vaccination schedule (52.22 %) and ranked first, second and third, respectively. The other constraints faced by considerable number of the dairy farmers

were; high cost of disinfectants, detergents and sprayers (49.44 %), veterinary services are not available timely (47.77 %), clean milk production practices increase workload (46.11 %), lack of necessary space for the separate milking area (41.66 %), poor knowledge about CMP practices (38.33 %), lack of knowledge about the disease of teats udder (35.55 %) and ranked fourth, fifth, sixth, seventh, eighth and ninth, respectively

Table 3 : Suggestions from the dairy farmers to overcome the constraints faced by the dairy farmers in adoption of clean milk production practices (n = 180)

Sr. No.	Suggestions	Frequency	Per cent	Rank
1	Subsidy should be provided for purchasing disinfectants and detergents required for clean milk production.	124	68.88	I
2	Training on clean milk production should be organized.	78	43.33	IV
3	Timely veterinary services should be made available in the village.	102	56.66	III
4	Training should be organized in the village for easy access.	69	38.33	V
5	Premium price for quality and milk should be given.	110	61.11	II

The data presented in the Table 3 indicates that dairy farmers have five suggestions in adoption of clean milk production practices. The suggestions by majority of the dairy farmers in descending order of the importance were; subsidy should be provided for purchasing disinfectants and detergents required for clean milk production (68.88 %), premium price for quality and milk should be given (61.11 %), timely veterinary services should be made available in the village (56.66 %) and ranked first, second and third, respectively. The other suggestions of the dairy farmers were; training on clean milk production should be organized (43.33 %), training should be organized in the village for easy access (38.33 %) and ranked fourth and fifth, respectively.

CONCLUSION

The adoption of clean milk production practices among dairy farmers reveals key demographic trends. The study investigated the correlation between various independent variables and the adoption of clean milk production practices among dairy farmers. Positive and highly significant associations were found between education, extension participation, risk orientation, and economic motivation, indicating their influential role in adoption. Additionally, experience in dairy farming, herd size, annual income, and information sources showed positive and significant relationships with adoption. While positive relationships were observed with family size and landholding, they were non-significant. Surprisingly, age exhibited a negative and non-significant relationship, challenging the notion that older farmers were less likely to adopt clean milk practices. These insights highlight key factors influencing adoption patterns, informing targeted interventions for promoting sustainable clean milk production practices.

CONFLICT OF INTEREST

All authors declare that they have no conflict of interest

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