Research Article

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Relationship between socio economic profiles of dairy farmers with extent of adoption of improved dairy farming practices in Kumaon division of Uttarakhand.

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ABSTRACT

Livestock sector contributes 4.11 per cent GDP. According to United States Department Agriculture 2018, 80 million households were engaged in dairy farming and majority of them are small scale, marginal farmers. The dairy farming has been considered as a potential means of employment and socio-economic development for people in rural areas. Uttarakhand trails behind from highest milk producing states due to less growth rate in milk production focused should be given to the improved dairy farming to increase milk production and development of dairy industry. The present study was conducted in Kumaon division of Uttarakhand state to find out the relationship between socio economic profile of dairy farmers with their extent of adoption of improved dairy farming practices. Udham Singh Nagar district was selected as for the study. Total 100 respondents from these villages were selected. It was resulted that respondents with higher education, higher land holdings, higher dairy farming experience, higher annual income, higher milk production higher social participation, higher risk preference and higher economic motivation tends to have more extent of adoption of improved dairy farming practices as they are found to have a significant and positive relationship with extent of adoption of dairy farming practices.
Keywords: Dairy farmers, Profit, Kumaon

INTRODUCTION

India is predominantly an agrarian country with animal husbandry playing role in accelerating the growth of rural economy. Thus, it is the backbone of agriculturally based farming sector. Dairying is well known to agricultural system and forms an integral part of rural economy (Shinde *et al*., 1996). Milk production in India is predominantly the domain of small farmers in mixed farming system. India has highest cattle and buffalo population and highest milk production of 105.42 million tonnes but still per animal productivity is very less in the country (19th livestock Census, 2012). In India, low animal productivity results due to climatic, social, economic factors; their per capita production is one of the lowest in the world due to the reasons that the farmers do not adopt the improved dairy management practices at the desired level (Sharma, 2004). Uttarakhand being the state with high number of dairy farmers still lag far behind the highest milk production states of the country. Hence, more focused should be given to the improved dairy farming practices and intervention of government policies and schemes to increase milk production and dairy development of the state. Impoved dairy farming practices plays an integral role in development of socio-economic profile of dairy farmers. Singha *et al*. (2020) revealed that education, farming experience and training received were found positively significant with their extent of adoption of improved dairy farming practices. Krishna and Chakravarthi (2020) revealed that age, education, family size, dairy experience organization participation, land holding was found positively related to adoption of dairy farming practices. The study focused to find out the relationship between socio economic profile of dairy farmers with their extent of adoption of improved dairy farming practices

MATERIALS AND METHODS

The study was conducted in Kumaon division of Uttarakhand. The study was purposively done in Udham Singh Nagar district of Kumaon division as it has highest milk production in this division. In Udham Singh Nagar district, Rudrapur and Sitarganj block were selected by random sampling. Two villages from each block were selected by simple random sampling. Bara and Khamaria village were selected from Rudrapur block and Siseya and Halduwa villages were selected from Sitarganj block. Total 100 respondents were taken purposively for the study. To find out the relationship between socio economic profile of dairy farmers with their extent of adoption of improved dairy farming practices correlation coefficient (r) and t- test were used.

RESULTS AND DISCUSSION

Age

The value of coefficient of correlation was 0.044 (r=0.044) and t calculated (0.435). The t calculated value was less than t tabulated value at 5.00 per cent level of significance and therefore the hypothesis Ho1 was accepted. This shows that there is positive and non-significant relationship between the age and extent of adoption. The results find parallel to the findings of Nande *et al.* (2019).

Education

The value of coefficient of correlation was 0.188 (r=0.188) and t calculated is 1.986. The t calculated value is more than t tabulated at 5.00 per cent level of significance and therefore the hypothesis Ho2 was rejected. This shows that there is positive and significant relationship between the education and extent of adoption. The results are in line with the findings of Singha *et al.* (2020)

Thus, it can be concluded that with more level of education there will be more extent of adoption of improved dairy farming practices. The significant relationship might be due to the reason that the respondents having higher educational level were able to learn and accept the improved practices easily.

Family size

The value of coefficient of correlation was -0.014 (r =0.014) and t calculated is -0.145. The t calculated value is less than t tabulated at 5.00 per cent level of significance and therefore the hypothesis Ho3 is accepted. This shows that there is negative and non-significant relationship between family size and extent of adoption. The results find contingency to the findings of Krishna and Chakravarthi *et al.* (2020).

Annual income

The value of coefficient of correlation is 0.291 (r=0.291) and t calculated is 3.030. The t calculated value is more than t tabulated at 5.00 per cent level of significance and therefore the hypothesis Ho4 is rejected. This shows that there is positive and significant relationship between annual income and extent of adoption. This might be due to the reason that with increase in annual income, dairy farmers can invest and afford more expenses related to improve dairy practices. The results find parallel to the findings of Bhise *et al.* (2018).

Land holding

The value of coefficient of correlation is 0.245 (r=0.245) and t calculated is 2.947. The t calculated value is more than t tabulated at 5.00 per cent level of significance and therefore the hypothesis Ho5 is rejected. This shows that there is positive and significant relationship between annual income and extent of adoption. The results are line with the findings of Satyanarayan *et al.* (2017)

Herd size

The value of coefficient correlation is 0.043 (r=0.043) and t calculated is 0.432. The t calculated value is less than t tabulated at 5.00 per cent level of significance and therefore the hypothesis Ho6 is accepted. This shows that there is positive and non-significant relationship between herd size and extent of adoption. It can be concluded that with increase in herd size farmer gets to adopt more practices that should be follow for better survival of their dairy animals and more milk production. The results find parallel to the findings of Harilal *et al.* (2018).

Dairy farming experience

The value of coefficient correlation is 0.191 (r=0.191) and t calculated value is 1.960. The t calculated is more than t tabulated at 5.00 per cent level of significance and therefore the hypothesis Ho7 there is a positive and significant relationship between dairy farming experience and extent of adoption. This is because of the fact that more experience would make them aware of the newly introduced practices that should be practice for proper management of the animals. The results find contigency with the findings of Ratnaparkhi *et al.* (2017).

Milk production

The value of coefficient of correlation is 0.185 (r=0.185) and t calculated is 1.873. The t calculated is more than t tabulated at 5.00 per cent level of significance and therefore Ho10 is rejected. This shows that there is a positive and significant relationship between milk production and extent of adoption. The results find parallel to the findings of Sachan *et al.* (2013).

Social participation

The value of coefficient of correlation is 0.330 (r=0.33) and t calculated is 3.464. The t calculated is more than t tabulated at 5.00 per cent level of significance and therefore the hypothesis Ho9 is rejected. This shows that there is a positive and significant relationship between social participation and extent of adoption. The reason behind such results might be that the dairy farmers will discuss and get knowledge about various new practices while participating more in their social groups. The results find parallel to the findings of Singhal and Vatta (2019).

Economic motivation

The value of coefficient of correlation is 0.314(r=0.314) and t calculated is 3.275. The t calculated is more than t tabulated at 5.00 per cent level of significance and therefore the hypothesis Ho11 is rejected. This shows that there is a positive and significant relationship between economic motivation and extent of adoption. It can be concluded that with higher economic motivation there will be more extent of adoption of improved dairy farming practices. The results are in line with the findings of Sarah *et al.* (2021).

Risk Preference

The value of coefficient of correlation is 0.222 (r=0.222) and t calculated is 2.885. The t calculated is more than t tabulated at 5.00 per cent level of significance and therefore the hypothesis Ho12 is rejected. This shows that there is a positive and significant relationship between risk preference and extent of adoption. It can be concluded from the results that higher the dairy farmers want to take risks in their occupation higher they would

adopt the advanced and improved practices. The results find parallel to the findings of Singha *et al*. (2020).

Table 1. Relationship between socio economic profile with their extent of adoption of improved dairy farming practices.

Independent variable	Correlation coefficient	t-calculated
Age	0.044	0.435
Education	0.188*	1.986
Land holding	0.245*	2.947
Family size	-0.014	0.145
Herd size	0.043	0.432
Dairy farming experience	0.191*	1.960
Milk production	0.185*	1.873
Annual income	0.291*	3.030
Social participation	0.330*	3.464
Risk preference	0.222*	2.885
Economic motivation	0.314*	3.275

*Significance at 0.05 level of probability; t value at 0.05 level of significance (df=99) =1.660

CONCLUSION

On the basis of above discussion, this can be concluded that respondents with higher education, higher land holdings, higher dairy farming experience, higher annual income, higher milk production higher social participation, higher risk preference and higher economic motivation tends to have more extent of adoption of improved dairy farming practices as they are found to have a significant and positive relationship with extent of adoption of dairy farming practices.

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