# Assessment of knowledge level of dairy farmers in Nagpur district and the co-relation between socio-economic variables with their training needs

A.P.Patil[1], S.H. Gawande[2], M.P.Nande[1] and M.R.Gobade[1]

Department of Veterinary and Animal Husbandry Extension
Nagpur Veterinary College, Nagpur-440006,
Maharashtra Agricultural and Fishery Science University (MAFSU)

**Abstract**

The present study was carried out to assess the knowledge level of dairy farmers in Nagpur district and to find the co-relation between the socio-economic variables and the training needs. This study was conducted in 15 villages from 3 talukas of Nagpur district by personally interviewing 225 dairy farmers. Here, majority of the respondents (55.11%) had medium level of knowledge followed by the respondents with high level of knowledge (24.00%) while some of the respondents (20.89%) had low level of knowledge. The study of co-relation between socio-economic variables of the respondents showed that variables like education (0.437), herd size (0.486), annual income (0.445), daily milk production (0.583), daily milk sale (0.486), social participation (0.500) and the knowledge (0.634) were significantly and positively co-related with the training needs. Whereas, variables like age (0.043), family size (0.103) and land holding (0.084) were found to be positively but non-significantly co-related with the training needs while, the caste (-0.093) was found to be negatively and non-significantly co-related with the training needs at 0.05% level of probability.

**Keywords:** Knowledge level, Co-relation, Socio-economic variables, Training needs

## Introduction

India is predominantly an agrarian economy, with more than 75% population in villages in depending upon agriculture, animal husbandry and allied activities for their livelihood. Among many livestock enterprises, dairying is the most ancient occupation established in the rural setting of our country. Dairying sector contributes significantly in generating employment opportunities and supplementing the income of small and marginal farmers and landless laborers of rural India, besides providing food security.

But at the same time, the rapid growth of milk production in India has been mainly because of the increase in the number of animals rather than that of improved productivity.

The low productivity of dairy animals is of great concern and average productivity of Indian cow is only 987 Kg/lactation as against the world average of 2038 Kg/lactation. The gradual breed deterioration generally occurs from negligence over centuries and consequent rise in the population of non-descript cows (80 %) and buffaloes (50%) along with the chronic shortage of feed and fodder coupled with their nutritive values and low fertility of our dairy animals has resulted in the low productivity. In India, low animal productivity results due to climatic, social and economical factors. India possesses enormous bovine wealth, but their per capita production is one of the lowest in the world due to reasons that the farmers do not adopt improved dairy management practices at the desired level.

Keeping the above problem in view, the present study was taken up to assess the knowledge level of dairy farmers in Nagpur district and finding the co-relation between socio-economic variables with with their training needs to make the training programme need based and problem oriented.

## Materials and Methods

**1. Locale of the study:** The present study was conducted in Nagpur district of Maharashtra state. Nagpur district is centrally located district in Vidarbha region, which is the eastern part of Maharashtra state.

**2. Methods of sampling:**

(a) Selection of villages: For the study, in all 15 villages i.e. five villages from each block i.e. Kalameshwar, Hingana and Nagpur were selected randomly.

1. M.V.Sc. scholars, 2. Head of The Department.

(b) Selection of the respondents:

For the present study in all, 225 dairy farmers were interviewed; wherein a dairy farmer with two or more than two dairy animals was considered as a respondent.

**3. Statistical methods used:** Frequency and percentage was used for the statistical assessment of the knowledge level as per the responses recorded by the dairy farmers. Statistical test such as Pearson's coefficient of co-relation was used tom find the co-relation between the variables.

Results and Discussion

It was found that majority of the respondents (55.11%) had medium level of knowledge followed by the respondents with high level of knowledge (24.00%) while some (20.89%) of the respondents have low level of knowledge. Majority of the respondents (51.11%) were having medium level of knowledge because of illiteracy, poor educational facilities and weakness of extension agency in imparting technical knowledge by organizing training programmes, seminars and camps in order to bring awareness in them.

It was also observed that majority of the respondents (96.89%) did not have any knowledge about the symptoms of brucellosis followed by 83.11% respondents who were ignorant about the vaccination schedule. Many respondents i.e. 82.67% did not know about heavy economic losses caused due to infectious diseases. Symptoms of diseases such as H.S., B.Q., FMD and mastitis were not known completely to 78.67%, 73.78%, 65.78% and 70.67% respondents respectively. These findings are supported by those of Reeja and Subhadra (2002). Important managemental operations such as use of insecticides and de-worming were not known to 76.00 %and 68.00 % respondents respectively.

The study revealed that majority of the respondents (78.67%) did not know the necessity for the separate housing of pregnant animal before 2 - 3 weeks prior to parturition. It might be because of lack of technical knowledge about the importance of housing and monetary constraints for constructing the animal house. Again most of the respondents (73.78 %) did not know the drying off animals before parturition. Also, 52.89 % of the respondents were unknown about steaming-up i.e. allowing extra concentrate ration in the last trimester of pregnancy.

As regards care and management of animal during parturition, it revealed that 57.33% of the respondents did not know about the treatment of dystokia i.e. about the condition and calling up for the veterinary aid in such condition. Whereas, 52.00 % respondents were unaware about the expulsion, time period and necessity of the expulsion of the placenta after parturition. Almost all of the respondents (100.00%) were unknown about the use of weak solution of Potassium Paramagnet prior and after milking. Instead, caster oil and other oils were in prevailing use instead of weak solution of Potassium Paramagnet prior and after milking .This might be because of lack of diffusion of technology in the rural areas. 85.78 % of the respondents were unaware about the regular check-up of milk sample for mastitis. This might be due to lack of technical knowledge about heavy economic losses due to mastitis. 78.22 % of the respondents did not know correct i.e. full hand method milking and instead they were using mostly the knuckling method for milking particularly the buffaloes.

The study shows that majority of the respondents (76.89%) were unaware about cutting the naval cord and application of Tincture iodine to it. Most of the respondents (43.56%) did not know about colostrums feeding and its importance for the new born calf.

It was revealed that majority of the respondents (70.67%) did not know the proper timing for A.I. So, might be in most of the cases because of improper timing for A.I., conception doesn't occur and thus farmers lose their faith in A.I. 68.00% of the respondents were unknown about the advantages of artificial insemination while 60.89% of the respondents were unknown about the advantages of Pregnancy diagnosis and 29.33% of the respondents do not know symptoms of heat.

Majority of the respondents (97.33%) did not know the urea treatment over the feed, while 65.77% of the respondents did not know about the methods of feed conservation whereas 62.67% of the respondents were unaware of providing balanced ration to the milking animals. Cultivation of fodder was not known to 37.33% of the dairy farmers interviewed. This might be due to lack of knowledge about the methods of conservation of feed, urea treatment over the feed to enhance its nutritive value and likewise feeding management practices particularly during summer and in scarcity.

As regards the knowledge level about clean milk production, majority of the respondents (81.78%) did not know that the milker should be healthy and free from bad habits. This might be because of their ignorance about their personal health and spread of zoonotic diseases through humanly infection via milk.

**Relationship of personal and socio-economic characteristics of dairy farmers with training needs:**

It was assumed that, training need is the function of personal and socio-economic characteristics. So, correlation coefficient was administered to test this

assumption. The results are presented as:

| Sr. | Independent variable | 'r' value |
|---|---|---|
| 1. | Age | 0.043$^{NS}$ |
| 2. | Caste | - 0.093$^{NS}$ |
| 3. | Education | 0.437** |
| 4. | Family size | 0.103$^{NS}$ |
| 5. | Land holding | 0.084$^{NS}$ |
| 6. | Herd size | 0.486** |
| 7. | Annual income | 0.445** |
| 8. | Daily milk production | 0.583** |
| 9. | Daily milk sale | 0.486** |
| 10. | Social participation | 0.500** |
| 11. | Socio-economic status | 0.391** |
| 12. | Knowledge | 0.634** |

NS - Non Significant
* Significant at 0.05 level of probability
** Significant at 0.01 level of probability

Age of the respondent was not found to be significantly related with training needs of dairy farmers. The possible reason might be that, training need could be felt important depending upon the situation, need and knowledge of the respondent and not mostly upon the age. It was observed that, there is negative and non-significant relationship between caste and training need of the dairy farmers. It was noticed that, there is positive and significant relationship between education and training needs of the dairy farmers. It might be because education imparts knowledge and creates awareness and curiosity to learn skills and newer things. These observations are in line with those of Jondhale and Chole (1989). With respect to land holding, it was observed that there is a positive and non-significant association between the training needs.

Herd size, Annual income, daily milk production and daily milk sale were found to have a positive and significant relationship with training needs. Social participation was found to be positively and significantly associated with training needs of the farmers. Probable reason may be that, social participation brings awareness among the farmers. These findings are in line with those of Ingole (1990) and Gaikwad (2003). Socio-economic status was found to be positively and significantly associated with training needs of the dairy farmers. Higher socio-economic status implies more social participation and annual income which tends them to be attentive for training programmes. Knowledge was found to have a positive and significant association with training needs of the dairy farmers. It suggests that, knowledge creates awareness and change in the attitude to sharpen the skills through training programmes.

## Conclusion

1. As regards to knowledge, majority of the respondents were having medium level of knowledge.
2. Training needs were significantly and positively correlated with education, herd size, annual income, daily milk production, daily milk sale, social participation, socio-economic status and knowledge at 0.05% level of probability.
3. However, age, caste, family size and land holding were found to be positively but non-significantly associated with training needs at 0.05 % level of probability.

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