



Use of Indigenous Technical Knowledge by Dairy Farmers of Jammu Region *vis-a-vis* Animal Husbandry Practices

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ABSTRACT

The present study was undertaken in Jammu, Samba and Kathua districts of Jammu and Kashmir to categorize and prioritize different factors influencing the application of Indigenous Technical Knowledge (ITKs) by dairy farmers in animal husbandry practices. 150 dairy farmers from three districts of Jammu division (Jammu, Samba and Kathua) were chosen as respondents who had a minimum of one milch animal and also practicing ITKs during the period of this study. The results of this research study revealed that, locally available medicinal plants were the main factor followed by the dairy farmers with perceived knowledge of ITK. Along with this lack of door-step availability of veterinary services coupled with their high cost was perceived as the third most important factor that determined the utilization of ITKs by the dairy farmers in maintaining animal health and productivity. Localized and plentiful availability of indigenous plants, familiarity and confidence concerning ITK were the main reasons that determine the use of ITKs by the dairy farmers. Different rationale behind embracing of ITKs may be owing to the fact that it is part of their way of life, behavior and long-established standards and can be performed using available resources.

HIGHLIGHTS

- Livestock owners should be acquainted with scientific management practices through appropriated training programmes.
- *Locally and easy availability of medicinal plants* was the most important factor for adoption of indigenous technical knowledge.
- Different stakeholders must work to preserve herbs and provide necessary facilities to the farmers to cultivate these species.

Keywords: Dairy farmers, ITK, Animal health, Management practices

Animal husbandry and dairying continues to be an integral part of mankind since the process of civilization has started. The animal husbandry sector plays an important role in the country. There is a long tradition of rearing dairy animals by the farmers in the state of Jammu & Kashmir. Large number of landless families are also engaged in dairy animal rearing and it has ensured livelihood security to them. Dairy management training provides a systematic improvement of knowledge and skills which in turn helps the trainees to function effectively and efficiently. So, effective training requires a clear picture of how the trainees will need to use information and technology after

training in place of such local practices what they have adopted before in their situation (Sharma *et al.*, 2017). Sharma *et al.* (2021) reported that the major problems of the small dairy farmers were management while for semi commercial and commercial farmers mastitis was the major problem. Similarly, Sharma (2012^a and 2012^b) observed that poor knowledge about the nutritive value of

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feed ingredients (86.5%), high cost of raw feed ingredients (28%), shortage of skilled and committed labour (32.5%) were found to be major bottlenecks at the dairy farm. Further, Sharma *et al.* (2020) showed that for making the dairy farming a profitable market, farmers must follow the recommendations of the research institutes and take maximum care so that productivity as well as profitability can be sustained.

Indigenous Technical Knowledge evolved from the experiences of farmers found to possess practical utility in solving some of the farmer's problems under their own conditions. Our nation has prosperous heritage of traditional health control and treatment systems (Ayurvedic, Unani and Homeopathic) that have been used for animals since time immemorial. These practices have been percolating from one generation down to the next by verbal transmission and considered to be the holistic approach for livestock management. Veterinary care reaches to just about 20% of livestock owners (Nair, 2005). The absence of adequate allopathic conventional health care systems forces remote communities throughout the world to rely on traditional medicines for their primary health care (WHO, 2002) and veterinary care (Schillhorn, 1997; Martin *et al.*, 2001; Ponnusamy *et al.*, 2009). The indigenous practices are cost effective and are also socially compatible and generally comprise of easily available local flora/ingredients (Das and Tripathi, 2009). The indigenous practices in the Jammu, Samba and Kathua district are a part of animal care. So, an attempt has been made to prioritize those factors which determine the use of ITKs by the dairy farmers regarding animal husbandry practices in these districts of J&K.

MATERIALS AND METHODS

The present study was conducted in Jammu, Samba and Kathua district of the J&K. Through simple random sampling technique, 150 dairy farmers were selected as respondents rearing at least one milch animal and those practicing ITKs. Quantitative research method such as Garret Ranking Technique was used for factors that determine the use of ITKs. For the purpose of identifying and prioritizing the factors semi-structured pretested interview schedule was used. The respondents were asked to rank each of the factors relevant to them according to

the degree of importance. The prioritization of factors was done by means of Garret Ranking Technique.

The formula for percent position as suggested by Garret (1981) is:

$$\text{Percent position} = \frac{100(R + 0.5)}{N}$$

Where R is the rank of the individual item in the series and N is the number of individual items ranked.

RESULTS AND DISCUSSION

The dairy farmers professed *locally and availability of medicinal plants* as the first with a mean score of 73.55 (Table 1) as the central factor, influential to the use of ITK by the farmer's in maintaining health of the dairy animals. Native plants in the study area were locally and easily available. This data shows that ITK was easily available to the dairy farmers in local flora and fauna of the village or with the local practitioners. The second significant professed factor, with a mean score of 71.40 (Table 1), was *farmers having deep knowledge of ITK*. Dairy farmers of the study area had deep knowledge about various indigenous practices *vis-à-vis* areas of breeding, feeding and health care management. Along with this knowledge, farmers quite a confidence on ITK to treat their animals. *Distant location of Veterinary hospital/dispensaries and non availability and high cost of Veterinary medicines* was professed as the third significant factor with a mean score of 68.72 (Table 1). There were no Veterinary dispensaries in the villages in which this work was undertaken except a couple of villages where only one Veterinary sub-centre/dispensary is present and that also was having insufficient facilities. Almost all veterinary care facilities were at a distance of more than 4-5 km away from the villages which allowed the farmers with the option of practicing indigenous practices for the treatment of their animals. This coupled with socio-economic status of the dairy farmers, who are mostly resource poor, along with soaring cost of veterinary drugs discourages them from using such drugs for treatment of their animals. *Lesser side effects of ITK* was perceived as the fourth important factor with a mean score of 58.34. *ITK is farmer oriented and evolved by the farmers* was perceived as the fifth important factor with a mean score of 56.36. As per farmers, the sixth

Table 1: Ranking of factors that determine the use of ITK by dairy farmers

Factors	Mean Score	Rank
Locally and easily availability of medicinal plants	73.55	I
Farmers having deep knowledge of ITK	71.40	II
Distant location of Veterinary hospital and non availability and highcost of Veterinary medicines	68.72	III
Lesser side effects	58.34	IV
ITK is farmer oriented and evolved by the farmer's	56.35	V
ITKs are often cheaper i.e., cost-effective	49.32	VI
Lack of faith in modern medicine	48.75	VII
ITK is compatible with local situation and easy to adopt	45.90	VIII
ITK is less dependent on the use of external inputs	32.78	IX
Lack of linkages and coordination among the various agencies	25.42	X

important perceived factor was *Cost-effectiveness* with a mean score of 49.32.

Further, according to the respondents *lack of faith in modern medicine* was the seventh important constraint with a mean score of 48.75. *Easy adoption and compatible with local situation* 45.90, *less dependent on the use of external inputs* 32.78 and *lack of linkages and coordination among the various agencies* 25.42 were perceived as other factors that determine the use of ITKs by the dairy farmers (Table 1). The reason for easy adoption and compatibility may be due to the fact that the ITK used by dairy farmers suits their convenience, habits, beliefs and traditional values and can be performed using available resources.

Moreover, respondent dairy farmers had graded ITK as cost-effective which may be attributed to the fact that all the ingredients used were available in their surroundings or in village itself and further such preparations were prepared by a group of villagers in a large quantity so that they may provide it to a large number of animals at the similar time. Most of the dairy farmers were low on confidence *vis-a-vis* modern veterinary medicine which may be attributed to the fact that experimental evidences performed through generations have led to development of an insight, an attitude or a statement of reasons which made the farmers to trust ITK more than veterinary medicine in treating their animals. Further, ITK is less dependent on the use of external inputs as all the ingredients used in ITK were either available with the farmers or locally available.

CONCLUSION

It can be concluded that *locally and easily availability of medicinal plants* was the most important perceived factor for adoption of indigenous technical knowledge by the dairy farmers for treatment of their animals followed by *deep knowledge of the farmers regarding ITKs*. Since the most important factor was found as locally and easily availability of medicinal plants, therefore, government and non-governmental organizations must work to preserve herbs and provide necessary facilities to the farmers to cultivate these species. Further, the livestock owners should be acquainted with improved management practices through appropriated training programmes to obtain better output from their livestock along with access to latest veterinary treatment at door steps. Along with this, they must also provide some monetary benefits to the traditional medicine practitioners, so that we may conserve these rich traditions of animal care for our future generations, which may be research upon for their scientific validation.

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