

Constraints in the Adoption of Ethnoveterinary Practices for Dairy Cattle Disease Management in the Villupuram District of Tamilnadu

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ABSTRACT

Health care management of the domesticated animals through traditional practices has a long ancient tradition in India. Due to ongoing modernization, this traditional knowledge on health care of domesticated animals is rapidly being lost from the traditional societies. Hence, this study was planned to identify the present constraints faced by the rural livestock farmers in the adoption of ethno-veterinary practices for dairy cattle disease management. Villupuram District of Tamil Nadu was randomly selected for the present study. Multistage random sampling technique was used to select the respondents. Data was collected by a well structured questionnaire from individual farmers. Garrett's ranking technique was used to give ranking for the constraints. Unavailability of ready made herbal preparations was the most important constraint reported by the livestock farmers in the adoption of ethnoveterinary solutions for dairy cow disease management. Lack of raw materials/herbal plants especially seasonal herbs was ranked second important constraint. Slow effect of herbal medicines, preparation of recipe time consuming, lack of awareness of medicinal value of plants, lack of traditional remedies for newly emerging diseases, dearth of availability of documentation of the traditional system were some of the other constraints ranked by the livestock farmers.

Key Words: Ethnoveterinary practice, constraints, Garrett's ranking technique

INTRODUCTION

Livestock in general and dairying in particular play a major role in the Indian rural economy. The importance of dairying in India hardly needs emphasizing as this sector is the major source of income for an estimated 27.6 million people (Subbarama Naidu and Kondaiah, 2004). Lack of proper health management and lack of timely approach in getting veterinary aid incurs a heavy economic loss to the farmers owing to the disease outbreak. Ethnoveterinary medicine is a broad field encompassing people's beliefs, skills, knowledge and practices related to veterinary health care. Medicinal plants traditionally used in the treatment of animal diseases play a crucial role in local health modalities. Ethnoveterinary knowledge is highly significant for persistence of traditional community-based approaches to veterinary care. This is of particular importance in the context of developing and emerging countries, where animal health (that of livestock, especially) is crucial to local economies and food security (Abbasi et al., 2013). Ethnoveterinary medicine deals with people's knowledge, skills, methods, practices and beliefs about the care of their animals (McCorkle, 1986).

Knowledge on the medicinal uses of biological resources is not only restricted to human beings; but also extended to the health care of their domesticated animals (Lans et al., 2006; Ullah et al., 2015). Health care

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management of the domesticated animals through traditional practices has a long ancient tradition and till date, it is surviving in some traditional societies in different parts of the world. Due to ongoing modernization, this traditional knowledge on health care of domesticated animals is rapidly being lost from the traditional societies. Understanding this alarming situation, researchers from every corner of the world have been documenting this herbal glory and related knowledge to save it from its immediate extinction (Ahmad et al., 2015). Hence, this study was planned to identify the present constraints faced by the rural livestock farmers in the adoption of ethno-veterinary practices for dairy cattle disease management.

METHODOLOGY

Villupuram District of Tamil Nadu was randomly selected for the present study. Multistage random sampling technique was used to select the herds. The selected district comprised 22 blocks of which, two blocks, viz., Kallakurichi and Thiyagadurgam were randomly selected. In the next stage, two villages from each selected block were chosen randomly. In total, 120 farmers, 60 each from two blocks were randomly chosen to collect the data. The study was taken up during the months of April and May, 2016 and the data collected from the sample units related to the year 2015-2016. Relevant data were collected from the chosen respondents through personal interview using a pre-tested interview schedule. Cross checks were made to minimise the errors due to recall bias and also to ensure reliability of the information provided by the respondents.

Data was collected by a well structured questionnaire from individual farmers. Garrett's ranking technique was used to give ranking for the constraints. Garrett's formula for converting ranks into percent is as follows (John Christy, 2014) :

$$\text{Percent Position} = 100(R_{ij} - 0.50)$$

$$\text{where } \frac{R_{ij} - 0.50}{N_j} = \frac{\text{Rank given for the 'i'th item by the 'j'th respondent} - 0.50}{\text{Number of items ranked by the 'j'th respondent}}$$

The percent position of each rank was converted into scores referring to the table of Garret . For each factors, the scores of individual respondents were added together and divided by the total number of the respondents for whom scores were added. These mean scores for all the factors were arranged in the descending order and the most influencing constraint faced by the farmers were identified through the ranks assigned. The advantage of using Garrett's technique over simple frequency distribution is that the constraints are arranged based on the point of view from the respondents (Table I).

Key constraints identified in the adoption of ethno-veterinary practices for dairy cattle disease management are listed below with their rank.

Table -1

Constraints	Garrett's Mean Score	Rank
Unavailability of ready made herbal preparations	74.17	I
Lack of raw materials/herbal plants especially seasonal herbs	63.42	II
Duration of treatment/slow effect of herbal medicines	61.21	III
Preparation of recipe is time consuming	56.70	IV
Lack of awareness	44.56	V
Lack of traditional remedies for newly emerging diseases	42.59	VI
Lack of/ non availability of documentation of the traditional system	31.73	VII
Lack of transfer of knowledge within the family and to the community by the local healers	24.52	VIII
Educated family members discouraging the adoption of traditional system	22.19	IX
Easily available allopathic medicines	12.01	X

Unavailability of ready made herbal preparations was the most important constraint reported by the livestock farmers in the adoption of ethnoveterinary solutions for dairy cow disease management though freshly prepared herbal preparations said to have good effect than the ready made preparations because certain phytochemical constituents become volatile when prepared and stored for a long time. Lack of raw

materials/herbal plants especially seasonal herbs was ranked second important constraint as increasing deforestation leads to high risk of extinction of many plant species of medicinal value. Slow effect of herbal medicines, preparation of recipe time consuming, lack of awareness of medicinal value of plants, lack of traditional remedies for newly emerging diseases, dearth of availability of documentation of the traditional system were some of the other constraints ranked by the livestock farmers. These findings are in line with studies carried out by Samal (2004), Adedeji et al., (2013) and Rakesh et al., (2015).

Conclusion

In view of the above findings of this study it can be concluded that livestock farmers facing several constraints while using ethnoveterinary practices for dairy cattle disease management. The planners and policymakers aiming sustainable rural development through livestock farming should make steps to alleviate or neutralize constraints identified such as dispensation of readymade herbal mixtures for curing different livestock diseases, comprehensive analysis and documentation of indigenous knowledge of curing animal ailments and to take urgent steps to protect rare medicinal wild species of plants.

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