Ethnoveterinary medicine in 21st century

S. Ramkumar and S.V.N. Rao

All veterinarians would have definitely felt the difference in approach towards indigenous practices and medicines in livestock rearing over years. Not many years ago we strongly adhered to and advocated modern methods of treatment as were taught to us. Then came a stage in which we did not blame farmers for the indigenous practices they followed but strongly resorted to modern prescriptions and stood by that. Now here is a stage in which we are to observe and understand Indigenous Technical Knowledge (ITK) practised by farmers, learn the efficacy of these and even promote the judicial use of Ethno Veterinary Medicines (EVM). This satisfies the poor livestock farmers, who are in majority in our country, on the cure, cost and cultural dimensions.

This paper outlines the concept of EVM in general from the veterinarians perspective. The simple idea is to prepare ourselves for a reversal of role from advocates of modern medicines to acceptors of EVM.

The farmers are in a constant process of analysing, choosing, experimenting and adapting technologies or practices (Chambers 1994). They are engaged in these activities within a Complex, Diversified and Risk prone farming (CDR). Within the CDR agriculture the farmers themselves are continuously experimenting and adapting the information and technology in their local conditions (Ramkumar, 1998). This adaptation, in addition to various other factors utilises the farmers' traditional knowledge also.

Indigenous knowledge is local knowledge which is unique to a given culture or society. It is quite different from the knowledge generated by Universities, research institutions and private firms. Indigenous knowledge is the basis for local-level decision-making in animal husbandry, agriculture, health care and various other activities in rural communities.

Indigenous Technical Knowledge (ITK) of late has attracted the attention of the researchers and development personnel in view of the fact that many technologies evolved by the researchers when used as such failed to address the problems experienced especially by the resource poor farmers. There is a growing realization that science and technology are not culturally neutral and modernization is not synonymous with westernization (Nair et. al, 1998)

Ethno Veterinary Medicine (EVM) includes the indigenous beliefs, knowledge, skills, methods, and practices pertaining to the health care of ani,als (Warren, 1991). The experiences gained by the farmers through various trial and errors and passed over generations forms the basis of EVM.

The following table gives a comparison on the various characteristics of EVM with the Modern Veterinary Practice.

(Contd.. Page 14)

Dr Ramkumar, Associate Professor, Dept. of Veterinary and Animal Husbandry Extension, Rajiv Gandhi College of Veterinary and Animal Sciences, Pondicherry

Dr S V N Rao, Professor and Head, Dept. of Veterinary and Animal Husbandry Extension, Rajiv Gandhi College of Veterinary and Animal Sciences, Pondicherry

(Cont. from Page 12)

progesterone acetate in the dog. *Endocrinology*, **99:** 108-113

14. Salmeri, K.R. *et al.* (1991). Elective gonadectomy in dogs: A review. JAVMA. **198**(7): 1183

15. Seaman, W.J. (1993). Canine ovarian fibroma associated with prolonged exposure to mibolerone. *Toxicol. Pathol.* **13**(3): 177

16. Sokolowski, J.H. and Kasson, C.W. (1978). Effects of mibolerone on conception, pregnancy, parturition, and offspring in the beagle. *Amer. J. Vet. Res.* **39**: 837-839

17. Sokolowski, J.H. *et al.* (1968). Exogenous hormone therapy to control the oestrous cycle of the bitch. JAVMA. **153**: 425-428

19. Van Os, J.L. and Oldenkamp, E.P. (1978). oestrus control in bitches with proligestone, a new progestational steroid. *j. Small Anim. Pract.* **19**: 521-529

19. Zimbelman, R.G. and Lauderdale, J.W. (1973). Failure of prepartum or neonatal steroid injections to cause infertility in heifers, gilts, and bitches. *Biol. Reprod.* **8**: 388-391

❑

Table 1. Comparison of EVM with the Modern Veterinary Practice

ETHNO VETERINARY MEDICINE	MODERN VETERINARY PRACTICE
Farmer oriented and evolved by farmers	Science oriented, developed by researchers
Passed on from generation to generation or farmer to farmer	Communicated from researchers to veterinarians
Compatible with the local situation, low dependency on external inputs	May or may not be compatible with local situation, more dependency on external inputs
Environment friendly	May be harmful to the environment
Not well documented	Well documented
Takes more time to show effects	Quicker results
Considered as unscientific and primitive	Considered as modern irrespective of their relevance to the social system
Specific to local situation since dependent on locally available inputs	General recommendations

Many of the ethnoveterinary medical practices and medicines are time tested, cost effective, readily available, location specific and are environment friendly-making the poor livestock farmers dependable on them.

There are various steps involved in refinement of EVM. The important ones will be:

1. Documentation of available technologies

As mentioned earlier there are various practices and medicines that are location and community specific. With wide variations in the agricultural crops, plants and herbs and the varying knowledge of the diversified communities one could expect a large quantum of information in this area. Many of these are ignored, some are dismissed as being primitive and unscientific. Unless these are collected and documented there is a chance of losing this vital information. Farmer participatory discussions initiated by the local veterinarians can be of much use in this context, there are few magazines like"The Honey Bee" published in Ahmedabad which carry information on the indigenous practices followed by the livestock owners in India.

2. Understanding ITK and its validation.

The veterinarian observes various cases and recommends EVM from his perception. The veterinarian is very often put into a confusing situation in choosing between the stock knowledge received from the College and the ITK gained through experience in solving the problems faced in the field. This is more so when the clients are poor livestock owners and majority of them are small herd owners who prefer to keep the expenditure on treatment to the minimum. In such circumstances he may have to compromise effectiveness for the sake of economy.

The veterinarians are in a paradox of whether to accept the EVM practices which are to be validated or opt for the modern medicines which are authenticated by formal research. It is here the veterinarians have to have an efficient information network.

The veterinarians need to understand the logic and rationale underlying the EVM. This is the first step of screening the practices

which seem to be of non sense, crude and unscientific. The proponents of EVM are of the view that the indigenous practices are time tested and there is no need to subject them for scientific validation. However, validation is necessary to give enough confidence for the veterinarians to practice it in the field. It is not possible to validate all the available ethno

veterinary medical practices. The scientific validity of the practices could be done on a three point validity continuum: valid, can't say, not valid (De, and Rao, 1994).

3. Categorization of ITK

The available ethnoveterinary medical practices observed around could be conveniently grouped into five categories on the basis of scientific validity as well as the number of farmers adopting or using the practices. These could be mapped on a grid. (see figure)

	High adoption	High Validity	
9,1	Low validity	High adoption	9,9
	Low validity	Low adoption	
1,1	Low adoption	High validity	1,9

Fig: Categorization of practices

The Scientific validity and adoption are marked from a minimum of 1 to a maximum of 9. Practices grouped in cell 1, 1 are low in adoption and in scientific validity and hence do not call in for urgent attention, unless there is some justification.

It is useful to start experimentation with the practices and medicines which are in cell 9,1. These are the ones that farmers adopt widely but yet to be scientifically validated. Reasons for low adoption are to be probed into the practices in cell 1,9. These might be the ones that require modification to suit the local conditions if all other situational factors are not to be blamed for poor adoption.

In Kerala the Veterinarian with the help of the local body could organize farmers meetings at the Gram Panchayat level, coordinating various livestock development agencies (like the Milk Co-operative Society) in which the prospects of various ethnoveterinary medical practices could be discussed. This will help in identifying practices and arranging them in the utility grid based on adoption and validity.

4. Conducting on-farm research

Once the useful practices are identified and selected, the veterinarians could initiate activities to observe and study the effect of these in the field conditions. This will help the researchers, veterinarians and extensionists to have the opportunity to incorporate the knowledge, experience and modifications of farmers in the development of suitable practices. Moreover farmers have an opportunity to evaluate the EVM within their own production systems.

5. Transfer of information

The veterinarians have to have an efficient network of information transfer to build up confidence in propagating the inclusion of valid ethnoveterinary medical practices in the modern practices. The decentralised democratic set up in Kerala favours such an organizational set up for information transfer. The veterinarians in a district could get together to discuss and debate the various practices they come across at Gram panchayats. Popular practices could be send to formal research stations for validation, in addition to on-farm trials by the veterinarians. This interaction could generate a wealth of knowledge on EVM.

A veterinary graduate passing out of the College is at present not exposed to the concept of 'accepting what the farmers are doing' and 'learning from farmers'. The stock knowledge that (s) he receives from five years

4.MRUGAYURVEDA, INDIAN ANIMAL SCIENCE< parts 1 and 2 by K Vijayalakshmi and K M Shyamsunder,LPSS Monographs No.13 & 14,Published by Lok Swasthya Parampara Samvardhan Samithi,C/O Centre for Indian Knowledge Systems, No.2,25 East Street,Thiruvanmiyur,Chennai 600041 gives useful reviews of indigenous thoughts in Animal Science

of intensive training does not include something that provides him/her confidence to accept more than what (s) he learns in the formal system. Practically (s) he faces the question of whether it is right or wrong to preach for farmers' knowledge.

Towards the 21st century

The concept of accommodating EVM with the modern veterinary practice gained importance in the mid eighties. We are moving towards the next century when increasingly ethnoveterinary practices are widely accepted globally as complementary to the existing modern practices. In Kerala majority of the farmers has taken up livestock keeping as a subsidiary occupation. For the increasing number of poor farmers cost effective treatment will be of priority in the coming years.

There should be proper facilities for the documentation and testing of all the EVM in use. Scientifically it is essential to know the drug activity of all EVM and its efficacy in treatment of diseases or conditions. Serious thinking need to be done on incorporating the concept of EVM in the BVSc and AH curriculum.

At present the diverse nature, non-documentation and lack of validity of EVM inhibits its scope of inclusion in modern veterinary medicine. It is the experience and initiative of the farmers and veterinarians and prompt validation by the research that could facilitate the smooth incorporation of these practices and medicines along with the modern medicine.

All of us are aware that there is no system of medicine that is a panacea for all the ailments and diseases. EVM may provide low cost solutions to some of the health problems especially in the rural areas. The ultimate aim shall be to identify and refine such of those indigenous practices and methods which are effective in treatment of animals.

Our idea is neither to denounce modern medicine nor to outrightly advocate EVM as an alternative to treat the animals; it is to request the fellow veterinarians to give a fair trial to EVM which needs to be preserved before it is lost. The veterinarians being very close to the livestock owners can certainly help sustain EVM by collecting the farmers' wisdom, experimenting with it and sharing the experiences with his her fellow veterinarians. By doing so over a period of time it is possible to come out with appropriate prescriptions of indigenous medicines for treatment of diseases.

REFERENCES

Chambers, R. (1994) Challenging the professions; frontiers for rural development. London: Intermediate Technology Publications

De, H.K and Rao, S.V.N. (1994) Indigenous Feeding Practices-Farmers Beliefs and Scientists Rationale. Paper presented at National Symposium on Environment related animal feeding strategies, held at CCSHAU, Hisar, Oct, 1994.

Nair, R.S., Rao, S.V.N. and Ramkumar, S. (1998) Ethno veterinary medicine-an overview. Paper presented at the International Conference on Ethnoveterinary Medicine organised by BAIF Research and Development Foundation at Pune from 1-6 Nov.

Ramkumar, S. (1998) Realising the reality: first step in sustainable agricultural development. Agricultural Research and Extension network.

Newsletter 37. London: Overseas Development Institute(ODI)

Warren, D.M. (1991) Using Indigenous Knowledge in Agricultural Development. Washington: World Bank Discussion Paper, No. 127:46

Dr Ramkumar, Associate Professor, Dept. of Veterinary and Animal Husbandry Extension, Rajiv Gandhi College of Veterinary and Animal Sciences, Pondicherry

Dr S V N Rao, Professor and Head, Dept. of Veterinary and Animal Husbandry Extension, Rajiv Gandhi College of Veterinary and Animal Sciences, Pondicherry

❑