



## **PROS AND CONS ENCOUNTERED BY THE FARMERS IN ADOPTING THE ANIMAL HUSBANDRY TRADITIONAL PRACTICES AND ETHNO VETERINARY MEDICINES**

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### **Abstract**

*The present study has featured various pros and cons perceived by livestock farmers in adopting the animal husbandry traditional practices and ethno veterinary medicines under different livestock management practices. A total number of four districts viz., Tirunelveli, Namakkal, Vellore and Thiruppur were selected based on the highest number of livestock population. A total number of 240 livestock farmers were randomly selected from the 16 villages. Quantitative and qualitative data were collected through interview schedule, focus group discussion and direct observation. The study revealed cost effectiveness have got*

*highest mean score (12.16) and occupy the first position. User friendly (11.82), effectiveness is more (11.66) and harmless to animals (11.45) are the major pros while adopting traditional practices/EVM. The major cons identified were "not sure of the disease" have got highest mean score (17.57). This was followed by the items viz., no written documents (16.21), short term curability noticed (15.90), highly risky treatment (15.69), delay in recovery (14.86), treatment based on symptoms and not on the underlying cause (14.18).*

**Key words:** Animal Husbandry Traditional Practices, EVM, Traditional Practices, Cost Effectiveness, ITK

### ***Introduction***

The traditional knowledge regarding animal husbandry is considered as old as domestication of various livestock species. Unfortunately, these practices, which are in vogue throughout rural India, are little documented and there is danger of extinction of this knowledge.

The use of indigenous veterinary medicine is a cost effective treatment option for livestock, especially in primary health care in remote areas (Punniamurthy, 2010). The ethno veterinary knowledge and skills are not always evenly spread within the community and society. Caste, gender and socio-economic classes influence their distribution. Ancient animal husbandry system and practices prevalent for the treatment of livestock diseases are still relevant today. Treatment is being done with the help of locally available herbs and minerals. Besides, firing, acupuncture/acupressure, surgery and witchcrafts are some of the age-old practices being followed by local healers. Usage of the animal husbandry traditional practices and ethno veterinary medicines are very limited owing to the reason of low or no validation of the same. Hence there is a need to identify the pros and cons encountered by the farmers in adopting the animal husbandry traditional practices and ethno veterinary medicines before validating them.

### ***Methodology***

Among the seven agro-climatic zones of Tamil Nadu, top four zones namely North Western Zone, Western Zone, Southern Zone, North-Eastern Zone were selected based on the highest livestock population for this study. From each selected zone, a district with highest livestock population based on 19<sup>th</sup> Livestock census of department of Animal Husbandry and Veterinary services, Tamil Nadu was selected for the study. The selected districts were Tirunelveli, Namakkal, Vellore and Thiruppur. The blocks were selected based on the suggestions made by Veterinary Assistant Surgeons. Villages were selected based on the

lottery method of random sampling. From each block, two villages were selected and thus a total of 16 villages were selected from eight blocks.

For the analysis, the primary data was used. A sample of 240 farmers was used. Primary data was personally collected from the respondents through structured interview schedule. The interview schedule was based on open form questions. The data was usually collected in the farmer's fields, homes or in community centres.

The common pros and cons faced by the farmers in adopting the traditional animal husbandry practices and ethno veterinary medicines were collected by open ended questionnaire and ranked according to the scores obtained by each item based on Friedmans test.

### ***Results and Discussion***

#### **Item wise "Pros" score of respondents while adopting traditional practices/EVM**

The 20 items with regard to the "pros" in using traditional practices/EVM were ranked based on their mean rank in descending order in the Table 1. It could be observed from Table 1 that cost effectiveness have got highest mean score (12.16) and occupy the first position followed by user friendly (11.82), effectiveness is more (11.66), and harmless to animals (11.45). This was followed by items viz., lower side effect (11.28), sure about the diseases/ symptoms of tried accordingly in most cases (11.24), cures certain diseases permanently (11.24), encourages herbal plant growth in home to meet out the emergency situation (11.20), no transport cost incurred (11.11) and no eminent resistance (10.49). Similar findings was recorded by Moreki (2012) who found out that the Ethno Veterinary Medicine was used by the farmers extensively for the merits such as cost effective, readily accessible and no transport cost was incurred.

The low mean scores were recorded for the following items viz., ever ready ingredients /readily available (9.66), reflects local tradition (9.66), effectiveness in use (9.61), ease in preparation (9.41), alternative for modern drugs (9.41), and quickness in healing (9.20). Sri Balaji and Vikram Chakravarthi (2010) recorded that the EVM's were alternative for modern drugs and ease in preparation. Rao *et al.*, (2011) documented that the ethnoveterinary practices in sheep of North coastal zone of Andhra Pradesh proved effective in use and possessed ever ready ingredients.

*Table 1: Friedman test for significant difference among mean ranks towards "pros" of adopting animal husbandry traditional practices and EVM*

N=240

Sl.No	Pros	Mean Rank	RANK	Chi-Square test	F-value
1	Cost effectiveness	12.16	I		
2	User friendly	11.82	II		
3	Effectiveness is more	11.66	III		
4	Harmless to animals / person	11.45	IV		
5	Lower side effect	11.28	V		
6	Sure about the diseases/ symptoms of tried accordingly in most cases	11.24	VI		
7	Permanent cure of certain diseases	11.24	VI		
8	Encourages herbal plant growth	11.20	VII		
9	No transport cost incurred	11.11	VIII		
10	No eminent resistance	10.49	IX	268.756	<0.001**
11	Minimum risk of drug overdose	9.95	X		
12	Low risk involvement	9.86	XI		
13	Administrated topically or orally	9.82	XII		
14	Locally available in remote areas	9.78	XIII		
15	Ever ready ingredients / Readily available	9.66	XIV		
16	Reflects local tradition	9.66	XIV		
17	Effectiveness in use	9.61	XV		
18	Ease in preparation	9.41	XVI		
19	Alternative for modern drugs	9.41	XVI		
20	Quickness in healing	9.20	XVII		

### **Item wise "cons" score of respondents while adopting traditional practices/EVM**

The 25 items with regard to the "cons" in using traditional practices/EVM were ranked based on their mean rank in descending order in the Table 2. It could be observed from Table 2 that "not sure of the disease (Supplementary treatment)" have got highest mean score (17.57). This was followed by the items viz., no written documents (16.21), short term curability noticed (15.90), highly risky treatment (15.69), delay in recovery(14.86), treatment based on symptoms and not on the

*Table 2: Friedman test for significant difference among mean ranks towards cons of adopting animal husbandry traditional practice and EVM*

N=240

Sl. No	Cons	Mean Rank	RANK	Chi-Square test	F-value
1	Not sure of the disease (Supplementary treatment)	17.57	I	645.976	<0.001**
2	No written documents	16.21	II		
3	Short term curability noticed	15.90	III		
4	Highly risky treatment	15.69	IV		
5	Delay in recovery	14.86	V		
6	Treatment based on symptoms and not on the underlying cause	14.18	VI		
7	Noticed side effects in certain cases if over dosages are given to animals	14.03	VII		
8	Difficulty in preservation of herbal extract	13.66	VIII		
9	Timely unavailability of local herbs	13.35	IX		
10	Ineffective proportion (Concoctions)	12.99	X		
11	If not prepared and preserved (Herb extracts) properly it is highly risky (Poisonous)	12.83	XII		
12	Lack of ability to identify right plants	12.78	XIII		
13	Herbs availability – Seasonal	12.62	XIV		
14	Takes long time to cure diseases / Time consuming	12.57	XV		
15	May be harmful to person preparing them	12.52	XVI		
16	Particular methods are often very localized (further dissemination is limited)	12.15	XV		
17	Difficulty in getting herbs at certain times of the year	11.58	XVI		
18	Non availability of certain herbs	11.53	XVII		
19	Incompatibility of ITK with modern techniques	11.53	XVII		
20	Tedious in preparation and use	11.37	XVIII		
21	Not standardized procedure	11.27	XIX		
22	EVM has little effect or nothing to offer against acute viral diseases of animals	11.21	XX		
23	Unknown Dosages	11.06	XXI		
24	Extinct due to non-practiced by young generation	11.01	XXII		
25	Extent of curability – Not known/ Variable	10.54	XXIII		

underlying cause (14.18), and noticed side effects in certain cases if over dosages are given to animals (14.03). Similar findings were recorded by Kaur *et al.*, (2015).

The low mean scores were recorded for the following items viz., EVM has little effect or nothing to offer against acute viral diseases of animals (11.27), unknown dosages (11.21), extinct due to non-practiced by young generation (11.01) and extent of curability – Not known/ Variable (10.54). As the younger generations were keen in obtaining white collar job than EVM practices, the low score for this category was recorded. This is in accordance with the findings of Ponnusamy *et al.* (2009) who recorded the top two constraints faced by the farmers in the use of ITK were ITK took long time to cure the animal's disease and many herbs were extinct.

Ethnoveterinary medicines are often not as potent as modern allopathic medicines, therefore can be less suitable to control and treat epidemic and endemic infectious diseases (e.g., foot-and-mouth disease, rinderpest, haemorrhagic septicaemia, anthrax, blackquarter, rabies). But for common diseases and more chronic conditions such as cough, cold, skin diseases, worms, wounds, reproductive disorders, nutritional deficiencies, and mild diarrhoea, ethnoveterinary medicine can be a cheap and readily available alternative to costly drugs. This is in accordance with the findings of Kumar *et al.*, (2012) who documented that ethno veterinary plants might be used for the development of new, cheap, effective, and eco-friendly herbal formulations for veterinary healthcare management. Kaur *et al.*, (2015) also confirmed that the usage of EVM is cost effective for the farmers.

### **Conclusion**

Hence it was concluded that there are few pros and cons faced by the farmers in adopting animal husbandry traditional practice and ethno veterinary medicine in rural societies. The EVM's are being used for the development of new, cheap, effective, and eco-friendly herbal formulations for veterinary healthcare management. After identifying these pros and cons, these ITK's and EVM's will require safety and efficacy testing. In addition to this, this is high time to frame suitable conservation strategies for wildlly growing herbs to overcome their depletion from natural resources and to make these practices more eco-friendly.

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