



# Ethnoveterinary Practices by Livestock Owners in Animal Fair at Pushkar, Rajasthan, India

Yadav Manoj<sup>1</sup> and Gupta Ekta<sup>2</sup>

<sup>1</sup>Department of Botany, Government College, Ajmer, Rajasthan, INDIA

<sup>2</sup>Bhagwant University, Ajmer, Rajasthan, INDIA

Available online at: [www.isca.in](http://www.isca.in), [www.isca.me](http://www.isca.me)

Received 4<sup>th</sup> August 2013, revised 17<sup>th</sup> February 2014, accepted 4<sup>th</sup> March 2014

## Abstract

Majority of the cattle owners in Rajasthan belong to tribal areas or villages. These areas or villages are still lacking modern healthcare facilities. This is true for veterinary healthcare too. Also, these people are less economically endowed so they rely on traditional methods of veterinary practices which are mostly based on plants or their parts to treat the various ailments of animals. Our present paper deals with ethno veterinary practices used by livestock owners at Pushkar animal fair for the well-being and good health of their cattle. These practices involve the use of plants as well as their products for the treatment of livestock diseases.

**Keywords:** Ethno veterinary medicine, livestock owners, healthcare practices, Pushkar fair.

## Introduction

Ethno veterinary is a branch of science which deals with the study of traditional knowledge, methods, skills and practices used for treating various ailments of animals<sup>1,2</sup>. Since the beginning of this earth, animals and plants coexist with each other. They both are related with each other in one or many ways<sup>3</sup>. Both of them are related with a bond. India is a land where 80% of the population live in villages. The main occupation of these villages is agriculture and cattle rearing. Cattle rearing plays an important role for the economy of not only Rajasthan but also for India<sup>4</sup>. Big livestock industries depend on these cattle rearers.

Livestock health is a major issue of concern for the development of these industries. According to the livestock census (2003), India possesses 185 million cattle population<sup>5</sup>. Also, India is a land possessing rich biodiversity and is counted amongst the mega diversity regions of the world.

India possess about 8% of the global plant genetic resources<sup>6</sup>. India is also a land which has a great cultural diversity. 45% population of India belongs to 530 communities of 227 ethnic groups of different tribal communities. Rajasthan is the state which possess different tribal communities. It is placed at 6<sup>th</sup> position in India from the point of view of tribal population<sup>7</sup>. Most of the tribal communities live in forest areas. Due to this reason they are in close vicinity with nature and know the nature very deeply. As the modern healthcare practices are still lacking in the remote areas of the state so these tribal people have to depend on surrounding medicinal plants. They also have a good knowledge about the uses of various plants and their products. Indigenous healthcare practices are widely used by the people of not only Rajasthan or India but also worldwide.

According to the World Health Organization at least 80% people of developing countries depend largely on indigenous healthcare practices for the control and treatment of various ailments of humans and animals. The identification and acquisition of this knowledge is not an easy job for these people as they are not maintain any written records about these practices.

Since the beginning of culture and religion, plants played an important role in the lives of people. The sacred texts of Vedic religions like Rig veda, Garuda Purana and Agni Purana also mentioned that uses of herbs for curative purposes<sup>8</sup>.

The uses of a protective ointment for human beings, cows and horses have been documented in the Atharva Veda (IV, 9, 2)<sup>9</sup>.

Indian medicinal system adopted observations and rational procedures by the end of the Vedic period. This led to the foundations of a new medicinal system known as Ayurveda. The knowledge formed the basis for veterinary medicine<sup>10</sup>.

Earlier the people did not find any necessity to document and validate the knowledge regarding ethno veterinary practices. But the interest regarding documentation and validation of ethno veterinary practices arose in the early 1980s. Since then several efforts have been done to document the outstanding practices used by the livestock owners<sup>11-18</sup>. In India also, the researchers have made a lot of efforts for the documentation of knowledge of ethno veterinary medicine. Recently two publications regarding ethno veterinary medicine in India have appeared<sup>19-20</sup>. It mentions 836 plants and their uses and 100 medicinal plants with their uses for veterinary purposes. In Rajasthan also various workers have described the ethno veterinary prescriptions from time to time<sup>21-25</sup>.

Ethno veterinary medicines are easily available. They can be easily prepared and used. They are cost effective also.

**Study Area:** Pushkar is a sacred town for the Hindus located 11 kms. to the North-West of Ajmer district . It lies on the shore of Pushkar lake in Rajasthan. Geographically it is located at 26.5<sup>0</sup> N 74.55<sup>0</sup> E. It has an average elevation of 510 meters (1673 feet). It is one of the oldest cities of India. Pushkar is famous for its temples and ghats. A great Indian poet Kalidas also wrote about the place in his classic Abhigyan Shakuntalam. Mahabharat and Ramayana, the great Hindu epics make reference to this place as Adi Tirtha. According to a myth, a demon vajra Nabha killed Brahma's children, so Brahma struck him with his weapon a lotus flower. Vajra Nabha was killed with it and the petals of the lotus fell at three places. One of the place is Pushkar. It is supposed that Lord Brahma have performed sacrifice at the Pushkar lake on Kartik Poornima ( the full moon day of the kartik month of Hindu Calendar). So every year in the month of kartik a fair is held at Pushkar, which is popularly known as Pushkar fair.

The Pushkar fair, is the annual camel and livestock fair held in the holy town of Pushkar . It is one of the largest camel fairs of the world. A number of camels travel their way across the golden sands to collect at Pushkar. Besides camel, horses, cows and sheep also march to this site. The sleepy little township of Pushkar comes alive with a riot of colours and a frenzied burst

of activity during this period. None of the others fairs in the world can match the liveliness of Pushkar.

The fair occurs every year in the Hindu month of Kartik (Oct/Nov) ten days after Diwali. It is the central cattle market for local herdsmen and farmers who buys and sell camels, horses and indigenou breeds of cattle. This paper deals with the ethno veterinary practices used by the livestock owners at Pushkar animal fair during 20-28 November 2012.

## Methodology

A number of elderly persons having practical knowledge of ethno veterinary medicines in the native system were interviewed. Informations were obtained through the use of well structured questionnaire. These persons were found to have accurate informations regarding their old traditions. Various types of livestock march in the fair of Pushkar. Sheep, goat, buffaloes, cows, bulls, horses and camels are the most common.

The informations presented in this paper are based on first hand information gathered from the livestock owners visited at Pushkar fair and through personal observation. The data were cross checked with more than one medicine men. The informations reveal that these people treat their domestic animals with herbal medicines on the basis of their empiric knowledge. Some cures mentioned here are already recognized by other researchers during their study in other areas of Rajasthan but some practices are new for veterinary purposes.



Photographs of Cattle owners with their cattles

**Table-1**  
**Plant name with their uses**

Plant Name	Local Name	Family	Use
<i>Acacia nilotica</i>	Desi Babool	Mimosoidae	Decoction of stem bark made into a paste with sesasme oil is applied on the effected parts to heal the wounds or burns.
<i>Aerva pseudotomentosa</i>	Bui	Amaranthaceae	Inflorescence is crushed, warmed and applied on affected portion of cattle's knee to cure knee pain and swelling.
<i>Citrullus colocynthis</i>	Tetumba	Cucurbitaceae	Dried citrullus mixed with rock salt, Ajwain and Methi is given to the animal to cure gastric problems or uneven feeding.
<i>Cocos nucifera</i>	Coconut	Areaceae	Dried fruit burnt and made into a paste with desi ghee is applied on wounds or burns for healing.e
<i>Azadiracta indica</i>	Neem	Meliaceae	Infusion of the leaves is used for body wash to repel ectoparasites like lice, fleas, bugs and flies. Paste of leaves mixed with equal quantity of turmeric powder is given to the animal for a week against constipation.
<i>Tamarindus indica</i>	Tamarind	Caesalpiniaceae	In case of limb fracture; affected part is washed with neem and alum water and then tamarind leaves are bandaged.
<i>Sesamum indicum</i>	Til	Pedaliaceae	Seeds mixed with jaggery and edible oil is fed daily to increase cattle lactation. Oil mixed with turmeric powder is boiled, cooled and is applied on the affected part on horn wound.
<i>Zingiber officinale</i>	Saunth	Zingiberaceae	Saunth powder boiled with milk is given to cure cattle fever.
<i>Ferula asafoetida</i>	Heeng	Apiaceae	Heeng is given in stomach-ache and indigestion. It is also given in internal parasites.
<i>Ocimum Canum</i>	Bapchi	Lamiaceae	Diarrhea
<i>Plantago ovata</i>	Esabgol	Plantaginaceae	Diarrhea
<i>Vernonia cinerea</i>	Kalajeeri	Asteraceae	Kalajeeri mixed with jaggery is given orally as well as applied externally to cure goitre. Kalajeeri with sesame oil is given 2-4 times to cure aafraa. It is also given in loss of appetite.
<i>Cucumis melo var momordica</i>	Kachra	Cucurbitaceae	Dried crushed fruit mixed with citrullus salt and chhach (dilute curd) is given to cattle to cure gastric problems.

## Results and Discussion

It is evident from the above study that substances derived from plants have provided a reliable source of medicines to the livestock owners for the good health of their animals. Traditional human population have a broad encyclopedia of their livestock consisting of wild plants which are used for various ailments. The study shows that 13 species belonging to 13 genera and 11 families are used for treating over many different types of animal diseases.

The results prove that the use of plants or their derived products as therapeutic resources to the treatment of animal diseases represent a common practice and is culturally important. Farmers and others folk being herbal practitioners have added these medications to their indigenous knowledge system through trial and error, spanning over hundreds of years and covering several generations.

It is also evident that most of the knowledge regarding EVM is transferred from one generation to another orally by these

livestock owners. It is also noticed that these practices form an alternative to the veterinarian medicines which are cost effective. They also play a significant role in healing practices.

## Conclusion

The knowledge regarding ethno veterinary medicine is decaying fast due to the advancement of modern veterinary medicines. But EVM is still persistence due to some factors which include cost effectiveness, inaccessibility and other factors linked with the modern veterinary system. The information's regarding the uses of plants for veterinary purpose are transmitted from one generation to another through verbal means only. If there would be proper documentation of this knowledge, then it would be beneficial for the upcoming generation. However EVM contribute in the management of animal diseases in a cost effective manner but unfortunately research works which prove the pharmaceutical efficiency of plants have not been done so far or a very little research work has been done.

## References

1. McCorkle C.M., An introduction to ethnoveterinary research and development, *J. Ethnobiol.*, **6(1)**, 129-49 (1986)
2. McCorkle C.M., Mathias-Mundy E. and Schillhorn Van Veen T.W., *Ethnoveterinary Research and Development*, (IT Publications) (1996)
3. Prashant Kumar Singh, Shivam Singh, Vinod Kumar and Alok Krishna, Ethnoveterinary Healthcare Practices in Marihan Sub-Division of District Mirzapur, Uttar Pradesh, India, *Life Sciences Leaflets*, **16**, 561-569 (2011)
4. Wanzala W., Zessin K.H., Kyule N.M., Baumann M.P.O., Mathias E. and Hassanali A., Ethnoveterinary medicine: a critical review of its evolution, perception, understanding and the way forward, *Livestock Research for Rural Development*, **17(11)**, 1-29 (2005)
5. Dinesh Kumar Yadav, Ethno-veterinary practices: A boon for improving indigenous cattle productivity in Gaushalas, *Livestock Research for Rural Development*, **19(6)**, 1-5 (2007)
6. Sri Balaji, N and Vikrama Chakravarthi, P., Ethnoveterinary Practices in India-A Review, *Veterinary World*, **3(12)**, 549-551 (2010)
7. Praveen Galav, Anita Jain S.S. Katewa and Ambika Nag, Animal healthcare practices by livestock owners at Pushkar animal fair, Rajasthan, *Indian Journal of Traditional Knowledge*, **9(3)**, 581-584 (2010)
8. Priyadarsan S.S., Herbal veterinary medicines in an ancient Sanskrit work – The Garuda Purana, *Ethnobotany*, **3**, 83 (1991)
9. Mazars G, Veterinary medicines in ancient and medieval India, *Studies His Med Sci*, **16(1-2)**, 27-36 (1998)
10. Lalit Tiwari and P C Pande, Ethnoveterinary medicines in Indian perspective : Reference to Uttarakhand, Himalaya, *Indian Journal of Traditional Knowledge*, **9(3)**, 611-617 (2010)
11. Mathias E, Perezygrovas R, Application of Ethnoveterinary medicine- where do we stand ? In Proceedings of the International Conference on Ethnoveterinary Medicine Alternatives for Livestock Development : 4-6 November 1997 ; Development Research Foundation, Pune, India Edited by Mathias E, Ragnekar DV, Mc-Corkle CM. (1998)
12. Pal D.C. Observation on folklore plants used in veterinary medicine in Bengal, Bihar and Orissa –II In : Maheshwari, J.K.,G. Kunkel, M.M. Bhandari and J.A.Duke (eds.), *Ethnobotany in India J. Econ. Tax. Bot. (Addl. Ser. 10)* 137 p. Scientific Publishers, Jodhpur (1992)
13. Pal D.C., Plants used in treatment of cattle and birds among tribals of Eastern India In: Jain,S.K.(ed.) *Glimpses of Indian Ethnobotany*, 245 Oxford and IBH Publishing Co., New Delhi (1981)
14. Reddy C.S. and Raju V.S., Folk biomedicine for common veterinary diseases in Nalgonda district , Andhra Pradesh, India, *Ethnobotany*, **12**, 113 (2000)
15. Shah R., Pandey P.C. and Tiwari L., Traditional veterinary herbal medicines of western part of Almora district, Uttarakhand Himalaya, *Indian Journal of Traditional Knowledge*, **7(2)**, 355 (2008)
16. Singh K.K. and Kumar K. : Observation on ethnoveterinary medicine among the Gaddi tribe of Kangara Valley, Himachal Pradesh , *Ethnobotany*, **12(42)**, (2000)
17. Ghosh A., Ethnoveterinary medicines from the tribal areas of Bankura and Medinipur districts, West Bengal, *Indian Journal of Traditional Knowledge*, **1(1)**, 93 (2002)
18. Jain S.K., Ethnoveterinary recipes in India –A botanical analysis , *Ethnobotany*, **15(23)**, (2003)
19. Jain S.K., *Dictionary of Ethnoveterinary Plants of India*, (Deep Publications, New Delhi), (1999)
20. Srivastava GN, Hasan SA, Bagchi GD and Kumar Sushil, *Indian Traditional Veterinary Medicinal Plants* , (Central Institute of Medicinal and Aromatic Plants , Lucknow ) (2000)
21. Geerlings E : Sheep husbandry and ethnoveterinary knowledge of Raika sheep pastoralists in Rajasthan, India , In MSc thesis, University of Wageningen (2001)
22. Kumar Ashwani and Kumar Manoj, Contribution of Ethnomedicinal Plants in Conservation of Biodiversity of Central Rajasthan, *International Journal of Research in Pharmacy and Science*, **1(2)**, 118-127 (2011)
23. Takhar H.K. and Chaudhary B.L., Folk herbal veterinary medicines of southern Rajasthan, *Indian Journal of Traditional Knowledge*, **3(4)**, 407-418 (2004)
24. Katewa S.S. and Chaudhary B.L., Ethnoveterinary survey of plants of Rajsamand district of Rajasthan, Vasundhara, **5**, 95 (2000)
25. Katewa S.S. and Jain Anita: *Traditional Folk Herbal Medicines* (Apex Publishing House, Jaipur) (2006)
26. Yadav M., Yadav A. and Gupta E.; Ethno Veterinary Practices in Rajasthan, India- A Review, *International Research Journal of Biological Sciences*, **1(6)**, 80-82 (2012)