



Ethnoveterinary plants- plants used for treatment of cattle and livestock diseases in Dang region of Rajasthan

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Abstract

The present review revealed that dang region of Rajasthan has a rich diversity of ethno veterinary plants. This study shows that traditional herbal medicines plays a significant role in meeting the livestock healthcare needs of farmers and hence is a viable practice. The present paper deals with the study of ethnoveterinary plants in dang region of Rajasthan. Present study provides useful information about veterinary plants and their therapeutic uses of different animals residing in different villages of dang region. This study is based on data obtained from survey, field trip and discussion with traditional medicinal practitioner. These plants are used to curative various animal ailments and also play an important role in healing. This research endeavors to document and analyze the indigenous knowledge systems, practices and beliefs associated with plants in dang region of Rajasthan.

The study also contributes a wealth of knowledge about ethno veterinary practices for further planning and use. This will provide an option for livestock farmers who cannot afford allopathic medicine under organic farming schemes that are likely to be a part of sustainable livestock farming programs in dang region of Rajasthan.

Keywords: Ethnoveterinary, diversity, ailments, livestock, indigenous knowledge

Introduction

The study of correlation between plants and people in surrounding them is called Ethno-botany. The dang region of Rajasthan is very rich in plant biodiversity. It is also known as herbal region of Rajasthan. According to World Health Organization (WHO), about 80% of the world population still uses herbs and other traditional medicines for their primary health care needs. Ethnobotanical studies are very popular and accepted worldwide. In India villagers and tribes believes in their indigenous uses of plants. Several plants are utilized to cure numbers of diseases. In Ayurved which is ancient medicine book of India based upon the uses of medicinal plants. There are several technique described regarding use of plants. These techniques are Ras (plant part juice), Choorna (powder of plant part), Quath (decotion of plant or plants part), Awaleh (Plant part boiled in milk and clarified kept in a pot for fermentation). Most of the tribes more or less use this technique to cure diseases. Above all system of traditional

medicine arise or developed from the Ayurved in India (Rao, 1987). The ethnomedicinal plants are useful for therapeutic as well as for curing of animal diseases because of the existence of phytochemical compounds. Phytochemicals are naturally stirring in the medicinal plants, leaves, vegetables and roots that have protection mechanism and protect from various diseases. Currently, the global demand of herbal medicines is increasing rapidly because of their higher safety margin and low cost.

Study Area

Dang area is one of the most resource dispossessed and arid region of Rajasthan state marked with degraded ravines, barren land and severe water shortage. Dholpur and Karauli districts with an area of 6034 square kilometers is located in eastern most extremity of the state of Rajasthan and lies between latitudes 22°21'19" and 26°57'33" North and longitude 77°13'06" and 78°16'45" East.

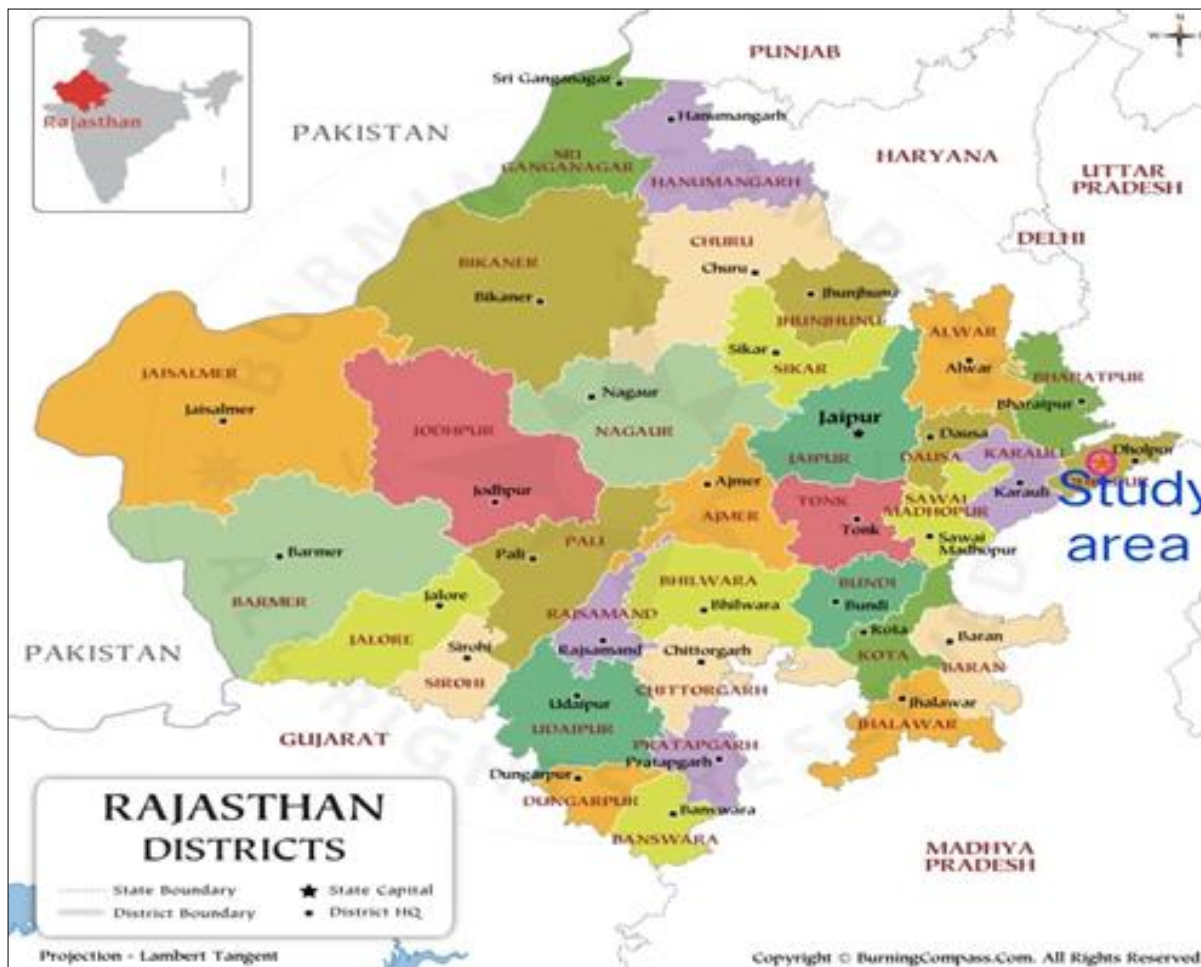
Land use detailed statistics of dang region

S.No.	Particulars	Figure in sq. Km
1	Area not found suitable for cultivation	746.51
2	Hills and forest	270.59
3	Pastured land	178.77
4	Barren found land	113.38
5	Others	4.63
6	Area suitable for cultivation but not cultivated	180.20
7	Area found under cultivation	1514.97
	(i) Irrigation by wells	910.49
	(ii) Irrigation by canals	90.91
	(iii) Irrigation by tanks / ponds	1.78
	(iv) Irrigation by various other sources	Nil means not found

Climate

The climate of dang region is semi-arid type. Summer period starts from March to middle of June and after this rainy season starts which last up to end of September. In

winters it is very cold and during the summer season in this area dry and hot. During period of May and June month, everyday temperature is 40°C.



Map of Rajasthan state showing study area Source: Atlas of Rajasthan

Methods

1. The plant life was identified by villagers of tribal local communities about various aspects.
2. Obtain the knowledge of folklore remedies of several animal diseases.
3. Interviewing with regular people to know about ethno medicine and plants used for treating diseases in cattle.
4. Collection of information about ethnomedicinal and ethnoveterinary plants their uses by local or rural communities including preparation, mode of administration and applications.

Ethnoveterinary Plants in this Region are as Follows

Aegle marmelos, *Abelmoschus esculentum*, *Abrus precatorius*, *Balanites aegyptiaca*, *Acacia leucophloea*, *Cassia tora*, *Datura stramonium*, *Enicostemma littorale*, *Ficus benghalensis*, *Ficus religiosa*, *Grewia tenax*, *Ricinus communis*, *Hygrophila spinosa*, *Hibiscus rosa-sinensis*, *Jatropha gossypifolia*, *Launaea procumbens*, *Lawsonia inermis*, *Lantana camara*, *Momordica dioica*, *Maytenus emarginata*, *Nyctanthes arbor-tristis*, *Nerium indicum*, *Ocimum sanctum*, *Oxalis corniculata*, *Papaver somniferum*, *Pedaliium murex*, *Phoenix sylvestris*, *Saccharum benghalensis*, *Syzygium heyneanum*, *Saccharum officinarum*, *Trapa natans*, *Tecomella undulata*, *Tinospora cordifolia*, *Wrightia tinctoria*, *Withania*

somnifera, *Vitex negundo*, *Vitex peduncularis*, *Xanthium strumarium*, *Zingiber officinale* and *Ziziphus mauritiana*. Various ailments of the cattle of indigenous people are cured with the help of these plants used in various manners.

Information about Ethnoveterinary Plants

A total of 207 extracts from different plant species belonging to different families was investigated. The plants were consumed in different forms for curing the health ailments of human and cattles.

Table 1: Percentage of plant parts used

Plant Part Used	Percentage
Leaves	88.11
Flower	29.33
Stem	17.33
Rhizome	12.67
Root	62.67
Pod	19.33
Whole plant	24
Fruit and pulp	48.67
Oil	27.33
Latex, Resin and Gum	32.67
Bark	84

Table 2: Different mode of administrations used for treatment by informants

S.No	Plant forms used for treatment	No. of informants	Percentage	Normal distribution
1	Decoction	138	93.83	0.0068
2	Extract	123	82.11	0.0104
3	Powder	117	63.74	0.0143
4	Paste	99	46.36	0.0163
5	Raw/Direct Consumption	75	35.00	0.0124
6	Infusion	63	21.91	0.0085
7	Oil and Poultice	40	14.48	0.0048

Results

The practice of traditional folk medicine is a vibrant and most important aspect of Ethno-botany. The traditional art of medicinal plant curative is a characteristic of Indian principles and Tribal people rely on it since ages. Thousands of uninhabited and grown plants are being utilized by these natives to treat several diseases. A substantial quantity of data on herbal plants is obtainable with these groups which needs proper documentations. Rajasthan is one of the largest states and has a great heritage related to these forests and aboriginals. India has suffered with the loss of its rich heritage due to urbanization and deforestation. This is an important area of research which presents a variety of opportunities for conservation, sustainable development and health-care. Tribal people preserved this knowledge through their conservation oriented approach that pass on from one progeny to other through idle talk. Now this is the time to preserve this knowledge in written form so looking to the significance of ethno-medicinal plants and their photochemical are the safe cure of human beings, the present study is carried out.

The present study suggests that villagers of dang region of Rajasthan are using plants for veterinary medical purposes even today. They are still dependent on plants for common and immediate health problems and are curing various diseases with the help of plants growing around them. He has information about various plants used for the treatment of various diseases as well as the nature of plants and their cultivation, although his method is slowly ending due to the availability and reliability of modern hospitals, hence the village. The medical properties of these plants were highly known by the elders of the country, it is not only a relatively information. The aim of the present study is to overcome this problem and to preserve information about the medicinal properties of plants for the future.

Conclusion

Ethno-medicinal and ethno-veterinary plants play a vibrant part in inhibiting different disorder in human-being and cattle. Due to the availability of the secondary metabolites as stated above, help in the form of anti-diuretic, anti-analgesic, anti-cancer, anti-viral, anti-malarial, anti-fungal, anti-inflammatory activities. In the making of new herbal medicine, herbal plants are screened on the basis of phyto-chemical elements the significant phyto-chemical characteristics are recognized in this investigation in local plants of Dang area, Rajasthan and will be beneficial in coping various disorders in the present region of research. "The study area is rich in a wide variety of medicinal plants, highlighting their significance as an important source of

ethnoveterinary knowledge. Further investigation is needed to analyze their bioactive compounds, antibacterial potential, methods of application, and to determine standardized dosages for these medicinal plants."

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