

COMMONLY USED ETHNO-VETERINARY MEDICINAL PLANT RESOURCES FOR DYSENTERY AND DIARRHEA FROM BHOR REGION, PUNE DISTRICT, MAHARASHTRA

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Abstract:Rural people from Bhoregion have utilized 36 EVM plant resources for animal health care. 16 different ailments were recorded from study area. The present study deals with different ethno-veterinary practices performed by local farmers and *Vaidus* to treat their livestock. The enumeration of EVM plants for dysentery and diarrhea are listed with their plant parts along with different ingredients. A total of 36 ethno-veterinary medicinalare reported for the first time from Bhoregion for dysentery and diarrhea which belong to 25 families and 33 genera.

Key words: *EVM plants, dysentery and diarrhoea. Bhoregion*

INTRODUCTION:

EVM concern with traditional plant species used for curing animal diseases Ethno veterinary medicine was practiced as early as 1800 B.C. at the time of King Hamurabi of Babylon who formulated laws on veterinary fees and charged for treating cattle and donkeys (Schillhorn van Veen, 1996). Many traditional medicines have been abandoned following the discovery of the modern chemotherapy. But for more than a decade now Ethno veterinary medicine has experienced a revival and several reports have been published. This growing interest in traditional practices had been encouraged by the recognition of some efficacious Ethno veterinary medicinal products. Ethno veterinary medicine often provides cheaper options than comparable western drugs, and the products are locally available and more easily accessible. In the face of these and other factors there is increasing interest in the field of Ethno veterinary research and development (Zschocke et al., 2000; Masika et al., 2000; Tabuti et al., 2003; Yineger et al., 2007; Kone and Atindehou, 2008). Resource-poor livestock farmers all over the world have limited access to modern disease prevention and treatment practices particularly in the areas with inadequate health coverage facilities. They frequently depend on traditional knowledge for the management of animal health problems and to improve their productivity. Despite the fact that Ethnoveterinary medicine has been very crucial for the animal healthcares of most developing countries, it has not yet been well documented and much effort is needed in research and integration activities in these countries (Yineger et al., 2007). The possible benefit of plant derived medications IJSAR, 1(2), 2014; 91-99 92 constitutes a rewarding area of research, particularly in countries such as India which have a rich biodiversity of natural plant resources coupled with a high prevalence and variety of infectious diseases. The characteristics, sophistication, and intensity of the Ethnoveterinary systems differ greatly among individuals, societies, and regions. Hence, documentation of Ethnoveterinary medicine from regions having a rich ethnographic and biodiversity setting would be of great significance. Most of the reports concern with Ethno veterinary practices of tribal people in India for the treatment of various diseases in livestock as Rajan et al., (1997), Girach et al., (1998); Jain, Reddy et al., (1999); S.K., (2003); Geetha et al., (2006), Kiruba et al., (2006) Mini, et al., (2007); Harsha et al., (2005); Ganesan et al., (2008), Satya et al., (2009); Yadhav, (2009); Rahman et al., (2009), for the treatment of different types of diseases in livestock. Some ethnobotanist of works on this aspect in Maharashtra regarding the particular district as M.V. Patil (2001) Ethno veterinary herbal medicines from Nasik District (Maharashtra), Rothe, et al., (2005) Ethno-veterinary medicinal plants study from Melghat tribal region of Satpuda range Ethno-veterinary medicinal preparations of tribals from Shirpurtahasil, Dhule district, by Patil et al., (2013) while Gupta et al., (2009) worked on ethnomedicinal plants of the study area but still there is no any strong reference in concern with ethno veterinary studies of the Bhandara district hence the present study was conducted to identify, collect and document the Ethno veterinary medicinal plants used of Bhoregion and their utilization for primary health care of animals treatments for different ailments

II.MATERIALS AND METHODS:

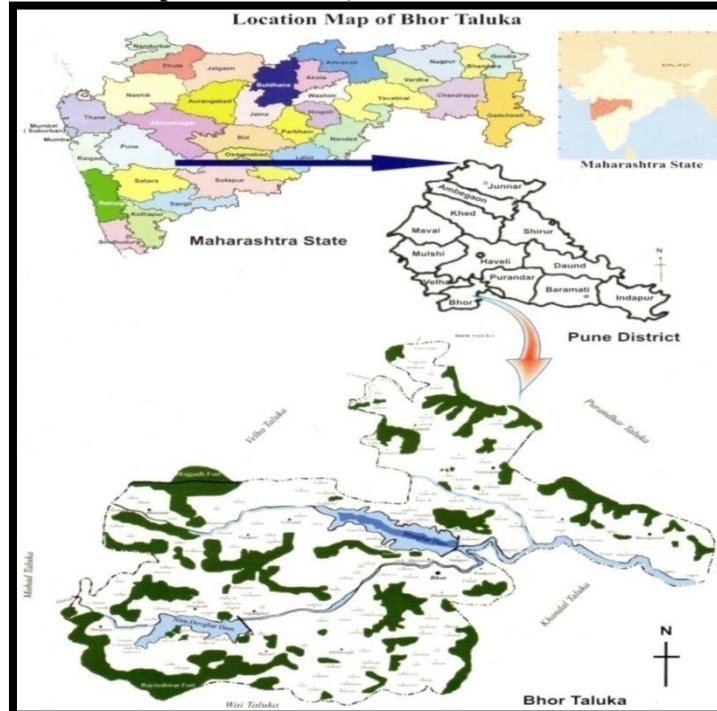
Study area:

The present study was conducted inBhorregionof Pune district. Local communities people were residing in in hilly and remote,area of Bhore Taluka of Pune district, Bhore is situated on the bank of Nirariver. Each village has around 15-20 houses and some villages are not having any transportation facilities. The people of the study area are basically agriculturists and most of them are having domestic animals such as cow, goat, sheep, buffalo and bulls. But the area has not been supported with the veterinary colleges, hospitals and any such dispensaries. The villagers in. this areatreated domestic animals by local herbalist with herbal drug (medicinal plants).

Data Collection:

Field trips ranging from 3 days to a week were made in the study area in every month of the year of study (June 2004 to November 2010) among the tribal people inBhor region. The major livelihood of these tribal are cattle farming, agriculture, collection of fuel-wood and forest resources such as herbal medicines, honey and some edible fruits and tubers from the nearby forests. The tribal communities are reside in hilly and remote area These villages were occupied by different types of ethnic communities, with the predominant population of tribes. Ethno veterinary data were collected from 25 resource persons (all belonged to the male group with average age of 50 to 65 years) of the study area who have much knowledge on medicinal plants with semi structured interviews. The interviews were conducted in the local language, i.e., Marathi. Ethnoveterinary information included with the local name of the particular plant, parts utilized Ethnoveterinary uses and methods of preparation and administration. The collected ethnoveterinary information was recorded on field note books and plants with the usual ethno-medical botanical method (Jain 1987), were plant specimens are identified by using established flora of Maharashtra Vol. I & II (Singh N. P. and S. Karthikaran, 2000). The vouchers specimens were deposited at the herbarium of AHMA Pune.

Map of Maharashtra,Pune and Bhor Taluka



Local Herbalists And Informant FromBhor Region





Mentha spicata L. *Woodfordia fruticosa* (L.) Kurz *Holarrhenapubscens* (Buch-Ham) Wall ex G. Don



Aegle marmelos L. *Abutilon indicum* (Link) Sweet *Curcuma longa* L.

Table -1 Ethno Veterinary Medicinal Plants for Dysentery And Diarrhea from Bhor Region

Botanical name	Family	Local name	Part used	Local use	Mode of Administration
<i>Abutilon indicum</i> (Link) Sweet	Malvaceae	Mudra	.Leaf	Juice	20 ml leaf juice with a glass of water is given twice a day for 3 /4 days to control dysentery.
<i>Abutilon manihot</i> (L) Medak	Malvaceae	Mudra	Fruit	Powder	25gm fruit powder with 50 ml Nilgiri leaf decoction is given twice a day for 3 days
<i>Acacia nilitica</i> Lam.	Mimmosaceae	Babhul	Bark	Powder	20 to 25 bark powder along with a glass of water is taken twice a day for 3 /4 days.
<i>Aegle marmelos</i> L.	Rutaceae	Bel	Fruit	Powder	30 /50 gm fruit powder along with two glass of water is given twice a day for 4 days .
<i>Andrographi spaniculata</i> (Burm. f.) Nees	Acathaceae	Kalmegh	WP	Decoction	100 ml decoction is given twice a day for 4 days

<i>Bambusa arundinaca</i> (Retz.)Willd	Poaceae	Kalak	Leaf	Juice	50 /60 ml leaf juice is taken twice a day for 3 /4 days.
<i>Allium cepa</i> L.	Liliaceae	Kanda	Bulbs	paste	.30 gm paste with a glass of water is given twice a day for 4 days.
<i>Careya Arborea</i> Roxb	Lecythiadaeae	Kumbha	Stem bark	powder	20 to 25 gm powder along with50 ml butter milk is given twice a day for 3 /4 days.
<i>Citrus reticulata</i> Blanco	Rutaceae	Mosambi	Stem bark	Decoction	50 /60 ml stem decoction is given twice a day for 4 days.
<i>Coculushirsutus</i> L.	Menispermaceae	broom creeper	Leaf	Juice	50ml leaf juice along with a glass of buttermilk is given twice a day for 3/ 4days.
<i>Citrulluscolocynthis</i> (L)	Cucurbitaceae	bitter cucumber	Fruit	Powder	25 /30 gm fruit powder with glass od water is given twice day for 3 /4 days.
<i>Cumium cymium</i> L.	Apiaceae	Jira	Seed	Powder	20 /25 gm seed powder with a glass of butter milk is given twice a day for 4 days.
<i>Curcuma longa</i> L.	Zingiberaceae	Halad	Rhizome	Juice	20/ 25 ml juice is given twice a day for 3 4 days.
<i>Cassia Toral</i> .	Caesalpinaceae	Takala	Seed	Powder	20 /25 gm seed powder with a glass of buttermilk is a given twice a day for 3 4 days.
<i>Datura metal</i> L.	Solanaceae	Dhotara	Leaf, Fower	Juice/ Exudate	20 ml leaf juice along with a glass of a water is taken for 3/ 4 days.to control dysentery
<i>Gmeliaarborea</i> Roxb.	Verbenaceae	Shivan	Bark	Paste.	50 /60 gm paste along with two glass of water is given twice a day for 4 days.
<i>Grewiatilifolia</i> Vahl.	Tiliaceae	Dhaman	Bark	Powder	50 gm bark powder with two glass of water is given twice a day for 4 days.
<i>Holarrhena pubscens</i> (Buch-Ham)Wall ex G.Don	Apocynaceae	Kuda	Rootbark	Decoction	150 ml root decoction is given twice a day for 3 /4 days.
<i>Lowsonia innermis</i> L	Lythraceae	Mendi	Seed	Soak seed with water	. 25/ 30 gm seed soak in two glass of water overnight is given once a day for 3 /4 days..
<i>Mangifera Indica</i> L.	Anacardaceae	Amba	Root bark	Powder	25gm root bark powder along with a glass of water is given twice a day for 4 /5 days.

<i>Menthaspicata</i> L.	Lamiaceae	Pudina	Leaf	Powder	30 gm leaf powder along with two glass of water is given twice a day for 5 days.
<i>Murraya koenigii</i> (L)Spreng.	Rutaceae	Kadipatta	Leaf	Juice	25 30 ml leaf juice with two glass of water is taken twice a day for 3 4 days.
<i>Ficus benghalensis</i> L.	Moraceae	Vad	Supporting Root	Paste	25 /30 gm paste with a glass of butter milk is given twice a day for 4 days. to control dysentery &diarrhoea
<i>Momordica charantia</i> L.	Cucurbitaceae	Karale	Young fruit, Root	Juice	25/30 ml fruit & root juice with two glass of buttermilk is given twice a day for 5 days.
<i>Psidium guajava</i> L.	Myrtaceae	Peru	Unripe fruit,	Juice	30 ml leaf or fruit juice with a glass of butter milk is given twice a day for 4 days.
<i>Paracalyx scariosus</i> (Roxb.)Ali	Fabaceae	Ranghveda	Leaf	Juice	100ml leaf juice is given twice a day for 3 /4 days.
<i>Ficus hispida</i> L.f.	Moraceae	Kala Umbar	Unripe Fruit	Powder	20 25 gm powder with a glass or water is given twice a day for 3 /4 days.
<i>Syzygiumcumini</i> (L)Skeel.	Myrtaceae	Jambul	Bark, Leaf	Juice	50ml bark / leaf juice along with a glass of water is given Thrice a day for 3 /4 days.
<i>Soymidiafabrifuga</i> (Roxb.)Jun	Meliaceae	Rohin	Leaf, Fruit	Juice/ Powder	20 /25gm/ml juice / powder along with a glass of water is give twice a day for 4 days.
<i>Ficustictoria</i> G.Forst	Moraceae	Wild Umbar	Fruit	Powder	20 25 gm powder with a glass of water is given twice a day for 3 /4 days.
<i>Sidaacuta</i> Burma.	Malvaceae	Bala	Leaf	Juice	25 30 ml juice with a glass of water is given twice a day for 4 days.
<i>Tamarindus indica</i> L.	Caesalpinaceae	Chinch	Leaf, Fruit	Juice	25 /30 ml juice with a glass of water is given twice a day for 3 /4 days .
<i>Termanalia bellerica</i> (Gaertn.) Roxb	Combretaceae	Behda	Fruit bark	Decoction	50/60 ml decoction with 2 tsp Nilgiri oils is given twice a day for 3 /4 days.
<i>Pogamiapinnata</i> (L)pierre.	Fabaceae	Karanj	Seed	Decoction	50/ 60 ml decoction with a glass of water is given twice a day for 3/ 4 days.

<i>Woodfordia fruticosa</i> (L.) Kurz	Lythraceae	Dhayati	flower, Leaf	Powder	25 /30 gm powder with a glass of water is given twice a day for 3 /4 days.
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St-Stem,R-Root,L-Leaf, Bk-Bark, Sd-Seed,Ftbk-Fruit bark,Fl-Flower, ,Un Unripe,Yn-Young

III.RESULTS AND DISCUSSION:

The traditional knowledge of tribal communities of BhorRegionPunedistrict has high ethnobotanical importance. Theyutilizenumerous plants and their various parts viz., roots, leaves, stems and rhizome for various ethnoveterinary practices. During the field survey, ethnov data of 35-plants species belonging to 36 genera of 27- families have been collected. Among the documented useful species the families, is found to be most often used family in the study while *Aeglemarmelos*, *Woodfordiafruticosa* and *Menthaspicata*, *Holarrhenapubscens*(Buch-Ham)Wall ex G.Don.Above four plants are easily available in study area .this four plants are socially validated .The leaves are the predominant part utilized in the treatment of veterinary diseases and most of the plants are used to treat fever in livestock. Decoction, paste, powder and mixture of plants are the common methods employed for the preparation of medicinal plants. Most of the reported ethnoveterinary medicinal plants are used to treat fever, wounds and dysentery.

IV.CONCLUSION:

Traditional knowledge of plants in many tribal communities is changing because of rapid socioeconomic and cultural changes. This is particularly true in the tribal people in Bhor Region of Maharashtra. Documentation of this knowledge is valuable for the communities and their future generations and for scientific consideration of wider uses of traditional knowledge in treating domestic animals. The EVM are easily accessible, low cost and without side effects. Medicinal plants make them adaptable by the local community. The wealth of this tribal knowledge of medicinal plants points to a great potential for research and the discovery of new drugs to cure the diseases of animals. So, further scientific assessment of these medicines for Phytochemical, biological and pre-clinical and clinical studies are needed for future new herbal drug.

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