



SOME ETHNOVETERINARY MEDICINAL PLANTS USED AMONG TRIBALS OF SATPURA RANGE BURHANPUR OF M.P., INDIA

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Abstract: The present exploration encompasses in-depth investigation on Ethnobotanical plants used as Ethno-veterinary medicine in the district of Burhanpur M.P., India. The present exploration revealed that 45 ethno-veterinary medicinal plants belonging to 43 genera under 29 families are used by tribals of Satpura range of Burhanpur district. Authors found that they are habitual to use plant parts in different formulations, leaves are predominantly used, followed by fruits, roots/ rhizomes, stem and bark.

Keywords: Burhanpur, Ethno-veterinary, Medicinal Plants, Satpura forest range.

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INTRODUCTION

Domestic animals play a very significant role in human civilization. Bio resources and humans have intimate relationship since past and depend upon each other for existence. In Indian subcontinent, the plants have played crucial role in the socio-cultural development of human race concurrently in different parts of human civilization and exerted larger impact because of varied climatic conditions and diversified socioeconomic conditions (Pandey, 2019). The traditional medicine is not only a source of healing, but the practice is also an important part of their religion and culture (Sharma and Pareek, 2021). So far as modern medicine is concerned, it is reported that more than half of the world's modern drugs are of biological sources (Prakash and Prakash, 2021; Prakash and Verma, 2021). Jain *et al.* (2006) reviewed the medicinal flora of Madhya Pradesh and

Chattisgarh. Some indigenous plants act as anticancer agents (Prakash and Upadhyay, 2021).

Now day's importance of immunity booster plants and their products are continuously being enhanced since first wave of COVID-19, which has now been declared pandemic (Kumari and Shukla, 2020; Verma and Prakash, 2020; Balwan *et al.*, 2021). *Allium sativum*, *Piper nigrum*, *Curcuma longa*, *Zingiber officinale*, *Nigella sativa* and *Syzygium aromaticum* and so many plants are used by rural and urban people to enhance the immunity in order to get protection from COVID-19 pandemic (Rao, 2021).

The knowledge of traditional medicine is mostly less documented and is transmitted orally from generation to generation thereby restricted to a particular practicing family, tribe, or section of society, which has led them to



the verge of extinction. Since due to various reasons, both natural resources and tribal culture are depleting at an alarming rate, therefore, there is an urgent need to explore and document this unique and indigenous knowledge before it is lost forever (Prakash, 2017; Prakash and Yadav, 2020). As far as studies on Ethno-veterinary medicinal plants of Burhanpur district (M.P.) is concerned, there are no availability of authentic reports. Hence, it is felt worthwhile to bring a comprehensive account on Ethno-veterinary medicinal plants of Burhanpur district.

MATERIALS AND METHODS

The study covers the areas of Satpura region of Burhanpur district of Madhya Pradesh literally means 'Central Province', and is located in the geographic heart of India, between latitude 21.2°N-26.87°N and longitude 74°02'-82°49' E. The state straddles the Narmada River, which runs east and west between the Vindhya and Satpura ranges. These ranges and the Narmada are the traditional boundary between the north and south of India. Within the forest, 26.49% of the population in Burhanpur district belongs to ST and 8.87% belongs to SC.

All the botanical explorations were carefully planned, so that as far as possible all the rounds of various forest ranges could be explored. During 2018-2020, each trip, notes related to habit, habitat, association, flower and fruit color, ethno-veterinary uses and other characters were entered in a field book. Careful attention was paid to search and collect the ephemeral plants in the region, especially during monsoon season. Plants were collected with the help of local men expert in medicine, flowers were preserved in 4% Formalin for further study and preparations of herbarium specimens and identified with the help of Flora and other literature (Jain and Rao, 1977; Chopra, *et al.*, 1956; Cookie, 1957; Haines, 1974; BSI, 1993, 1997, 2001).

ETHNO-VETERINARY MEDICINAL PLANTS

Authors collected a data of 45 ethno-veterinary medicinal plants belonging to 43 genera under 29 families, which are used by tribals of Satpura range of Burhanpur district. A list of these plants with family names, ailments, plant parts used and mode of administration are given in table 1.

Table 1: Ethno-veterinary medicinal plants.

S. No.	Plant name with family	Name of ailments	Parts of plants	Mode of administration
1.	<i>Abutilon indicum</i> (L.) Sweet, Hort. (Malvaceae)	Galactagogue	Roots	100g roots chopped with fodder to fed animals as galactagogue.
2.	<i>Acacia nilotica</i> Linn. (Fabaceae)	Jaundice Dysentery	Flower, Bark	About 200g flowers grinded well and mixed with 250 ml of water; the mixture given orally twice daily for 15-20 days to cure jaundice. The extract of bark is given to animal orally twice a day for 10-20 days to cure dysentery.
3.	<i>Adhatoda vasica</i> Nees. (Acanthaceae)	Diarrhoea and Dysentery	Leaf, Bark	Half cup leaf juice is mixed with equal amount of bark juice of <i>Syzygium cumini</i> ; administered thrice a day for one week to treat diarrhoea and dysentery.
4.	<i>Aegle marmelos</i> (L.) Correa (Rutaceae)	Sun burn	Leaf, Seed	About 500g fresh leaves are taken to form a paste by grinding and mixed with 100 ml seed oil of <i>Ricinus communis</i> . This paste is applied over skin affected till the rest from sun burn.
5.	<i>Albizia lebbbeck</i> (L.) Benth. (Leguminosae)	Galactagogue	Fruits	100g fruits chopped with fodder to fed animals as galactagogue.
6.	<i>Alternanthera sessilis</i> (L.) R. (Amaranthaceae)	Galactagogue	Whole plant	100g roots chopped with fodder to fed animals as galactagogue.
7.	<i>Allium cepa</i> Linn. (Amaryllidaceae)	Removal of Ectoparasites And Cough	Bulb, Leaf	Bulb of onion is grinded well and mixed with 100 ml of mustard oil and 25g leaf ash of <i>Musa paradisiaca</i> . The mixture so obtained is externally applied on the skin for removal of the ectoparasites. Bulb paste mixed with mustard oil and administered thrice daily for one month.

8.	<i>Amaranthus spinosus</i> L. (Amaranthaceae)	Galactagogue	Whole Plant	Whole plant chopped with fodder to fed animals as galactagogue.
9.	<i>Amorphophallus konkanensis</i> Hett. (Araceae)	Galactagogue	Corm	50g corm paste mixed with flour of wheat or jowar and fed to milch animals to increase milk yield.
10.	<i>Ampelocissus latifolia</i> (Roxb.) Planch. (Vitaceae)	Galactagogue	Roots	100g root paste mixed with flour of Jowar and fed to milch animals for three days to increase milk yield.
11.	<i>Asparagus racemosus</i> Wild. (Liliaceae)	Arthritis	Root	About 500g root powder given with milk for one month for the treatment of arthritis in cattle.
12.	<i>Argemone mexicana</i> Linn. (Papavaraceae)	Foot infection, Rheumatism	Leaf and Fruit	The juice extracted from leaves (100 g) and fruits (100 g), is applied over foots suffering from infections. Same juice is also applied over body parts for relieving rheumatic pain.
13.	<i>Azadirachta indica</i> Juss. (Meliaceae)	Wound	Bark	About 500g bark of <i>Azadi rachta</i> and 250g bark of <i>Acacia nilotica</i> is grinded and mixed with water; the paste so obtained is applied over wounds till complete recovery.
14.	<i>Bambusa arundinacea</i> Wild. (Poaceae)	Easier delivery, Diarrhoea	Leaf, Rhizome	The leaves (200g) are given to pregnant buffalo for a month twice a day to easier delivery. The paste prepared from equal amount of rhizome and fresh leaf is given twice a day for 7 days to the cattle suffering from diarrhoea.
15.	<i>Butea monosperma</i> (Lam.) Taub. (Fabaceae)	Dysurea, Paralysis	Flowers	Decoction of flowers is given to the cattle thrice a day for one month for the treatment of dysuria and paralysis.
16.	<i>Calotropis procera</i> (L.) R. Br (Asclepiadaceae)	Easier delivery	Flowers	The paste of flower (50g) mixed along with jaggery (100g) and given to animal for easier delivery.
		Snake bite	Latex	Milky latex of plants is applied externally on snakebite to neutralized poison.
17.	<i>Cassia fistula</i> Linn. (Fabaceae)	Indigestion	Pods	The paste of pods is given twice a day along with wheat bread to cattle in the case of indigestion.
		Improve appetite	Leaves	The paste of leaves is mixed along with mustard oil and given twice a day for five days to improve appetite.
		As purgative / to release constipation	Leaves and ripe pods	The young leaves are cooked and given as purgative. Paste of ripe pods is also administered for purgative purpose.
18.	<i>Coriandrum sativum</i> Linn. (Apiaceae)	Loose motion	Seeds and Leaves	The seed powder is mixed with leaves paste of <i>Lawsonia inermis</i> and given twice a daily for seven days to cure loose motion.
19.	<i>Cynodon dactylon</i> (Linn.) Pers. (Poaceae)	Increasing lactation	Aerial plant	The 30g aerial plant is given as fodder for increasing lactation and milk quality.
		Conjunctivitis	Leaves	One teaspoonful leaf juice is dropped in each eye in the morning for three days for the treatment of conjunctivitis.
20.	<i>Dalbergia sissoo</i> Roxb. (Fabaceae)	Hemorrhage	Leaves	Juice of 100g leaves is given twice or thrice in a day for one week to stop bleeding effectively.

21.	<i>Datura metal</i> Linn. (Solanaceae)	Cold	Ripe fruits	About 100g are ripen frits are made in to paste and given to cattle once daily for seven days to cure cold.
		Wounds	Leaves	A paste is prepared from 300g fresh leaves and 200g roots and given to animals once daily for 7 days to stop bleeding from the wounds and early healing.
22.	<i>Delonix regia</i> Linn. (Fabaceae)	Fever	Bark	Extract of bark is given with black pepper and garlic twice daily to cure fever.
23.	<i>Eclipta prostrata</i> Linn. (Asteraceae)	Wounds	Leaves	Fresh leaves are grinded and boiled with mustard oil. The paste is applied twice daily for 10-15 days on wounds for early healing.
24.	<i>Feronia elephantum</i> Linn. Rutaceae	Intestinal worm	Leaves	Fresh leaves are grinded well and mixed with 500 ml of water and given to cattle once daily for 10-20 days in case of intestinal worm.
25.	<i>Ficus benghalensis</i> Linn. (Moraceae)	Stomachache	Root	About 100g root is grinded well and given once daily for 3-4 days to cattle suffering from stomachache.
26.	<i>Ficus religiosa</i> Linn. (Moraceae)	Tonsils	Leaves	The juice of leaves is used to cure tonsils.
27.	<i>Hibiscus rosa sinensis</i> L. Malvaceae	Twitching	Bark	150-200g bark is grinded well and given with one liter of water, twice daily in case of twitching.
28.	<i>Holoptelia integrifolia</i> Planch. Ulmaceae	Removal of ecto-parasites	Leaves	Leaf juice is applied on the skin for removal of ecto-parasites.
29.	<i>Madhuca indica</i> J.F. Gmel (Sapotaceae)	Fever	Flowers	100g flower paste, 250g jaggery and 50 ml water is mixed and given twice a daily for seven days to cure fever of cattle.
30.	<i>Mangifera indica</i> Linn. (Anacardiaceae)	Indigestion	Fruits	The paste is obtained from 100g fruit and given along with wheat bread twice a daily for seven days to cattle to cure indigestion.
31.	<i>Mentha arvensis</i> Linn. (Lamiaceae)	Fever	Leaves	The paste is obtained from 250g leaves of <i>Mentha arvensis</i> and 200g leaves of <i>Centella asiatica</i> and given to cattle twice in a day for 7 days to cure fever.
32.	<i>Moringa oleifera</i> Lamk. (Moringaceae)	Diarrhoea, Dysentery	Leaves	200g leaf paste is given twice daily for three days to cattle for quick relief from diarrhea and dysentery.
		Rheumatism	Pods	The paste is prepared from 400g pods and given approximate one month for relief from rheumatism.
		Ulcer	Root	Juice of the roots is applied on the ulcers of cattle for healing and expels larvae of insects from it.
33.	<i>Musa paradisica</i> Linn. (Musaceae)	Body heat	Leaves	Young leaves and roots are given with fodder for one week to reduce body heat.
34.	<i>Ocimum sanctum</i> L. (Lamiaceae)	Cough, Cold	Leaves	300g fresh leaf of <i>Ocimum sanctum</i> is boiled with 200 ml water and the decoction is given to cure cough and cold.
35.	<i>Ocimum gratissimum</i> L. (Lamiaceae)	Removal of ecto-parasites	Leaves	Leaf paste is applied externally on skin of cattle for removal of ecto-parasites.
36.	<i>Oryza sativa</i> L. (Poaceae)	To enhance lactation	Grains	Grains are cooked along with black gram and salts. The recipe so prepared is given once or twice in a day for one month to enhance lactation in cattle.
37.	<i>Psidium guajava</i> L (Myrtaceae)	Fever	Leaves	One liter decoction of fresh leaves is given twice daily to cure fever.

38.	<i>Ricinus communis</i> L. (Euphorbiaceae)	Constipation	Seeds	An about 50g seed is given orally with fodder for 7 days in case of constipation of cattle.
39.	<i>Syzygium cumini</i> (L.) Skeels (Myrtaceae)	Joint pains	Bark	Equal amount of bark of <i>Syzygium cumini</i> and <i>Azadirachta indica</i> is boiled in water and the decoction prepared is spread on the affected joints to release joints pains.
40.	<i>Tamarindus indica</i> L. (Fabaceae)	Swelling	Leaves	The fresh leaves, about 200g are boiled in water and these leaves are tie up on affected part of body to cure swelling till the complete relief.
		Tongue sores	Fruits	A paste is prepared from ripe fruits and mixed with <i>Allium sativum</i> . The paste mixed with mustard oil and applied on the tongue sores.
41.	<i>Tagetes erecta</i> L. (Asteraceae)	Hydrophobia	Leaves	Decoction of 50g leaves are given once in a day for a month to cattle suffering from hydrophobia.
42.	<i>Tribulus terrestris</i> L. (Zygophyllaceae)	Colic, Cough	Leaf	Juice of fresh leaves is given to animals in case of colic and chronic cough.
43.	<i>Trigonella foenum-graecum</i> L. (Fabaceae)	Easier delivery	Seeds	About 100g sprouted seeds are given to pregnant animal once daily for one month for easier delivery.
		Twitching	Seeds	About 25g dried seeds powdered and given twice daily for 5 to 7 days to animal suffering from twitching.
44.	<i>Zingiber officinale</i> Ros (Zingiberaceae)	Physically disability	Rhizome	About 100g fresh rhizomes are boiled in half liter of cow milk and given to physically disable animal twice a day for 15 days.
45.	<i>Vitex negundo</i> L. (Verbenaceae)	Diarrhea	Leaf	Dried leaves mixed with fodder and given to the cattle for one week to cure diarrhea.

In this way, authors compiled first-hand information on the Ethno-veterinary medicinal plants used by tribals, another rural folklore people of the district Burhanpur. Healers never charged any fee for treatment; however, they ask farmers to bring additives like pepper, chilies, curcuma powder, jaggery etc. while preparing medicine. A total of 45 remedies were recorded for veterinary diseases of which 33 remedies were recorded under digestive disorders, 3 stomach pain and 3 for constipation.

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