

Ethno – veterinary Plants of Nadurbar district of Maharashtra, India

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ABSTRACT:

A survey of medicinal plants of Nandurbar district of Maharashtra, India in regard to their veterinary uses, has been done. While collecting the data, special emphasis is given to the foot and Mouth disease, Haemorrhagic Septicaemia, Maggotted Wounds, Retention of Placenta, Timpany and Worms, which are the most common animal ailment in the district. After short listing, about 29 plant species are found to be in regular use by various tribal veterinary doctors in the district.

Key Words: Ethno-veterinary medicinal plants; Nandurbar Districts; Maharashtra; India.

STUDY AREA

Nandurbar District, a part of the Deccan plateau is situated in the northern part of the Maharashtra state, with an area of 4933 Km.2 between 21°N to 21.32° N latitudes and 73.34° E to 74.31° E longitudes (Fig.1) it lies in the valley of Tapi and Satpuda mountains. The district can be divided into hilly tracts and undulating plain areas. The hillocks of Satpuda are flat-topped and plain. Highest elevation is recorded at Toranmal hills rising up to 3373 ft. with a lake on its top. Very small part of Narmada basin is towards the west.

The district is made by deccan trape. Tapi River and its tributaries pass alluvial soil, while southern part posses mountainous gravelly soils. Black cotton soil is very common through out the district. Climate on the whole is dry except during South – west monsoons which begins in June and lasts till about September – October. The

average rainfall of the area is 1201.8 mm. the temperature rises in the later part of February, May being the hottest month of the year. The highest temperature recorded is 47° C in May. Relative humidity in monsoon period is 70% and 25-30% in other months.

POPULATION

Nandurbar district is one tribal district of Maharashtra state. The Bhils, Gamits, Gavits, Kokanis, Mavachis, Pasvis, Pawaras, Tadavi, Valvis and vasaves are the various ethnic group have their own dialect viz Pavari, Mavchi, Bhili, Kokani etc. The tribal population is about 661,000 making 62.18% of the total population (1991).

Many areas are inaccessible and devoid of modern facilities. Modernization has very little effect on their socio-economic aspects.

They have their own peculiar tradition, festivals, ceremonies, music, dresses and ornaments.

AIM OF THE STUDY

The knowledge about the plants is normally an inherited property of these tribal doctors. These plant medicines indeed to be brought into lime light as they are the cheapest and readily available remedies for the common ailment of the animals. Animal health-care has been an integral part of Indian tradition and indigenous knowledge. There are many ancient treatises on upkeep of domestic animals; there is also rich oral tradition among the folk.

Our survey has revealed that there is an urgent need for a very detailed survey, for two reasons: 1. Due to lack of recording of the knowledge, there is a danger of it's being lost in course of time as it is only orally transmitted from father to child of rarely from a teacher to disciple:2. The plants identity and preservation pose another problem as many plants are only seasonally available. On the other hand, due to gradual dwindling of the forest, once extensively used plants are now becoming a rare commodity and perhaps might become extinct if not conserved in time.

PREVIOUS KNOWLEDGE ON LOCAL FOLK MEDICINE

As such the work on plant medicines in Veterinary uses is meager except a few reports 1-16. To the best of our knowledge, there is no report regarding plant medicines used for common ailment in this tribal district. The present endeavor was therefore aimed to survey the most useful plants used by the tribal of Nandurbar district to cure the common ailments of the animals such as foot and Mouth disease, Haemorrhagic

Septicaemia, Maggotted wounds, Retention of Placenta, Timpany and worms. So, 29 plants have been recorded to be in regular use.

METHODOLOGY

The study was performed during 1999-2002 covering 442 villages in the forest area under 6 Tahasils viz Akkalkuwa, Dhadgaon, Nandurbar, Navapur, Shahada and Taloda of the district. The information was collected during field trips on basis of interviews with the tribal doctors. In every 2-3 village, there is a prominent tribal doctor, who treats the cattle in and around his village. Total 74 tribal doctors have been visited. Upon repeated enquires, changing the pattern of questioning like showing the plant collected from one tribal doctor to another of a distant locality and asking him for its use as medicine in skin diseases and vice-versa, it is found that their knowledge about indigenous plant medicines is astonishingly same, indicating their positive validity which is gained over time and trial and error basis, perhaps. All the collections are housed in the herbarium of the G.T.P College, Nandurbar-425412, and Maharashtra, India.

RESULT

Reported in a Table, the list of plants (in an alphabetical order) with their botanical name followed by family name, voucher number, vernacular names, in English, (wherever possible), Marathi Tribal languages and plant parts used, ailment treated preparations, mode of use and number of citation with percentage.

CONCLUSION

Our extensive field survey on medicinal plants of Nandurbar district resulted in the

identification of 29 most potential plant species belonging to 23 different angiosperm families used in curing 6 common ailments of animals viz. Foot and Mouth disease, Haemorrhagic Septicaemia, Maggotted wounds, Retention of Placenta, Timpany and Worms (Dr. G. N. Dange, Principal, Livestock supervisor's Training centre, Dondaicha, Dhulia district, Maharashtra, India).

Our survey indicates that there is an urgent need to conduct a detailed survey and also to promote measures for conservation of both the traditional knowledge and plant species. Some of the plant viz. *Boswellia serrata*

(S.Sharma; 1983), *Hemidesmus indicus* (V.D. Vartak; 1983), *Semicarpus anacardium* (G.L.Shah; 1983), *Tragia heldebraandtii*, and *Trichodesma indicum* are under severe threat and are likely to become extinct at least from this part of the country.

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TABLE

Sr. No. A2	Botanical Name, Family and Voucher specimen number	Local Name	Part used	Uses/Ailments treated	Preparations	Mode of use	Citation	
							(n)	(%)
1	2	3	4	5	6	7	8	9
1	Abrus precatoriousL.Fabaceae, MBP-27	Crab's eye Gunj, Tingali	Seed	Retention of placenta	5-6 seeds made into paste	Given orally once	68	91.8
2	Acacia Arabica Auct. Mimosae, MBP-8	Indian gum Arabic Tree, Babhul, Babal.	Pod	Foot and Mouth disease	Paste with warm ground nut oil	Applied externally in the gaps of hooves	62	83.7
3	Aegle marmelos (L) Corr. Rutaceae, MBP-8.	Bengal Quince, Bel,Bili	Bark	Haemorrhagic septicaemia	Barks of this plant and sissou burnt.	The animal is made to inhale the smoke	58	78.3
4.	Ailanthus excelsa Roxb.Simaroubaceae, AVM -19	Tree of heaven, Maharukh, Vorulo.	Leaf	Worms	One litre leaf extract.	Given orally once	70	94.5
5	Allium cepa L. Liliaceae, MBP-83	Onion, Kanda,Kando	Bulb	Worms	Bulb used along with gralic	Orally once a day	65	87.8
6	Allium sativaL. Liliaceae, MBP - 89	Gar;oc,Lasun,Gondalo	Flakes of garlic	Worms	Flakes of garlic, cuminum seeds, onion, asafetida and chilli powder made into paste.	Given orally once	66	89.1
7	Aristolochia bracteolata Lam. Aristolochiaceae, AVM - 16	Worm killer, Kidamari giden.	Leaf	Maggotted Wounds	Leaf Juice.	Applied externally	62	83.7
8	A. bracteolata Lam. Aristolochiaceae, AVM-16	Worm killer, Kidamari giden.	Fruites	Timpany	1-2 fruits crushed in water	Given orally.	65	87.8
9	A. bracteolata Lam. Aristolochiaceae, AVM-16	Worm killer, Kidamari giden.	Leaf	Worms	Leaf Juice.	Given orally once in a day, for 2-3 days	59	79.7
10	Boswellia serrala Roxb. Burseraceae,AVM -9	Indian olibanum tree, Salai, Gungulo	Bark	Timpany	250 grams of fresh bark ground in half to 1 litre of water and filtered with cloth.	Given orally once	59	79.7
11	Caesalpinia bonnducella (L) Flem Caesalpinaceae, AVM-9	Fever nut tree,Gaja,Sagargota	1.Leaf 2.Seed	Timpany Timpany	1. one litre Leaf Juice 2. one seed roasted, powdered and mixed in 1litre of water	Given orally once Given orally once	62	83.7
12	C.bonducella(L) Flem Caesalpinaceae,AVM-9	Fever nut tree,Gaja,Sagargota	Leaf	Worms	one litre Leaf Juice	Given orally once	64	86

13	<i>Calotropis gigantea</i> (L.)R.Br. Asclepidaceae, MBP-60	Giant milk weed, Rui, Ruvandi	Latex	Foot and Mouth disease	Latex mixed with groundnut oil	Applied externally on a spot where the hairs on the back of the animal show curling in to a circle	50	67.5
14	<i>Capsicum annunt</i> L. Solanaceae, MBP-20	Giant milk weed Rui,Ruvandi	Chilli	Timpany	Chilli powder taken in a cloth dipped into a water to obtain extract.	Two to three drops dropped into nose	58	78.3
15	<i>Cassia fistula</i> L. Solanaceae, MBP-199	Indian Laburnum, Bavha, kervalo	Pulp of fruit	Worms	Pulp of fruit crushed in water	Given orally	60	80
16	<i>Coriandrum satvum</i> L. Apiaceae, PVR-50	Coriander, Kothimbir, Kothambro	Whole Plant	Foot and Mouth disease	Whole plant	Given along with fodder	72	97.2
17	<i>Cuminum trigonus</i> Roxb. Cucurbitaceae, PVR - 47	Kateri, Halacjrp	Root	Worms	Root paste	Given orally once	65	87.8
18	<i>Cuminum cyminum</i> L. Apiaceae, MRP - 210	Cumin seeds, Jira, Jiru	Seed	Worms	Seeds used along with garlic onion, asafetida, chilli powder made into paste.	Given orally once	70	94.5
19	<i>Curcuma longa</i> L. Zingiberaceae, MBP-290	Turmeric, Halad, Edo	Rhizome	Haemorrhagic Septicaemia	Rhizomes	Applied externally when warm.	65	87.8
20	<i>Dolichandrone falcate</i> Se em. Bignomiaceae, AVM-51	Medhshingi, Menhingi	Bark	Timpany	Handful of bark ground and put into one litre bottle of water	Given orally, half bottle in the morning and half in the evening.	50	67.5
21	<i>Enicostemma littorale</i> Bl. Gentianaceae, PVR – 22	Kadvinai, Kodvinai	Leaf	Timpany	Leaf juice along with water.	Given orally	68	91.8
22	<i>E.littorale</i> Bl. Gentianaceae, PVR -22	Kadvinai, Kodvinai	Leaf	Worms	Leaf juice along with water.	Given orally	62	83.7
23	<i>Euphorbia neriifolia</i> L. Euphorbiaceae, PVR-5	Spurge cactus, Sabar, Nivdung	Latex	Haemorrhagic Septicaemia	Latex and groundnut oil mixed with black cotton soil	Applied externally	65	87.8
24	<i>Hemidesmus indicus</i> (L) Suchult Periplocaceae, PVR-57	Indian Sarsaparilla, Upalsari, Aadudi.	Root	Retention of placents	Handful of roots along with grass	Fed orally	51	68.9

25	Morinda tomentosa Heynees Roth Rubiaceae, PVR -55	Indian Mulberry tree, Bar-tondi,Aali	Bark	Timpany	Bark infusion	Given orally.	50	67.5
26	Momordica chanantia L. Cucurbitaceae, MBP -44	Bitter gourd, Karle, Kaa- ale	Leaf	Foot and Mouth disease	Leaf Juice along with tobacco poeder.	Packed between hooves	68	91.8
27	M.charantia L. Cucurbitaceae, MBP-44	Bitter gourd, Karle, Kaa- ale	Fruit	Maggotted Wounds	Fruit juice.	Applied externally given orally once	60	80
28	Oryza sativa L. Poaceae, AVM - 18	Rice, tandool, chokha	Seed	Retention of placenta	250gams of seeds and 20gms of gingely seeds	Given orally once	68	91.8
29	Semecarpus anacardium L.F. Anacardiaceae, PVR - 56	Making nut tree, Bibba, Bhilamo	Seed	Foot and mouth Disease	Seed powder	Applied externally	58	78.3
30	S. anacardium L.F. Anacardiaceae, PVR-54	Making nut tree, Bibba, Bhilamo	Seed	Maggotted Wounds	Seed powder	Applied externally	61	87.8
31	Sesamum indicum L Pedaliaceae, PVR -56	Sesame, Til,Tili	Seed	Retention of Placenta	20gms of seeds with 250gms of rice seeds.	Given orally once	68	91.8
32	Trachyspermum amami(L.) Sprague.Apiaceae, AVM -31	Bishops weed, Onva, Ajamo	Seed	Timpany	Seed roasted, poedered and boiled with water	Given orally when warm	50	67.5
33	Tragia heldebrandti Muell.Arg. Euphorbiaceae, PVR-32	Kolti, Aagya gavat.	Root	Maggotted Wounds	Handful of roots	Fed orally	60	80
34	Trichodesma indicum(L) R.Br. Boraginaceae, PVR - 32	Chota kolpa,Agaya-khod	Twig	Maggotted Wounds	One twig	Fed orally once	58	78.3
35	T. indicum(L) R.Br. Boraginaceae, PVR -32	Chota kolpa,Agaya-khod	Twig	Maggotted Wounds	One twig	Fed orally once	62	83.7
36	Vernonia antihelminctica(L) Willd asteraceae, PVR-29	Kadu-jire,Kali-jire	Seed	Worms	Handful of seed boiled in one litre of water till it becomes half	Given orally for 2-3 days	70	94.5

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