

Ethnoveterinary plants used against different ailments from West nimar region of M.P. India

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ABSTRACT

Study was carried out in West nimar region is located in the south western region of M.P. Ethnoveterinary data were collected from year 2016-2017 Bhil, Bhilala, Gond, Nayika and Tadwi are dominant tribe of the region. They are dependent on plant based medium and other for recovery of their ailment. A total 28 plant species belonging to 23 families were documented in the area. The most frequently used plant parts were leaves (30%) followed by seeds and roots (16%), fruits (9%), whole plant (7%), tubers, bark and stem (5%), latex (3%), flower and rhizomes (2%) are used in against different 21 ailments.

Keywords: Ethnoveterinary, Nimar, Khargone, Bhil, Bhilala, Gond, Nayika and Tadwi.

INTRODUCTION

The history of ethnoveterinary medicine is as old as the evolution of man on earth. Human and animal relationship was so close from the beginning. Veterinary science was developed in India as early as the Vedic period. The Rig-Veda (4500 - 1600 B.C.) mentions the uses of medicinal plants in the treatment of man and animals. Atharveda (3500 - 500 B.C.) provides information about healing herbs and drugs. West nimar presently consists of two district Khargone and Barwani is the south western region of Madhya Pradesh state in West Central India was formerly known as West nimar. The region lies south of the Vindhya range and consists of two portions of the Narmada and Tapti river valleys separated by a section of the Satpura range. It is situated between 21°22' and 22°35' north latitudes, 74°25' and 76°14' east longitudes. It is famous for its cotton and chilly production. The district is divided into 08 tehsils and has 1407 villages. About 40% of the population consists of tribal people. Bhil, Bhilala, Gond, Nayika and Tadwi are most common tribes. Tribals mostly rear cow, goats, buffaloes and bullocks as livestock.

MATERIAL METHODS

Ethnoveterinary survey was carried out and ethnoveterinary data collected from different villages of West nimar of M.P. covering 09 Tehsil (Khargone, Segaon, Bhagwanpura, Jhiranga, Bailgaon, Barwah, Kasrawat, Barwani, Thikri, Niwali). Bhil, Bhilala, Gond, Nayika and Tadwi are most common tribes.

The information was gathered through questionnaire method and interviews. Field observations and discussions with tribal, local medicine men known as Ojha, Bumka, Bagwat, elderly persons, cattle owners was held during survey. Details of medicinal plants used, mode of treatment, methods of preparation and types of administration doses were recorded by interacting with them. The plants are arranged alphabetically, the botanical name, local name and family. Identification of plants done with the help of flora and other taxonomic literature.

Observation Table

1. *Abrus precatorius* L.

Family: Leguminosae

Local name: Ratti and Guraj.

Plant Part Used: Seeds

Ethnoveterinary Uses:

- 10 gm paste of seeds is fed to cattle in bone fracture.
- Paste of seed powder in coconut oil is used for wound healing.

2. *Acacia nilotica* (L.) Willd.

Family: Leguminosae

Local name: Babul, Kikar, Desi babool.

Plant Part Used: Leaves and bark.

Ethnoveterinary Uses :

- Fresh leaves are crushed and mixed with 100 ml of water is given orally in dysentery of cattle.
- Decoction of bark is applied over the hooves to cure foot and mouth diseases.

3. *Acanthospermum hispidum* DC.

Family: Compositae

Local name: Bada gokhru.

Plant Part Used: Leaves and seeds.

Ethnoveterinary Uses:

- Leaf ash mixed with coconut oil applied around horns of animals suffering from worms.
- Smoke produced by burning seeds is used to treat hemorrhagic septicemia.

4. *Achyranthes aspera* L.

Family: Amaranthaceae

Local name: Aandhi jhada, Apmarg.

Plant Part Used: Leaves and seeds.

Ethnoveterinary Uses:

- 50 gm leaves mixed with 100 ml mustard oil are given orally to cure gastritis.
- Seeds are burnt and the animals are exposed to smoke to treat hemorrhagic septicemia.

5. *Ailanthus excelsa* Roxb.

Family: Simoroubaceae

Local name: Maharukh, Addoo, Papdi.

Plant Part Used: Leaves.

Ethnoveterinary Uses:

- Leaves juice is used to kill lice and ticks on the skin of cattle.
- Decoction of leaves is applied to remove maggots from the wound.

6. *Albizia procera* (Roxb.) Benth.

Family: Leguminosae

Local name: Karak, Safed siris.

Plant Part Used: Roots and leaves.

Ethnoveterinary Uses:

- Leaves juice is dropped in to eyes to cure eye trouble.
- Root paste in cow's urine is applied in eyes against night blindness.

7. *Alangium salviifolium* (L.f.) Wang.

Family: Cornaceae

Local name: Ankol

Plant Part Used: Leaves and stem.

Ethnoveterinary Uses:

- Leaves paste or extract used in washing and healing of wounds.
- Stem bark juice is mixed with *Citrus limonia* (Lemon) juice given orally, 2-3 times a day to cure cough and sneezing in cattle.

8. *Asparagus racemosus* Willd.

Family: Asparagaceae

Local name: Shatavari, Sevarya, Shatmul, Musli.

Plant Part Used: Roots.

Ethnoveterinary Uses:

- Roots mixed with fodder given to the milching animals to increase lactation.
- Root paste mixed with the paste of *Allium cepa* (Onion) and jaggery given orally to cure mastitis

9. *Azadirachta indica* A.

Family: Meliaceae

Local name: Neem, Neemdo.

Plant Part Used: Leaves and seeds.

Ethnoveterinary Uses:

- Leaves paste is used for killing ectoparasites.
- Seed oil or decoction of leaves is applied on hooves of cattle in foot and mouth disease.

10. *Balanites aegyptiaca* (L.) Delile

Family: Zygophyllaceae

Local name: Hingot, Hinganbet.

Plant Part Used: Seeds

Ethnoveterinary Uses:

- Paste of seeds fed to cattle for expulsion of placenta.
- Seeds paste mixed with water is given to animal twice a day to cure neck inflammation.

11. *Capsicum annuum* L.

Family: Solanaceae

Local name: Lal mirch, Marchaya.

Plant Part Used: Roots, leaves and fruits.

Ethnoveterinary Uses:

- Crushed leaves are used for wound healing and swelling of body parts.
- Root extract (two cups) is given twice a day for snake bite.
- Fruit powder with jaggery given to cattle in stomach disorders and to improve digestion.

12. *Catunaregam spinosa* (Thunb.) Tirveng.

Family: Rubiaceae

Local name: Purput, Kalapendra.

Plant Part Used: Fruits, whole plant and leaves.

Ethnoveterinary Uses:

- Fruits or leaves are boiled in water, cooled and applied on wounds of cattle.
- Plant extract mixed with fodder is used to treat diarrhoea.

13. *Cleome viscosa* L.

Family: Cleomaceae

Local name: Hulhul or Machundi.

Plant Part Used: Leaves and whole plant.

Ethnoveterinary Uses:

- Leaf paste mixed with tobacco leaves is applied to remove ectoparasites from the skin of animals.
- Whole plant powder is given to animal along with bread two times a day to cure 'black quarter' disease.

14. *Crinum viviparum* (Lam.) Ansari & V. J. Nair.

Family: Amaryllidaceae

Local name: Sudarshan, Govel, Nagadamani.

Plant Part Use: Roots.

Ethnoveterinary Uses:

- The extract of bulbous root is slightly warmed and applied externally to cure stomach pain.
- Juice of bulbous root is given to cattle in fever.

15. *Cucumis melo* L.

Family: Cucurbitaceae

Local name: Phoot, Kharbooj.

Plant Part Used: Fruits.

Ethnoveterinary Uses:

- Fruit paste mixed with whey is given orally to cattle for 3 days to cure dysentery.
- Fresh fruits are fed with fodder to expel placenta after delivery.

16. *Euphorbia hirta* L.

Family: Euphorbiaceae

Local name: Thaur, Dudhai.

Plant Part Used: Leaves and latex.

Ethnoveterinary Uses:

- Crushed leaves mixed with fodder given to cattle to increase lactation in cattle.
- Latex is applied on wounds for quick healing.

17. *Gloriosa superba* L.

Family: Colchicaceae

Local name: Kaliharikand, Kallavi, Karkari.

Plant Part Used: Roots and tuber.

Ethnoveterinary Uses:

- Tubers are crushed and paste is applied over the hooves of cattle to cure foot and mouth disease.
- Tuber is rubbed and applied on swelling of neck of cattle.
- Root paste is applied on uterus to cure prolapsed uterus.

18. *Grewia hirsuta* Vahl, Symb.

Family: Malvaceae

Local name: Gadsatri, Gursakri.

Plant Part Used: Roots.

Ethnoveterinary Uses:

- Dried root powder mixed with water is given to cattle to treat bone fractures.
- 50 ml of roots decoction is given to cattle after delivery for quick removal of placenta.

19. *Madhuca longifolia* var.

Family: Sapotaceae

Local name: Mahua, Moho.

Plant Part Used: Flowers and stem.

Ethnoveterinary Uses:

- Flower decoction is given to calves to expel intestinal worms.
- Decoction of stem bark is applied on hooves and bandaged in foot rot disease.

20. *Pueraria tuberosa* (Roxb. ex Willd.) DC.

Family: Leguminosae

Local name: Bhui kola, Bidari kand, Gajua.

Plant Part Use: Tubers.

Ethnoveterinary Uses:

- Tubers are fed to cows and buffaloes with fodder to increase secretion of milk.
- Tubers are crushed and mixed with jaggery. The decoction along with *Curcuma amada* (Amba haldi) sendha salt and *Triticum aestivum* (Wheat) flour is fed to animals to get strength.

21. *Riccinus communis* L

Family: Euphorbiaceae

Local name: Arand, arandi, Aandi.

Plant Part Used: Leaves and seeds.

Ethnoveterinary Uses :

- Seed oil and decoction of *Capparis zeylanica* (Hur hur) is applied to reduce pains in joints of cattle.
- Leaves are slightly warmed and bandaged over bone fracture.

22. *Sapindus emarginatus* Vahl, Symb.

Family: Sapindaceae

Local name: Aritha, Reetha.

Plant Part Used: Fruits.

Ethnoveterinary Uses:

- Fruit powder and seeds stirred in water and administered to cattle to cure in snake bite.
- Decoction of fruits given orally in asthma and dysentery.

23. *Sesamum indicum* L.

Family: Pedaliaceae

Local name: Til.

Plant Part Used: Seeds.

Ethnoveterinary Uses:

- Seeds with jaggery (20 mg) are given to cows and buffaloes to increase lactation.
- 200 gm. seed oil is given orally to domestic animals to cure foot and mouth disease.

24. *Tephrosia purpurea* (L.) Pers.

Family: Leguminosae

Local name: Sarpenkha, Sarphonka.

Plant Part Used: Leaves and whole plant.

Ethnoveterinary Uses:

- Leaves crushed and applied on wounds of cattle for quick healing.
- Plant is boiled in water, filtered and given orally to cure haematuria.

25. *Terminalia arjuna* (Roxb. ex DC.) Wight & Arn.

Family: Combretaceae

Local name: Kau, Kahu.

Plant Part Used: Bark

Ethnoveterinary Uses:

- Bark paste is plastered over bone fracture and bandaged for fast recovery.
- Paste of fresh bark is given to cows for removal of placenta after delivery

26. *Trachyspermum ammi* (L.) Sprague in Kew Bull.

Family: Apiaceae

Local name: Ajwain.

Ethnoveterinary Uses:

- Decoction of seed powder with sugar and *Ferula asafoetida* (Heeng) is given orally to buffaloes to cure stomach disorders and bloat.
- 80-100 gm. seeds are powdered and mixed with jaggery and paste is given orally to cow and buffaloes twice a day for removal of placenta.

27. *Zingiber officinale* Roscoe.

Family: Zingiberaceae

Local name: Adrak.

Plant Part Used: Rhizome.

Ethnoveterinary Uses:

- Rhizome paste with leaf paste of *Aloe vera* (Guar patha) applied on swelling of udder in cattle.
- Dried rhizome mixed with black salt is given for three days to cure indigestion.

28. *Ziziphus nummularia* (Burm. f.) Wight & Arn.

Family: Rhamnaceae

Local name: Chinya bor, Jharbari, Jharbar.

Plant Part Used: Leaves and roots.

Ethnoveterinary Uses:

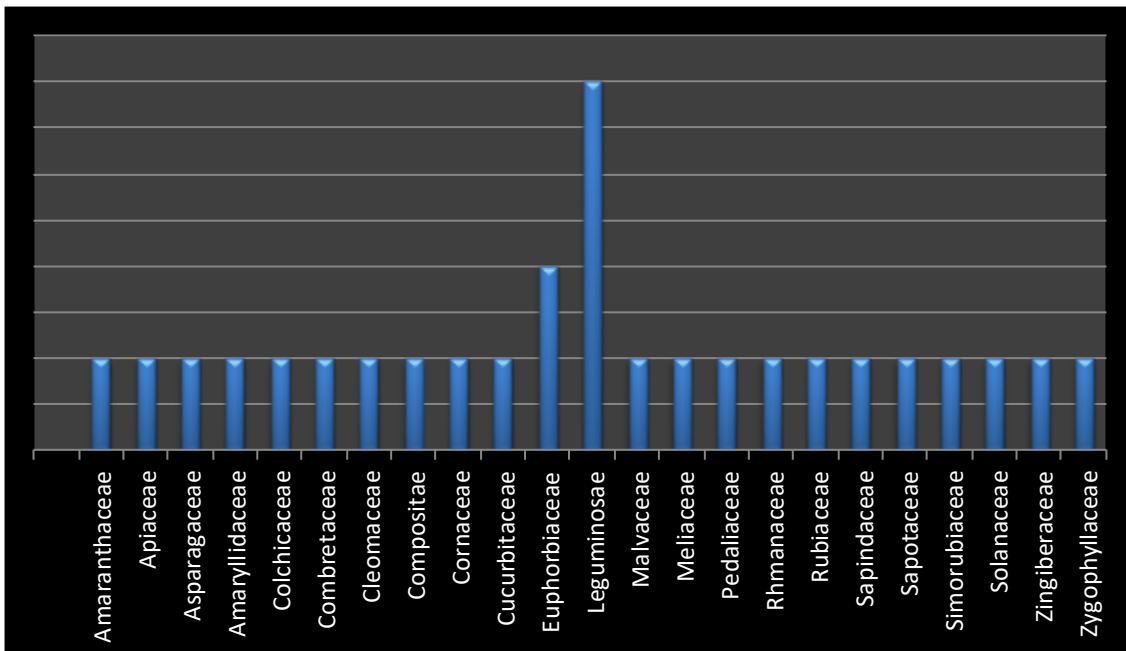
- Leaves pounded finely in *Linum usitatissimum* (Alsi) oil to form a paste. It is applied on burnt parts of animals till cure.
- Root crushed and mixed with water is applied on the shoulder pain of the bullocks.
- Decoction of root is applied on hooves and oral cavity in foot and mouth disease of cattle.

RESULTS & DISCUSSION

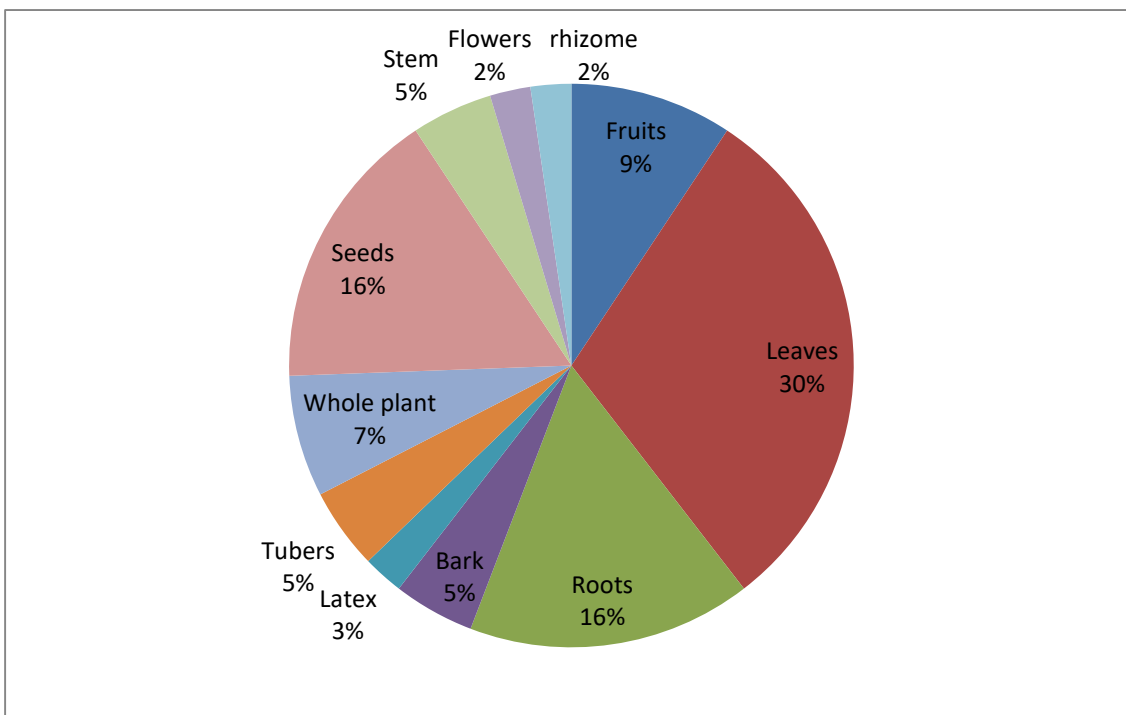
Present study reveal that 28 plant species are used in 21 different ailments of cattle in West nimar of M.P. Total 28 plant species belonging to 23 families were documented in the area. Common diseases of cattle are wound healing, swelling, expulsion of placenta, mastitis, gastritis, foot and mouth disease. Leguminosae is

dominant among the families. The most frequently used plant parts were leaves (30%), followed by seeds and roots (16%), fruits (9%), whole plant (7%), tubers, bark and stem (5%), latex (3%), flower and rhizomes (2%) Single and combination of different plant parts is used to treat various ailments. Tribals used to cure single disease

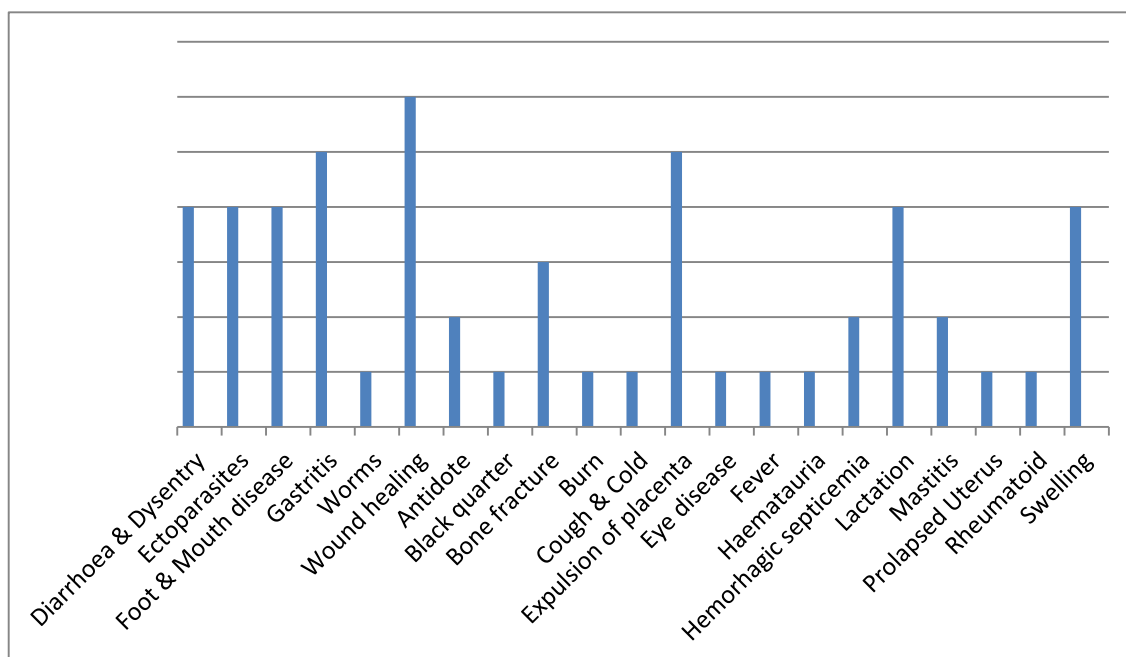
of animals by using different plant species. These study indicates that tribals have sufficient knowledge about the therapeutic uses. The low cost and almost no side effects of these preparations make them sustainable by the local community.



Different Families used in the treatment of Cattle.



Different Plant parts used in the ailments of Cattle.



No. of Plants used in different diseases of Cattle.

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