Environment & Ecology 29 (2A) : 866—868, 2011
 ISSN 0970-0420

Ethno-Veterinary Study of a Few Plants in Two Villages of Thiruvananthapuram

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Abstract

A field survey was carried out to document the traditional knowledge of ethano-veterinery practices. This paper deals with 28 plant species and their various prescriptions for veterinary medicines in use among the villagers. The most widely sought after plant parts in the preparation of medicines are the leaves and stem bark. A proper documentation of traditional knowledge and practice is urgently needed. The traditional knowledge is a wealth for human being and has value in the context of today's intellectual property rights (IPR) scenario.

Key words : Traditional knowledge, Ethno-veterinary, Livestock.

Most of the knowledge about plants and many native local languages are becoming extinct. Ethan botanical studies were carried out by a number of workers (1). Several plants are found to be effective against various diseases (2). Therefore, it is urgent and important that these must be preserved and properly documented before the information is lost for ever (3). The purpose of the present study was to survey and document the traditional knowledge used in veterinary practices by the local people.

Methods

A field survey was carried out between September 2008 to February 2009 to document the traditional knowledge of ethno-veterinary practices in two villages, Vattappara and Vizhinjam. In collecting data participatory learning approach (PLA) tools and individual interviews were carried out. The respondents were farmers, elders and local herbalists. An average of 4 days in each month was spent to document the information. Plant specimens were collected during field visits and voucher specimens prepared for the herbarium. The biographical data of the healers were recorded which could be used for future reference.

Results and Discussion

The botanical names of the plants are arranged alphabetically, followed by family and ethno-veterinary uses. About 28 medicinal plants which are commonly used by local traditional herbal practitioners for curing various livestock diseases are documented below.

1. *Adhatoda vasica* Nees. (Acanthaceae). The leaf extracts is used as an expectorant especially in chronic bronchitis and asthma. It relieves cough and breathlessness.
2. *Allium sativum* L. (Liliaceae). The bulb is used as a good medicine for urinary diseases and udder diseases. A decoction prepared from bulbs, green chillies, black pepper and cardamom seeds are given 2—3 times for dysentery.
3. *Anona squamosa* L. (Annonaceae). Leaf extract is insecticidal. Leaves and fruits are used against tumors.
4. *Aristolochia indica* L. (Aristolochiaceae). The juice of the fresh leaves is applied on ulcers and wounds of the cattle in order to prevent microbial growth and fast healing.
5. *Asparagus racemosus* Wild. (Asparagaceae). Paste of fresh root is applied on the swelling and also on the body of cattle 1—3 times daily to remove ectoparasites.
6. *Azadirachta indica* A. Juss. (Meliaceae)- In case of arthritis, massage on the affected parts with seed oil, for 3—4 times daily is very effective.
7. *Bambusa vulgaris* Schrad. Ex J. C. Wendl.

(Poaceae). Leaf is considered antipyretic and diuretic, with action to encourage the flow of urine and suppression of fever.

8. *Cardiospermum halicacabu* L. (Sapindaceae). The whole plant is diaphoretic, diuretic, laxative, refrigerant, stomachic. It is also used in the treatment of rheumatism.
9. *Centella asiatica* L. (Apiaceae). Leaves are used to cure mastitis.
10. *Citrus aurantium* L. (Rutaceae). For treating odema of jaws ; bulbs of *Allium sativum*, fruits of *Citrus aurantium* and leaves of paddy are crushed and made into a pasate. After mixing with water it is given twice or thrice daily.
11. *Clerodendron infortunatum* L. (Verbinaceae). The juice of the leaves is believed to possess anthelminitic properties.
12. *Coffea arabica* L. (Rubiaceae). Coffee beans are powdered and applied on wounds once or twice daily till the wounds are healed.
13. *Coriandrum sativum* L. (Apiaceae). Seeds are also used in traditional Indian medicine as a diuretic by boiling equal amounts of coriander and cumin seeds, then cooling and consuming the resulting liquid.
14. *Cocos nucifera* L. (Arecaceae). White powedery coating present on the young parts of leaves is scrapped out and applied 1—3 times daily as dressing on fresh wounds for fast healing.
15. *Curcuma longa* L. (Zingiberaceae). It is also used as an antibacterial agent. Oral administration of powered rhizome gives relief in cases of asthma and cough. Juices of fresh rhizome is applied to recent wounds and bruises.
16. *Cyperus rotundus* L. (Cyperaceae). The plant is mentioned in the ancient Indian Ayurvedic medicine Charaka Samhita (ca. 100 A.D). Modern Ayurvedic medicine uses the plant for treating fevers and digestive system disorders.
17. *Gymnema sylvestre* R. Br (Asclepiadaceae). Application of leaf juice 2 or 3 drops into affected eye twice daily for two days to cure eye discharge.
18. *Leucas aspera* R. Brown (Lamiaceae). Fumigation near the sick animal to control phemeral fever once a day till cured. Pour 2—3 drops of leaf juice into the nose to get relief from HCN poison one time only.
19. *Mangifera indica* L. (Anacardiaceae). To treat foot and mouth disease, stem bark of the plant is crushed and boiled in water after mixing with soil from paddy field. Floor of the cattle shed is then lined with this mixture in such a way that it covers the hoof of the cattle, for 5 days to cure the disease.
20. *Ocimum sanctum* L. (Lamiaceae). In case of pyrexia, entire plant is crushed with dried ginger, black pepper, leaves of *Murraya koenigi* and coffee beans and boiled water. The decoction thus prepared is given for 1—5 days, till the fever is subsides.
21. *Piper betle* L. (Piperaceae). Leaves of piper betel and small amount of *Nicotiana tabacum* are chewed and spit forcely into the eyes of the cattle to cure conjunctivitis.
22. *Piper nigru* L. (Piperaceae). Grind 10g seeds with 25g of *Brassica nigra* and mix it into 500 ml warm water and drench once to cure bloat.
23. *Psidium guajava* L. (Myrtaceae). In the case of maggot, paste made of young leaves is applied on wounds two times a day for three days.
24. *Solanum nigrum* L. (Solanaceae). Paste prepared from leaves of *Solanum nigrum* and a fruit of *Cuminum cyminum* is given orally to cattle for three days to cure ephemeral fever.
25. *Tamarindus indica* L. (Fabaceae). Fruit, leaves, and bark also have medicinal applications. It is used as an Ayurvedic medicine for gastric and/or digestion problems, cardioprotective activity.
26. *Terminalia bellirica* L. (Combretaceae). Bark of plants are crushed and applied once daily on wounds and bound with a cloth bandage, till the wounds are healed.
27. *Tribulus terrestris* L. (Zygophyllaceae). Upset stomach can be usually counteracted by taking it with food.
28. *Vitex negundo* L. (Verbenaceae). The leaves are applied to rheumatic swellings of the joints and in sprains. They may be applied locally to swellings from rheumatic arthritis and sprains.

Most of the remedies consist of only one species ; some are mixture of species which add to enhance their efficacy to cure diseases. It was found that nearly 70% of the practices had supportive evidence from Ayurveda and modern pharmacology on their prescribed uses (4). Documentation of the plants

will help in the conservation of medicinal plants. There is an urgent need to conserve them before they are extinct due to over exploitation. The traditional medicinal system gives better results in drug resistance disease with zero side effects (5). Ethno-veterinary information is in danger of extinction because of the current rapid changes in communities all over the world.

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