INTERNATIONAL JOURNAL OF APPLIED BIOLOGY AND PHARMACEUTICAL TECHNOLOGY

Volume: 3: Issue-1: Jan - Mar-2012 *ISSN 0976-4550*

Accepted: Nov-2011 *Research Article*

ETHNOVETERINARY PRACTICES ASSOCIATED WITH ANIMAL HEALTHCARE IN DANG DISTRICT OF SOUTH GUJARAT, INDIA

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ABSTRACT: The paper deals with the indigenous knowledge of local communities on medicinal plants used for curing various diseases in Dang district, Gujarat state. Information collected is based on interview and observation was cross-checked with traditional herbal practitioners in the region. Adivasi, Kukunas, Kamits, Bhika, Warlis, and Kunbis are the chief communities in this area. This study revealed that 34 plant species were used for curing various diseases and disorders in animals, in this region.

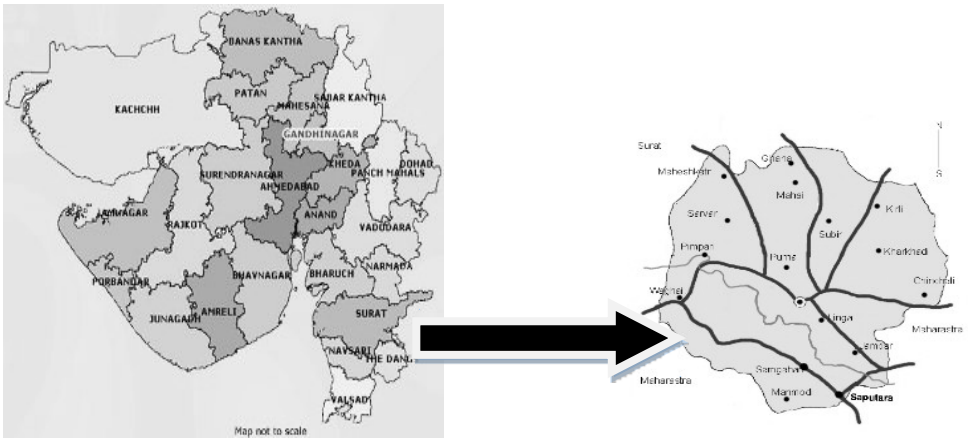
Keywords : Ethnoveterinary practices, Traditional knowledge, Animal healthcare, Dang, Gujarat

INTRODUCTION

Livestock sector contributes a major source of livelihood for many people worldwide, particularly the rural poor in developing countries. Cattle and buffaloes are the major livestock in India and they occupy a prominent position in the rural and economy of the country. To maintain these livestock indigenous animal husbandry practices along with Ethnoveterinary medicine is developed in Dang on the basis of farmer's need and regional adaptability. Ethnoveterinary medicine covers people's knowledge, skills, methods, practices and believes about the care of their animals[1]. Traditional drugs for animals based on both plant and animal products have received less attention. So far, few workers have studied and gathered information in the field of ethnobotony and veterinary medicines[2-6].

Study area

Dang (20° 39/ - 21 °50/ N & 72 °29/ - 73 °51/ E) is located in southern part of Gujarat state. Dang district (1764 sq.km) is comprised of 311 villages. To the north and west of dang lies Surat and Navsari districts of Gujarat where as to its east and south are the districts of Maharashtra state. Dang is one of the most backward district of Gujarat State where 75% of population is living below poverty line and 98% population is schedule tribe.



Methodology

Extensive field surveys were made in dang district in 2011. An approach of socializing and frequent discussion with the help of few local representative or headman was adopted for gaining rapport among local communities. Prior Informed Consent (PIC) was obtained from traditional healers (Bhagat) of the region. Later on in an open interview with informants like farmers, shepherds, housewives information were collected for each plant which included local name, botanical name, its Ethnoveterinary use along with combination with other plant combination, various formulations used for treating various disease and disorders. Details of use including the appropriate amount and number of doses per day or week were recorded.

Table1- Ethnoveterinary practices used in Dang district

S.No	Botanical name and Family	Local name	Ethno-veterinary usage Usage
1	*Abelmoschus esculatus* L. (Malvaceae)	Bhindi	Roots are hang around neck which act as repellent in maggot wound
2	*Abrus precatorious* L. (Papilonaceae)	Chanothi	Seeds (10-12) along with jaggery is given in case of retention of placenta
3	*Agave cantala* Roxb.; (Agavaceae)	Kantola	Juice of root is given orally in case of snakebite
4	*Albezia lebbeck* L. (Mimosaceae)	Shirish	Fruits are fed to the animals to increase milk production
5	*Aloe vera* L. (Liliaceae)	Kuvar pathu	Juice of leaf mix with turmeric powder and apply over wound for healing
6	*Annona squaosa* L.; (Annonaceae)	Sitaphali	Juice of leaves is applied over maggot wound
7	*Asparagus racemosus* Wild. Var. javanicus (Liliaceae)	Satavari	Root is fed to animal for increasing the milk production
8	*Azadirecta indica* A. Juss.; (Meliaceae)	Limdo	Decoction prepared from bark of tree is used in treating diarrhoea caused by parasites
9	*Bauhinia racemosa* Lamk.; (Caesalpiniaceae)	Aasitro	Roots are hang around neck which act as repellent in maggot wound
10	*Butea monosperma* Lamk. (Papilionaceae)	Khakhro	Seeds are fed orally to treat internal parasitic infection
11	*Cassia fistula* L. (Caesalpiniaceae)	Garmalo	Juice of stem is given orally in case of snakebite
12	*Cissus repanda* vahi	Nandanvel	One end of piece of stem is crushed to make a brush. cooked rice mixed with salt is applied on throat of cattle with the help of this brush to treat throat infection
13	*Curculigo orchioides* Gaertn.; (Hypoxidaceae)	Kali muchali	Roots are crushed and mixed with fodder and this is fed to the animals for curing maggot wounds
14	*Elettaria cardamomum* Maton;(Zingiberaceae)	Elaichi	Fruits (10-12) along with jaggery given is fed to the animal in case of retention of placenta
15	*Glossocardia bosvallia* DC.;	Shiri	Infusion prepared from root is given 2-3 times to cure bloat
16	*Helicteres isora* L. (Sterculiaceae)	Atai	Infusion prepared from root is given orally for 3 days to treat diarrhoea
17	*Holoptelea integrifolia* (Roxb.) planch.; (Ulmaceae)	Papada	Roots are hang around neck which act as repellent in maggot wound
18	*Kedrostris rostrata*	Mirchi kand	Juice of root is given orally to induce vomiting in case of poisoning

19	*Kirganelia reticulate* Poir. (Euphorbiaceae)	Kamboi	Leaves are mixed with green fodder and fed to animal to cure diarrhoea
20	*Madhuca indica* J.F.Gmel.; (Sapotaceae)	Mahudo	Flowers are mixed with rice and given to the animal in case of retention of placenta
21	*Monordica charantia* L. (Cucurbitaceae)	karela	Juice of fruit apply over maggot wound
22	*Nyctanthes arbor*-tristis L. (Nyctanthaceae)	Morasi	Leaf juice given orally to treat mastitis in cattle
23	*Oroxylum indicum* L. (Bignoniaceae)	Tetu	To treat mastitis in cattle, Hot fomentation of udder is given using bark of tree
24	*Phoenix sylvestris* L.Roxb.; (Palmae)	Khajuri	Crushed roots are mixed with fodder and is fed to the animal
25	*Pueraria tuberose* Roxb.ex Wild. (Papilionaceae)	Kolu	Fruit is cut into pieces and hot fomentation is given with it on udder to treat mastitis. Powder of fruit is also fed along with concentrate to cure same.
26	*Semecarpus anacardium* L.f.; (Anacardiaceae)	Bilama	Around 10 fruits are fed to the animal in case of infertility.
27	*Srailax spp*.	Uparchadi	Decoction of root is given orally for 3 days to cure diarrhoea
28	*Tecomella undulate* (Sm.) (Bognoniaceae)	Ragat rohidi	Decoction prepared from roots of both *Tecomella undulate* and *Madhuca indica* given to animal in case of retention of placenta
28	*Terminalia bellirica*(Gaertn)Roxb.; (Combretaceae)	Bhesada	Roots are hang around neck which act as repellent for curing maggot wound
30	*Trachyspermum ammi* L. (Umbelliferae)	Aajmo	Infusion of seed is given orally 2-3 times to cure bloat
31	*Woodfordia fruticosa* L. (Lythraceae)	Dhati	Roots are hang around neck which at as repellent for curing maggot wound
32	*Wrightia tinctoria* R. Br. (Apocynaceae)	Kudo	Leaf juice is applied over maggot wound
33	*Wrightia tomentosa* (Roxb.) roem & schult.; (Apocynaceae)	Kali Kuti	Crushed roots are mixed with fodder and fed the animal for curing maggot wound
34	*Xeromphis spinosa* (Thunb.) Keay, (Rubiaceae)	Mindhol	Fruits (2-3) powder is mixed with concentrate and fed to the animal for 2-3 day in case of infertility

RESULT AND DISCUSSION

Ethnoveterinary practices along with local name of the plant, parts used for treatment and, method of preparation are presented in Table 1. This investigation revealed 34 plant species were used to treat 10 different diseases and disorders in animals. Generally, freshly collected plants or plant parts were used for treatment. Whole plants, leaves, young twings, bark powder, roots, fruits and seeds were also used for treatment. Due to insufficient modern veterinary healthcare infrastructure, local people are highly dependent on this herbal remedies. The Ethnoveterinary medicinal plants documented were locally available and easily accessible and thus provided a cheaper alternative. There is an urgent need for biochemical analysis and pharmaceutical investigation of these plants species used by the tribal people of this region to standardize and formulate the medicines for sustainable use.

Acknowledgement:

Authors are thankful to tribal chieftains and traditional healers for providing valuable information.

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