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Folk Medicines for Treating Livestock in Vizianagaram and Srikakulam Districts, Andhra Pradesh, India.

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ABSTRACT

The paper highlights some commonly used ethnomedicines for domestic animals to treat ailments. The data was gathered from ethnic people (*Goudu, Jatapu, Konda dora, Konda Kammara, Kuttiya, Mali, Mukha dora, yerukula, Gadaba, Porja, Khond and Savara*) in the tribal pockets. A total of 41 species belonging to 41 genera, representing to 31 families as employed for 30 types of animal diseases. The species, family and vernacular name, plant part(s) used, drug preparation, mode of administration.

Introduction:

The use of plants and animals as a source of medicine has been continued since ancient time for curing diseases of man and animals. The term Ethno-Veterinary (context of animal treatment) was coined by MC Corkle in 1986. Folk medicine refers to holistic and interdisciplinary study of traditional knowledge, beliefs, practices, skills and methods pertaining to the health care of animal ailments. No research has been endeavored on veterinary practices and focusing on the folk knowledge carried out so far.

Andhra Pradesh in particular, very few authors, (1-9) studied the ethnoveterinary practices. There is traditionally domesticated livestock of specific breed with their unique products are indispensable in our daily life. About 25% of the therapeutic drugs are obtained from plants and some of the plants are still to be explored and observed. In remote areas, no organized veterinary medicinal aid is available. Therefore, these people treat their domestic animals with herbal medicines on the basis of their empiric knowledge.

Study Area:

Andhra Pradesh is the fourth largest state in India, tribal population is around 50.24 lakh divided into 33 tribal communities. Vizianagaram and Srikakulam districts are belongs to North Coastal Andhra Pradesh, which lies between approximately $18^0\,12^1$ to $19^0\,17^1$ N latitudes and $83^0\,54^1$ to $84^0\,50^1$ E longitudes. It is bounded on the North by Odissa State, on the South by Visakhapatnam district, on the East by Bay of Bengal and on the West by Visakhapatnam district and a part of Odissa state. The region extends an area of 12, 376 sq. km which constitute 4.4% of the geographical area in the state of Andhra Pradesh. The region comprises districts Viz., Vizianagaram and Srikakulam districts.

Material and Methods:

The methodology and mode of approach for ethnoveterinary medicinal enumeration is adopted from the classical works of Jain, (10). Emphasis was given mainly to intensive field work in the selected tribal pockets. The ethnomedicinal data presented here is the outcome of a series of intensive field studies conducted over a period of April – March, 2012 in 14 interior tribal pockets with good forest cover and coastal and plain pockets. To collect the desired information on ethnoveterinary practices completely devoted to acquaintance with the local chiefs, priests, vaidyas, herbal doctors, headman's, elderly people and educated

students. In the present investigation, an attempt has been made to gather the data as methodology adoptated by the tribal people to control the various ailments in livestock. Each medicinal practice was cross checked with at least 3 to 4 informants. Ethnoveterinary data and the vernacular names are collected for documentation. Plants specimens were collected and identified by referring to standard Flora of the Presidency of Madras and Flora of Andhra Pradesh, (11,12) and other local floras of NorthCoastal Andhra Pradesh, (13-14) and those were preserved in the form of herbarium.

Results and Discussion:

Livestock keepers who live close to their animals often have detailed information on various diseases, their causes and control. In the present study a total of 41 plant species representing to 41 genera and belonging to 31 families have been enumerated for ethnoveterinary practices as remedy for 30 types of animal ailments. The scientific name of the species along with vernacular name (Telugu), families, Part(s) used, ailment and with mode of administration presented in **Table: 1.**

While analyzing the information on the plants used by the tribals for treating the ailments of animals, it has been noted that leaf (48.78%) is the most commonly used plant part, followed by stembark (24.39%), fruit (14.63%), root (14.63%), latex (09.75%), seed (07.31), rhizome (04.87%), whole plant (04.87%), petiole and tuber in that order. It is interesting to note that for the 41 plant species enumerated, major ethnoveterinary uses are treatment of diarrhoea and fractures by 04 plants each, dysentery, foot and mouth disease (FMD) galactagogue and lactation by 03 species each, 02 species each by Anthrax, cold & cough, eradication of lice, renderpest, retained placenta and sores, minimum number of species were allocated for anthelmintic, conjuctivity, ephemeral fever, intestinal worms, mastitis, milk sucking, nasal drops, ophthalmic problems, pneumonia, rheumatism, skin diseases, trypanosomiasis, tympany, urinary troubles, wounds and yoke gall.

Among the families, Asclepiadaceae, Euphorbiaceae and Lamiaceae with 3 species each followed by Apiaceae, Mimosaceae, Vitaceae and Zingiberaceae having 02 plants of each. Twenty four families viz, Acanthaceae, Annonaceae, Apocynaceae, Aristolochiaceae, Caesalpiniaceae, Combretaceae, Cucurbitaceae, Dioscoreaceae, Fabaceae, Flacourtiaceae, Hypoxidaceae, Lauraceae, Liliaceae, Lytheraceae, Malvaceae, Moraceae, Musaceae, Nyctaginaceae, Papavaraceae, Poaceae, Rhamnaceae, Sapotaceae, Tiliaceae and Zygophyllaceae were bearing single species only.

Conclusion:

Animals and plants are integral part of their culture, religion, magico-religion and traditional pharmacopoeia. Traditional practices still remain prevalent in villages. This is a clear indication of their faith in the folk medicine. But in the process of modernization, this knowledge is vanishing very rapidly. Advanced research on plants of excessive medicinal values may lead to new sources of drugs.

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Table: 1. Plants of Ethnoveterinary Importance found in this Region:

S. No	Name of the species / Local name/Family	Part(s) used	Ailment	Mode of administration
1	*Abutilon indicum* (L.) Sweet Tutturu benda Malvaceae	Leaf	Diarrhoea,dysentery	Powdered of 100 g leaves mixed with cattle feed given to cattle. Leaves ground with butter milk and extract given orally.
2	Acalypha indica L. Kuppinta Euphorbiaceae	Root, Leaf	Intestinal worms, skin disease	Roots and leaves in proportion of 1:2 ratios are crushed together and administered to the cattle along with food. Leaf paste with pepper is applied for skin diseases.
3	*Albzia lebbeck* (L.) Willd. Dirisana Mimosaceae	Leaf, Stem bark	Trypanosomiasis	Leaves ground with those of *Cleome gynandra*, stem bark of *Pongamia pinnata*, cow's urine, pepper and garlic is given orally and decoction is dropped into nostrils.
4	*Alstonia scholaris*(L.) R.Br. Pala garuda Apocynaceae	Latex, Seed	Dysentery	2 spoonfuls of latex with a glass of decoction of *Piper nigrum* seeds mixed with rice washed water is administered daily twice for 2days.
5	*Ampelocissus temontosa* (Heyne ex Roth)Planch. Atukula baddu Vitaceae	Leaf	Fractures	Leaf paste mixed with turmeric, egg albumen and black goat milk is smeared over the fractured area and bound over it.
6	*Annona reticulata* L. Ramphalamu Annonaceae	Fruit, Leaf	Fractures, eradicate lice, sores	Unripened fruit paste is applied on the body of cattle daily once for 2days. Leaf paste applied externally for maggot-infested sores.
7	*Aristolochia bracteolate* Lam. Gadida gadapa Aristolochiaceae	Leaf	Ephemeral fever, Foot and Mouth disease	Leaves ground with those of *Anisomeles malabarica*, pepper and garlic, given orally. Leaf paste is applied over the infected hooves to cure foot and mouth disease twice a day.
8	*Boerhaavia diffusa* L. Punarnava Nyctaginaceae	Leaf	Nasal drops	Leaves with those of *Mentha spicata*, ginger and onion are pounded with warm water and kept in a bottle overnight. Then the extract is employed as ear and nasal drops.
9	*Caesalpinia bonduc* (L.) Roxb. Gatchakaya Caesalpiniaceae	Seed, Root	Rheumatism,Retained placenta	Seed paste mixed with goat urine applied locally once daily for a week. Root paste is used in removal of placenta during paturation.
10	*Calotropis procera* (Ait.) R.Br. Tella jilledu Asclepiadaceae	Latex, Leaf	Pneumonia	Latex of the plant mixed with red lead (vermilion) and *Sida rhombifolia* leaves is applied externally on the animal from the forehead to end of backbone in a form of drops or dots.
11	*Carica papaya* L. Boppai Papavaraceae	Leaf, Latex	Diarrhoea, anthelmintic	Leaves of the plant used as infusion diarrhoea in poultry. Latex (20ml) mixed with feed and administered twice daily for 6 days in cattle.
12	*Casearia elliptica* Willd. Giriguda Flacourtiaceae	Stem bark	Urinary troubles, dysentery	Stem bark paste is administered in doses of 200g once a day for about 3 days. Bark extract is used for cattle and goats to control dysentery.
13	*Centella asiatica* (L.)Urban. Saraswataku Apiaceae	Root	Weakness	Roots are boiled and fed to the animal twice a day to cure from general weakness.
14	*Cissusquadrangularis* L. Nalleru Vitaceae	Whole plant	Fractures	Extract of whole plant is given orally in bone fracture.

Table Continue …..

15	*Cleistanthus collinus* (Roxb.) Benth. Ex Hook.f. Nalla kodisa Euphorbiaceae	Stem bark Latex	Foot & Mouth diseases	The bark is made into a paste and applied to the hoof of the cattle, then few drops of latex of *Ficus racemosa* is put on it and covered with a cloth. This is repeated twice a day for 4 days.
16	*Coccinia indica* Wt.and Arn. Kakidonda Cucurbitaceae	Leaf, Rhizome	Clod and cough	Warm leaf juice with amount of the juice of ginger and garlic is given twice daily till cure of cow or buffalo.
17	*Colebrookia oppositifolia*. Smith. Mandrabutta Lamiaceae	Leaf	Cataract	Leaf juice is used as drops to treat eye problems like cataract.
18	*Cryptolepis buchanani* Roem. & Schult. Adavipala teega Asclepiadaceae	Leaf	Lactation& Galactagogue	Leaf paste in doses of 200g once a day for 7-10 days for enhancing lactation. Leaf paste in doses of 200g once a day for 7-10 days in cattle.
19	*Curculigo orchioides* Gaertn. Nela tadi Hypoxidaceae	Root	Ophthalmic diseases	3 spoonfuls of root decoction mixed in a glass of water and then 3 or 4 drops of decoction is instilled into eyes daily for 2 days.
20	*Curcuma longa* L. Pasupu Zingiberaceae	Rhizome, Leaf	Blood dysentery	Paste of rhizome of the plant, equal amount of seeds of black gram and bamboo leaves is given to the affected cattle.
21	*Dalbergio sisso* Roxb. Iridi Fabaceae	Leaf	Diarrhoea	Leaf infusion is given to cattle in sunstroke. Leaves soaked overnight in water are given orally to the cattle in the morning to cure ureatic and to warm up the body.
22	*Dendrocalamus strictus* Roxb. Sanva veduru Fabaceae	Stem bark	Fractures	It is using splints as bandaged on fractured portion. Infusion of tender stem is given once in a day for three days for early cure of fractured bone.
23	*Dichrostachys cinerea* L. Wt.Arn. Veluturu chettu Mimosaceae	Leaf	Renderpest	Leaves finely crushed along with water or given orally to cattle.
24	*Dioscorea bulbifera* L. Adavi dumpa Dioscoreaceae	Tuber	Lactation	Tubers are made into powder and mixed with rice husk or hay and given to the milking animals thrice a day.
25	*Ficus racemosa* L. Medi Moraceae	Fruit, Stembark	Galactagogue, renderpest	Fresh fruits given orally for 7 days. Bark paste in water or dry powder is utilized for.
26	*Gloriosa superba* L. Nabhi Liliaceae	Root	Anthrax	Roots along with those of *Tephrosia purpurea, Hemidesmus indicus* (each 100g) and 10g pepper and garlic pounded and the extract given orally daily for a week.
27	*Grewia tiliaefolia* Vah. Pedda jana Tiliaceae	Stem bark	Milk sucking	In case of young calf not sucking a long strip of bark is taken and put into the calf mouth one end of bark is tied at the back of head. Allow the calf to chew it up to evening.
28	*Hyptis suaveolens* (L.) Poit. Seema tulasi Lamiaceae	Leaf	Conjunctivitis	Leaf juice is dropped in eye against conjunctivitis.
29	*Justicia adhatoda* L. Addasaram Acanthaceae	Leaf	Rheumatism	A fine paste comprising leaves, stem bark with garlic and asafoetida is given thrice a day and for healing banded areas. Leaves are given for expulsion of gas.
30	*Lawasonia inermus* L. Gorintaku Lythraceae	Leaf	FMD	Leaf paste applied on a body of cattle is believed to cure foot and mouth diseases.
31	*Litsea glutinosa* (Lour.) Robins. Pulusu mamidi Lauraceae	Stem bark	Wounds	Ground stem bark along with *Cryptolepis buchanani* and mixed with water and drench, is orally given.
32	*Macaranga peltata* (Roxb.) Muell-Arg. Konda tamara Euphorbiaceae	Petiole	Sore	Petiole juice used for maggot-infested sores. Stem bark ground into paste, applied on wounds.

Table Continue …..

33	*Manilkara hexandra*(Roxb.) Dubard. Pala nimmi Sapotaceae	Stem bark	Throat complaints	Stem bark crushed with that of *Cissus quadrangularis* and garlic is crushed and the decoction is given in doses of 100ml twice a day for 3 days to treat to throat diseases in cattle.
34	*Musa paradisica* L. Arati Musaceae	Fruit & Leaf	Mastitis	Paste of crushed fresh fruit and leaf administered once daily for four days to cure mastitis.
35	*Ocimum americanum* L. Bhutulasi Lamiaceae	Wholeplant	Lice	For eradication of lice in poultry, plants kept inside the sheds.
36	*Terminalia bellirica* (Gaertn.)Roxb. Thani kaya Combretaceae	Stem bark & Fruit	Anthrax	Stem bark along with fruits of *Phyllanthus emblica* and *Aegle marmelos* (each 50g) and 20g pepper and garlic pounded and the extract given orally twice daily (morning and evening) for 5 days.
37	*Trachyspermum ammi* (L.) Spreng. Vamu Apiaceae	Seed	Lactation, Tympany/flatulence	A mixture of 250g of seeds, Sugar and gur is made and fed once a day for 10-15 days to cure lactation problems. Seeds are mixed with 1 litre of lukewarm water and given orally to cure.
38	*Tribulus terrestris* L. Palleru Zygophyllaceae	Fruit	Diarrhoea	Fruits are given to the animal as fodder.
39	*Wattakaka volubilis* (L.F.) Stapf. Bandi gurija Asclepiadaceae	Stem bark & Fruit	Yoke gall, Galactagogue	Stem bark ground with fruits of *Carissa spinarum,* onion, turmeric and the paste applied locally on yokegall. Plant infusion with *Aerva lanata* is given to domestic animals as a galactagogue.
40	*Zingiber roseum* Rosc. Adavi allamu Zingeberaceae	Root	Cough	Aqueous extract of the root (100-200 ml) is given twice a day for seven days for treatment of cough in cattle.
41	*Ziziphus oenoplia* (L.) Mill. Parimi Rhamnaceae	Leaf	Fracture	Leaf paste mixed with gum of *Sterculia urens* and plastered over the effected parts till cure, also leaf decoction of *Acacia chundra* given orally twice a day for 3 weeks. Root decoction is used to wash injury on shoulder of oxen caused by yoke.