



INDIGENOUS KNOWLEDGE ON ANIMAL HEALTH CARE PRACTICES IN SURADA BLOCK OF GANJAM DISTRICT, ODISHA.

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ABSTRACT

Physical and physiological components of animals are directly and indirectly governed by the chemical compounds and elements which are receiving from plants. Deficiency of any components by their nutrition may create ailments. Use of plants for treating various ailments of animals is an old practice. According to World Health Organisation (WHO) more than 80% of the world's population, mostly in poor and less developed countries depend on traditional plant-based medicine for their primary health care needs. Rural people are dependent on the plant based medicines for treating animals is mainly because of the limited access to the awareness and modern medicine system, cheaper and easy availability and simple applications. Crude plant products do not have the negative side-effects and build-up immunity in the body system. Surada Block of Orissa is remote and hill area. The people of this block mostly depend on agricultural economics and associated with domestic animals. Farmers in this area still depend upon plants for treating their animals who are suffering from various ailments. Ethnoveterinary importance has been recognised by the folk through a process of local practical experience over hundreds of years. The present investigation deals with fifty plants which are use among the people of Surada Block of Ganjam District for some common diseases in animals (cows, bullocks, buffalo, goats, sheep's etc) namely rheumatism, fever, constipation, foot and mouth disease, to expel the placenta after delivery, bronchitis, lactation, stomach-ache, swelling, fracture, ulcers, diarrhoea, against ticks and maggots etc. The emphasis has been laid on the and utilised in modern system of medicine. A preliminary account of Ethnoveterinary prescriptions in western Orissa

scientific validation of medicinal property of the plants and animals used in traditional medication system and also to recognise and appraise the traditional freedom of the local communities.

Key Words: Indigenous knowledge, medicinal plant, animal health care, Ethnoveterinary, traditionally healers.

INTRODUCTION

Ethnomedicine is the mother of all other system of medicine such as Ayurveda, Siddha, Unani, nature cure and even modern medicine. The knowledge of plants that have curative and palliative effects were transmitted from one generation to another and it is the outcome of bold experimentation through trial and error method over hundreds of years. The traditional medicinal knowledge is thought to be within every one's reach and does not require any study or training to practice. The paper discusses the plants in veterinary practices in Surada Block of Ganjam district. Surada block of Orissa is remote and hill area with wide range of biodiversity. The villagers are basically agriculturists and farm holders of domestic animals such as buffaloes, cows, oxen, sheep, goats and pigs for milk, cultivation, food and market. In remote and hilly areas no organised veterinary medicinal aid is available. Therefore, people in this area depend upon plants for treating their animals who are suffering from various ailments. Ethnoveterinary importance has been recognised by the folk through a process of local practice over hundreds of years. Some cures mentioned here are already recognised and other part of the country are already available [1-5]. The present investigation deals with fifty plants which are



use among the people of Surada Block of Ganjam District for some common diseases in animals.

METHODOLOGY

Thirty villages in Asurabandha, Guccha, Genja, Gajalbadi, Hukuma and Goudagotha Gram Panchayat of Sorada block were surveyed during 2012. Farmers, cattle growers, sheep and goat growers, housewife, traditional

healers were interviewed in different seasons of a year from time to time. The data were based on first hand information gathered from the above group of people and through personal observation. The data were cross checked with different informants. The plant species are enumerated with their local name, family, part used, method of medicine preparation and administration.

Sl. No.	Scientific Name	Local name	Family	Part Used	Method of Medicine preparation & administration
1.	<i>Acyranthe saspara</i> L.	Apamaranga	Amaranthaceae	Seed	Fresh seeds mixed with ghee and sugar and boiled to make slurry for treating stomach swelling.
2.	<i>Aegle marmelos</i> L.	Bela	Rutaceae	Fruit	Ripened fruit pulp is prescribed twice daily till the cure of internal injury by fire.
3.	<i>Aloe barbadensis</i> Mill	Gheekuanri	Liliaceae	Leave	Juice of fresh leaves is applied to the skin to kill ticks and parasites. Leaf pulp with curd is given twice daily for injuries.
4.	<i>Aristolochia bracteata</i> Retz.	Paniri	Aristolochiaceae	Leave	Paste of green leaves is applied to kill ticks and maggots.
5.	<i>Asparagus racemosus</i> Willd.	Satabari	Lilialeae	Root	Fresh roots are crashed and mixed with water and applied on the paining joints to cure rheumatism.
6.	<i>Azadirachta indica</i> A. Juss.	Limba	Meliaceae	Leaves	Juice of fresh leaves is fed to cure fever.
7.	<i>Bauhinia racemosa</i> Lam.	Ambata	Caesalpiniaceae	Bark	Juice of fresh bark is fed to animal to help expel the placenta after delivery.
8.	<i>Calotropis procera</i> (Ait.) R. Br.	Arakha	Asclepeadaleae	Leave & Latex	Juice of fresh leaves is given to cattle to expel the placenta after delivery. Latex of plant is fed to remove the internal worms.
9.	<i>Cassia fistula</i> L.	Sunari	Caesalpiniaceae	Leave & Fruit	Paste of fresh leaves or crashed leaves mixed with water is given against internal blood clot and constipation. Ripened dry fruit is warmed and paled over the affected enlargement of gland or swelling due to common cold.
10.	<i>Cardiospermum halicacabum</i> L.	Phutiputika	Sapindaceae	Leave	Leaf paste is given to cow or oxen for treating Godara (Filariasis)
11.	<i>Cayratia trifolia</i> L. Domin	Ambileti, Bana-anguru	Vitaceae	Root	Root paste mixed with turmeric is given to cattle for foot and mouth diseases.
12.	<i>Coccinia grandis</i> L. Voigt.	Kunduri	Cucurbiaceae	Fruits	Fresh fruits are fed with fodder to treat rheumatism.



Sl. No.	Scientific Name	Local name	Family	Part Used	Method of Medicine preparation & administration
					Leaves are crushed and applied on udder against mastitis.
13.	<i>Cocos nucifera</i>	Nadia	Areaceae	Fruit	Ash of pericarp is applied to treat skin disease
14.	<i>Cleome gynandra</i> L.	Anasorisha, Arakhasaga	Capparaceae	Leaf	Leaf paste is applied on affected parts of the body of goats to heal wounds.
15.	<i>Curcuma longa</i> L.	Haladi	Zingiberaceae	Rhizome	The paste of rhizome of the plant, equal amount of seeds of black gram and bamboo leave is given to the affected cattle to check blood dysentery.
16.	<i>Crotalaria juncea</i> L.	Chhanapata	Fabaceae	Whole Plant	Whole plant crushed with water is given to animal to help expel the placenta after delivery.
17.	<i>Datura metal</i> L.	Dudura	Solanaceae	Fruit	Fruit powder is mixed with copper sulphate and paste made with coconut and applied on the skin of goat and sheep for treating skin ailment.
18.	<i>Euphorbia nivulia</i> Buch-Ham	Siju, Katha siju	Euphorbiaceae	Stem & leaf	Chopped stem and leaves boiled with water and fed to animal to treat infected gums.
19.	<i>Ficus benghalensis</i> L.	Bara	Moraceae	Root	Pest of prop root of the plant along with honey is given to calves. Once a day for 3 days against both diarrhoea and dysentery.
20.	<i>Ficus racemosa</i> L.	Dimiri	Moraceae	Leaf	Cut pieces of leaves are fed to cattle to cure blood dysentery.
21.	<i>Ficus religiosa</i> L.	Aswastha	Moraceae	Bark & root	Paste of bark and root is applied on the fractured parts.
22.	<i>Hyptis suaveolens</i> L.	Gangatulasi	Lamiaceae	Leaf	Juice of leaf is dropped in eye against conjunctivitis.
23.	<i>Ipomoea aquatic</i> Forssk	Kalama Saga	Convolvaceae	Leaf	Leaves along with stem is given against blood urine
24.	<i>Justicia adhatoda</i> L.	Basanga	Acanthaceae	Leaf	Leaf paste is used for bronchitis
25.	<i>Lawsonia inermis</i> L.	Manjuati	Lythraceae	Leaf	Leaf paste applied to cure foot and mouth disease.
26.	<i>Meliaazedarach</i> L.	Mahanimba	Maliaceae	Leaf	Leaf paste applied to Phatua disease (foot and mouth infection)
27.	<i>Musa paradisiaca</i> L.	Kadali	Musaceae	Fruit	Fruits mixed with milk and fed to animal against swelling of udder and mastitis
28.	<i>Moringa oleifera</i> Lam	Sajana	Moraceae	Leaf	Leave paste and bark is fed with sugar to increase lactation
29.	<i>Mitragyna pavifolia</i> (Roxb)	KeliKadamba	Rubiaceae	Bark	Bark juice is given to oxen



Sl. No.	Scientific Name	Local name	Family	Part Used	Method of Medicine preparation & administration
					and cows against filariasis
30.	<i>Mucuna puriens</i> (L) DC	Baidanka	Fabaceae leaf	Leaf	Leaf is fed daily to increase cattle lactation.
31.	<i>Nicotina tabacum</i> L.	Dhuanpatra	Solanaceae	Leaf	Leaf leachate is applied on skin against ectoparasitic infection.
32.	<i>Piper betle</i> L.	Pana	Piperaceae	Leaf	Leaf paste mixed with black piper, ginger, Juani and garlic is fed to cattle to cure indigestion.
33.	<i>Piper longum</i> L.	Pipalli	Piperaceae	Fruit	Fruit powder mixed with juice of onion is applied on the affected area of foot and mouth disease.
34.	<i>Ricinus communis</i> L.	Jada	Euphorbiaceae	Seed	Seed oil is given to cattle along with fodder against constipation
35.	<i>Sesamum indicum</i> L.	Rashi	Pedaliaceae	Seed	Dry seeds are powdered and mixed with ghee and fed to animal to treat foot and mouth disease.
36.	<i>Sterculi aurens</i> Roxb. Ex DC	Kodal	Sterculiaceae	Gum	Dried gum is powdered and fed to animal against diarrhoea
37.	<i>Syzygium cumini</i> (L)	Jammu	Myrtaceae	Bark	Bark leachate mixed with equal amount of Basanga leaf juice is given against diarrhoea or dysentery.
38.	<i>Tamarindus indica</i> L.	Tentuli	Caesalpinaceae	Leaf & Fruit	Pods and leaves mixed with water are fed to animal to treat the stomach pain
39.	<i>Tephrosia purpurea</i> (Lam) Pers	Bananila	Fabaceae	Root & leaf	Roots are fed to animal against general swelling and rheumatism. Leaf paste is applied on wounds of goats and sheep.
40.	<i>Tinospora cardifolia</i> (Wild) Hook.f. & Thomas	Guluchilata	Menispermaceae	Whole plant	Chopped plant is fed during pregnancy.
41.	<i>Tribulus terrestris</i> L.	Gokhara	Zygophyllaceae	Fruit	The slurry of the plant is fed to animal as energizer during pregnancy.
42.	<i>Trachyspermum ammi</i> L. sprongue	Juani	Apicaceae	Seed & Leaf	Seeds and leaves mixed with salt are fed against general stomach pain
43.	<i>Trichodesma indicum</i> (L) R. Br.	Hetamundia	Boraginaceae	Leaves	Crushed leaves with water are fed to treat fever and body ache.
44.	<i>Trigonellafoenum-graecum</i> L.	Methi	Fabaceae	Leaf and seed	Fresh leaves and seeds mixed with fodder are fed to animal suffering from rheumatism.
45.	<i>Typha elephantina</i> Roxb.	Santara	Typhaceae	Stem	The stem of the plants used as supporting stick for plaster and cure facture.
46.	<i>Tridax procumbens</i> L.	Bisalyakarani	Asteraceae	Leaf	Leaf extract applied locally to



Sl. No.	Scientific Name	Local name	Family	Part Used	Method of Medicine preparation & administration
					wound.
47.	<i>Momordica charantia</i> L.	Kalara	Cucurbitaceae	Whole plant	Whole plants extract is prepared in cold water and bottle fed to the animal to increase its appetite
48.	<i>Vitex negundo</i> L.	Begunia	Verbenaceae	Leaf	Leaf paste with water is given against breathing trouble.
49.	<i>Xanthium indicum</i> Koenig	Jhagada	Asteraceae	Leaf	Leaf paste is applied to chronic wound of goat and sheep.
50.	<i>Zizyphus mauritiana</i> Lam.	Barakoli	Rhamnaceae	Root	Root crushed and mixed with water and applied on the painful shoulder of the bullock used for ploughing

RESULTS AND DISCUSSION

The study shows that 50 plant species are employed for treating different types of animal diseases. Crude extract of plant parts used to cures different diseases covered in the paper includes fever, foot and mouth disease, bronchitis, cold and cough, colic pain, constipation, diarrhoea, dysentery, filariasis, indigestion, mastitis, peptic ulcer, stomach ache, throat infection, swelling, shoulder pain etc. Traditional healers, farmers and other folk being herbal practitioners have added these medications to their indigenous knowledge system through trial and error method which spanning over hundreds of years and covering several generation. Similar types of works are carried out by different Authors in other part of India including Odisha [2-8].

The present article is perhaps the first record on the traditional knowledge on the Ethnoveterinary practices in Surada Block of Ganjam district. It is important to record here that, despite the fact that traditional wisdom is on the decline in every sphere of life, the substantial proportion, almost 50% of the sampled population, has knowledge of traditional Ethnoveterinary practice in the study region. There are reasons to such a large proportion of population practicing traditional medication system to treat their animals because of the cost of all these crude preparation of plant parts were negligible in comparison to the modern veterinary medicines. As majority of the

inhabitants of the district solely depend on agriculture and animal husbandry sectors i.e. directly or indirectly upon their domestic animals and they are busy throughout the year with their practice of earning livelihood from these sectors, they rarely find sufficient time to visit the veterinary hospitals. Their poor economic condition does not permit them to meet the cost of the allopathic medicines. Hence, they strongly believe and depend upon their age old traditional knowledge of medicines.

CONCLUSION

In nutshell, 50 plants are used as Ethnoveterinary medicine by villagers included in the five gram panchayat of Sorada block. The villagers are much awareness about Ethnoveterinary practice through traditional knowledge. The degree of curativeness and healing capacity depends on medicinal value of crude extracts of plant. The plants which are having medicinal properties needs to be promoted through ex-situ conservation practices in the form of cultivation in agriculture fields, gardens and nurseries. A mix of traditional wisdom and modern scientific methods of such cultivation could reap better harvest of medicinal plants, which would help the building of wild population. Traditional wisdom should be formulated, if conservation of traditional value and wisdom is to be ensured.

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