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ETHNOVETERINARY PLANTS OF YSR KADAPA DISTRICT, ANDHRA PRADESH, INDIA

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ABSTRACT

Ethnoveterinary knowledge comprises traditional plant-based remedies for livestock ailments occupies a vital component of rural animal healthcare systems in India. Present study documented 30 plant species belonging to 29 genus and 22 families were presented with botanical names, local names, families, parts used and modes of administration. Field surveys, interviews with shepherds and farmers and cross-verification with regional literature were conducted to compile a catalogue of useful species. The plants are mostly used for treatment of cough, fever, skin diseases, wounds, constipation, blue tongue, Bovine ephemeral fever, foot rot, ringworm, foot and mouth diseases etc. The findings highlight the persistence of traditional knowledge in livestock healthcare and underscore the need for conservation and pharmacological validation.

INTRODUCTION

Ethnoveterinary medicine comprises the knowledge, skills and practices associated with animal health care that are handed down through generations. India is predominantly live stocked based economy. Maintenance of livestock health has been possible because of traditional proven veterinary health care practices. In rural India, where access to modern veterinary services can be limited, traditional plant remedies play an essential role in treating livestock ailments. Studies across Andhra Pradesh have documented rich ethnoveterinary knowledge in tribal and rural communities, identifying many plant species used to treat diseases in cattle, goats and other domestic animals (Prasad & Rao 2012). Rural people in India largely depends on animal husbandry for their livelihood. A study conducted on the floristic studies on the flora of YSR Kadapa District and stated, there are 710 species of angiosperms in the District (Madhusudhan Rao 1989). Many researches have documented the uses of ethnoveterinary plants across the Andhra Pradesh and India. Ramanjaneyulu et all documented 25 ethnoveterinary plants from Annamayya District. Raja Reddy and Sudarsanam (2008) reported 57 plants exclusively used by the tribal and non-tribal people of Chittoor district for different diseases of their domestic animals. Sebastian and Bhandari (2017) published a paper on plants used as ethnoveterinary medicine by Bhills. Reddy et all (2015) collected information about 35 plant species used to treat common Livestock diseases for domestic animals. Venkata Ramana (2008) documented 57 ethnomedicinal and ethnoveterinary plant species from Boath, Adilabad District. Sudarsanam et al explored 106 plant species used for different diseases of domestic animals. Lakshmi Narayana and Narasihma Rao (2015) revealed 61 plants used as ethnoveterinary medicine in a report. Rao et al (2008) collected information about 73 ethno-veterinary medicinal plants of the catchment area of the river. Mc Corkle (1986), Jain (1991, 2003), Pieroni (2002), Subapriya and Nagini (2005), Kamboj (2000), Gupta (2004), Murthy (2007), Mahawar (2008), WHO (2013), Varma (2013), Sasidharan (2011), Kamboj (2015), Patil (2016), Swamy (2017), Tela & Pal (2017), Dixit (2017), Singh (2018), Silva (2018), Sundharakumar et al (2020), Vijay Kumar et al (2025) also documented ethnoveterinary plants for the treatment of various diseases for livestock animals. YSR Kadapa District, located in the Rayalaseema region of Andhra Pradesh, has a predominantly agrarian economy with significant livestock populations. Despite this, there has been limited systematic documentation of ethnoveterinary plant use in this region. This investigation aims to fill that gap by documenting ethnoveterinary plants used locally, providing baseline data for further pharmacological and conservation research.

MATERIALS AND METHODS

Study Area

YSR Kadapa District, covering an area of 15,378.41 km², is located in the south-central part of Andhra Pradesh, India. The district is bounded by Kurnool District to the north, Chittoor District to the south, Nellore District to the east, and Anantapur District to the west. Geographically, it lies between 13°43′–15°14′ N latitude and 77°55′–79°29′ E longitude. The district extends along the western slopes of the Eastern Ghats and includes important hill ranges such as Velikonda, Palakonda, Nallamalais, and Yerramalais. The forests of YSR Kadapa District mainly consist of dry deciduous vegetation, much of which has been degraded into scrub forest (Champion & Seth, 1968). The total forest area is approximately 5,050 km², accounting for 32.87% of the district's geographical area. Rainfall is comparatively higher in the north eastern region of the district. The vegetation supports several endemic, rare, and threatened plant species (Ahmedullah & Nair, 1987). The endemic and endangered medicinal tree Pterocarpus santalinus (Fabaceae) occurs naturally in this region. YSR Kadapa District was selected as the study area due to its rich floristic diversity, varied topography, and the presence of rural and traditional communities with well-preserved ethnobotanical knowledge. The sample size in the present study was determined based on standard ethnobotanical research practices, data saturation, and informant consensus, rather than purely statistical sampling. The district is primarily drained by the Penna River and its tributaries, including Kunderu, Sagileru, Cheyyeru, Papagni, and Chitravati. The forest ecosystems of YSR Kadapa District exhibit considerable plant species diversity, providing a suitable setting for ethnobotanical investigations.

Data Collection

Ethnoveterinary data were collected during 2025 through structured interviews and open-ended discussions with livestock keepers, shepherds, and traditional healers across multiple villages in the district. Plant species cited were recorded with their local names and uses.

Plant Identification

Voucher specimens were collected and identified using regional floras (Gamble, Pullaiah, henry) and reference herbarium materials where possible. Botanical names follow accepted taxonomic standards.

Data Organization

For each species, botanical name, local name, family, plant part used and mode of administration (veterinary uses) were recorded. A table of the 30 most frequently cited species was compiled.

RESULTS AND DISCUSSION

The present study documents 30 plant species used in ethnoveterinary practices in YSR Kadapa District. These plants are used as ethnoveterinary medicine by local people

for their domestic animals. The species are drawn from local knowledge corroborated by regional ethnoveterinary studies in Andhra Pradesh. The results are presented in table 1.

Table 1. Ethnoveterinary Plants Used in YSR Kadapa District, Andhra Pradesh

S. No	Botanical name	Local name	Family	Veterinary Uses
1	Acorus calamus L.	Vasa	Acoraceae	Rhizome paste given orally for constipation, colic and deworming in cattle.
2	Achyranthes aspera L.	Uttareni	Amaranthaceae	Whole plant decoction for retained placenta and wound healing in cattle.
3	Adhatoda vasica Nees.	Addasaramu	Acanthaceae	Leaf extract for cough, cold and respiratory infections in livestock.
4	Aegle marmelos (L.) Correa	Maredu	Rutaceae	Unripe fruit pulp for diarrhea and dysentery in cattle.
5	Aloe vera (L.) Burm.f.	Kalabanda	Asphodelaceae	Leaf gel applied on wounds, burns and skin infections.
6	Andrographis paniculate (Burm. f.) Wall. ex Nees.	Nelavemu	Acanthaceae	Leaf decoction for fever and skin diseases.
7	Aristolochia indica L.	Pacha Eswari	Aristolochiaceae	Root paste applied for blue tongue in animals.
8	Azadirachta indica A. Juss.	Vepa	Meliaceae	Leaves used as antiseptic wash for wounds and foot rot.
9	Cissus quadrangularis L.	Nalleru	Vitaceae	Stem paste applied for bone fractures in livestock.
10	Citrus limon (L.) Burm.f.	Nimma	Rutaceae	Juice mixed with feed for digestive disorders and ringworm.
11	Curcuma longa L.	Pasupu	Zingiberaceae	Rhizome paste applied on wounds and mastitis, anti-inflammatory.
12	Cymbopogon citratus (DC.) Stapf.	Nimmagaddi	Poaceae	Leaf decoction for fever and as insect repellent.
13	Emblica officinalis Gaertn.	Usiri	Phyllanthaceae	Fruit decoction as immunity booster and used for Bovine fever.
14	Eucalyptus globulus Labill.	Neelagiri	Myrtaceae	Leaf oil inhalation for respiratory infections and antiseptic wash.
15	Hyptis suaveolens (L.) Point.	Seema-thulasi	Lamiaceae	Leaf paste applied for skin infections and wounds.
16	Mangifera indica L.	Mamidi	Anacardiaceae	Bark decoction for diarrhoea, leaf paste for wound healing.
17	Mimosa pudica L.	Attipatti	Fabaceae	Leaf paste for wound healing and anti-inflammatory uses.
18	Moringa oleifera Lam.	Munaga	Moringaceae	Leaves fed as nutritional supplement to improve milk yield.
19	Ocimum basilicum L.	Bhu tulasi	Lamiaceae	Leaf infusion for digestive disorders and respiratory problems.
20	Ocimum sanctum L.	Krishna tulasi	Lamiaceae	Leaf extract given for cough and fever in cattle.
21	Phyllanthus niruri L.	Nela usiri	Phyllanthaceae	Whole plant decoction for foot and mouth diseases.
22	Piper longum L.	Pippili	Piperaceae	Fruit powder mixed with feed for respiratory ailments.
23	Plumbago zeylanica L.	Yerra chitramulam	Plumbaginaceae	Root paste applied externally for skin diseases and parasites in livestock.
24	Sesbania grandiflora (L.) Pers.	Avisa	Fabaceae	Leaves fed for nutritional support and to treat digestive problems.
25	Solanum xanthocarpum Schrad. & Wendl.	Nela Mulaka	Solanaceae	Fruit decoction for cough, fever and respiratory issues in cattle.
26	Cissus quadrangularis L.	Nalleru	Vitaceae	Stem paste applied for bone fractures in livestock.
27	Terminalia chebula Retz.	Karakkaya	Combretaceae	Fruit decoction as laxative and digestive aid.
28	Tridax procumbens L.	Gaddichamanthi	Asteraceae	Leaf juice applied on cuts and wounds to stop bleeding.

29	Vitex negundo L.	Vavili	Lamiaceae	Leaf paste applied for inflammation and wounds in cattle.
30	Withania somnifera (L.) Dunal.	Aswa-gandha	Solanaceae	Root powder used as tonic for weakness and fertility improvement in livestock.

DISCUSSION

The documented plants belong to diverse families with Lamiaceae, Asteraceae, Fabaceae and Phyllanthaceae well represented. Leaves were the most commonly used plant part, aligning with broader ethnoveterinary patterns across Andhra Pradesh and other Indian regions where leafy parts are frequently utilized. These plant species are used to treat 11 veterinary diseases. Routes of administration varied from oral decoctions and infusions to external applications such as pastes and poultices. Remedies for digestive disorders, respiratory ailments, skin infections, and musculoskeletal issues were common, reflecting the practical needs of livestock keepers in rural contexts. The persistence of such knowledge underscores its cultural value, yet modern pressures and lack of documentation threaten its continuity. Further phytochemical and pharmacological studies are needed to validate the efficacy and safety of these traditional remedies.

CONCLUSION

This investigation represents the first comprehensive and systematic documentation of ethnoveterinary plant species utilized in YSR Kadapa District, Andhra Pradesh. The study recorded a total of 30 plant species distributed across 29 genera and 22 families, reflecting considerable botanical diversity in traditional livestock healthcare practices. The findings highlight the significant role of indigenous knowledge systems in managing common animal ailments, particularly in rural and resource-limited settings where modern veterinary services may be less accessible. Local healers and livestock owners rely on time-tested plant-based remedies for treatment, prevention and overall animal well-being. Preservation of this valuable traditional knowledge is urgently needed, as it is gradually declining due to modernization and changing socio-economic conditions. Further, phytochemical and pharmacological validation of these plants is strongly recommended to ensure their safety, efficacy and sustainable utilization.

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