

## **ETHNOVETERINARY MEDICINAL PRACTICES IN TRIBAL REGIONS OF ANDHRA PRADESH, INDIA**

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### **Abstract**

The present communication deals with the plants used to treat common diseases in cattle and pet animals in the tribal belts of Andhra Pradesh, India. For the purpose of the ethnoveterinary practices, 108 plant species belonging to 99 genera and 51 families were identified. The present study reveals that leafy parts rank first, among the various plant parts used to treat different ailments of the livestock.

### **Introduction**

Andhra Pradesh is the fourth largest state in India which lies between 12° 37' and 19° 54' North latitudes and 76° 46' and 84° 46' East longitudes, and occupies the middle portion of the Eastern half the Indian Peninsula with an area of 2,75,068 sq km of which 23.20% is covered by forest lands. The state has land boundaries with Orissa, Madhya Pradesh on the North, Maharashtra and Karnataka on the West, Tamilnadu on the South and Sea boundary with the Bay of Bengal on the East. The tribal population of Andhra Pradesh is 50.24 lakhs divided into 33 tribal groups.

Ethnoveterinary medicine, deals with traditional animal health care which encompasses the knowledge, skills, methods, practices and beliefs about animal health care. A broader survey has shown that more than 80% of the tribal populations of Andhra Pradesh still depend on traditional medicines for their animal health practices and more than 95% of the traditional medical preparations are of plant origin.

Indian rural economy depends upon agriculture and livestock management and farmer's livelihood in Andhra Pradesh is partially on dairy. In rural and tribal regions livestock regularly affected by different types of diseases. Due to unavailability of veterinary services rural tribal poor people of Andhra Pradesh depend on ethnoveterinary practices. The present study has been made to collect, identify and document the ethnoveterinary medicinal plants used by tribals of Andhra Pradesh.

### **Material and Methods**

Fifteen field trips to the study area were made to collect information on ethnoveterinary practices by the aboriginal and others through interviewing local chiefs, priests, vaidyas, herbal practitioners, elderly people and educated youths. The methodology was adopted as described by Jain (1964, 1981, 1987, 1999), Chadwick and Marsh (1994), Hemadri (1994) and Martin (1995). Each medicinal practice was cross checked with 3 or 4 informants. Ethnoveterinary data and the vernacular names were collected for documentation. Plants specimens were collected and identified by referring to standard Flora, viz. Hooker (1872-1897), Gamble and Fischer (1915), Pullaiah (1997) and few other local floras.

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## Results and Discussion

In the present study a total of 108 plant species belonging to 99 genera and 51 families have been identified as potential source for treating 47 types of ailments. The scientific names of the species along with families, vernacular names, part(s) used, veterinary uses, doses and mode of preparation are recorded in Table 1. Among these, leafy parts occupies the highest position (41%), followed by stem bark (18%), aerial part (12%), fruit (7%), whole plant (6%), root (5%), tubers (3%) corn, oil and bulb (2%) each one for latex, stem, milk, young fruit were used to treat the livestock ailment.

**Table 1. Plant species used by tribal people in the Andhra Pradesh, for treatment of veterinary diseases and the mode of administration.**

Sl. No.	Species name	Family name	Vernacular name	Part(s) used	Veterinary use	Doses and mode of preparation
1.	<i>Abrus precatorius</i> L.	Fabaceae	<i>Gurivinda</i>	Seed	Trypanosomiasis	Seed extracts (20 mg) dissolved in drinking water, once daily for 4 days
2.	<i>Acacia chundra</i> L.	Mimosaceae	<i>Sandra</i>	Stem bark	Ephemeral fever	Stem bark decoction (200 ml) is administered once daily for 4-5 days
3.	<i>Acacia nilotica</i> L.	Mimosaceae	<i>Nalla tumma</i>	Stem bark	Intestinal problem	Decoction (100 ml) stem bark is administered twice daily for 4 days
4.	<i>Acalypha indica</i> L.	Euphorbiaceae	<i>Muripindi</i>	Root, leaf	Worms	Roots and leaves are crushed in 1:2 ratio and administered once daily for 5 days
5.	<i>Achyranthus aspera</i> L.	Amaranthaceae	<i>Uttareni</i>	Leaf, flower	Anthelmintic, myiasis	Paste of leaves (100 gm) mixed in butter and is applied to wounds to prevent myiasis
6.	<i>Adansonia digitata</i> L.	Bombacaceae	<i>Enugu padam</i>	Stem bark, fruit	Diarrhoea, poor milk flow	Boiled decoction of stem bark, fruit is administered thrice daily for 3 days
7.	<i>Agave americana</i> L.	Agavaceae	<i>Kittanara</i>	Leaf	Skin wounds	Leaf paste applied on effected area
8.	<i>Ailanthus excelsa</i> Roxb.	Simaroubaceae	<i>Pedda manu</i>	Leaf	Malarial fever	Decoction of leaves is administered twice daily for 5 days
9.	<i>Allium cepa</i> L.	Liliaceae	<i>Ulli</i>	Bulb	Gastrointestinal problems	Ash (100 mg) is prepared from bulb and is administered twice daily for 4 days
10.	<i>Allium sativum</i> L.	Liliaceae	<i>Vellulli</i>	Bulb	Cough	Paste (50 mg) of bulb is administered once daily for 5 days
11.	<i>Aloe vera</i> L.	Liliaceae	<i>Kalabanda</i>	Leaf	Fowl typhoid	Paste of crushed fresh leaves (200 gm) dissolved in 1 liter water and administered once daily for 4 days

(Contd.)

Table 1. Contd.

Sl. No.	Species name	Family name	Vernacular name	Part(s) used	Veterinary use	Doses and mode of preparation
12.	<i>Alstonia scholaris</i> L.	Apocynaceae	<i>Edakulapala</i>	Bark	Gastric problem	Bark (50 mg) is mixed with sufficient salt and administered once daily for 5 days
13.	<i>Amaranthus spinosus</i> L.	Amaranthaceae	<i>Mulla thotakura</i>	Whole plant	Wounds	Paste of whole plant is applied externally for quick healing of wounds
14.	<i>Ananas comosus</i> L.	Bromeliaceae	<i>Nelapanasa</i>	Young fruit	Anthelmintic	Young fruit juice (200 ml) is administered twice daily for 5 days
15.	<i>Anisomeles indica</i> Kuntze	Lamiaceae	<i>Chinna ranabari</i>	Leaf	Ephemeral fever	Leaf decoction (500 ml) is administered once daily for 4 days
16.	<i>Annona reticulata</i> L.	Annonaceae	<i>Ramaphalam</i>	Leaf	Wounds	Paste of leaves is mixed with mustard oil and applied on wounds for quick healing
17.	<i>Annona squamosa</i> L.	Annonaceae	<i>Seethaphalam</i>	Leaf, seed	Tick infestation, maggot wound	Paste of seeds and leaves is applied on the skin
18.	<i>Argemone mexicana</i> L.	Papavaraceae	<i>Rakka balusa</i>	Milk, oil	Chronic ulcerous wounds	Pale milk of the plant and oil from seeds are applied on chronic ulcerous wounds once daily for 15 days
19.	<i>Atlantia malabarica</i> (L.) Correa	Rutaceae	<i>Konda nimma</i>	Stem bark	Anthrax	Stem bark (250 gm) paste with sufficient quantity of pepper and garlic is administered twice daily for a week
20.	<i>Azadirachta indica</i> L.	Meliaceae	<i>Vepa</i>	Whole plant	Trypanosomiasis	50 gm of powder of leaf is administered twice daily for 4 days
21.	<i>Balanitis aegyptiaca</i> L.	Simaroubaceae	<i>Gara</i>	Seed	Anthelmintic	Seed powder (20 gm) administered once daily for 8 days
22.	<i>Bambusa aundinacea</i> Retz.	Poaceae	<i>Veduru</i>	Leaf	Cough	Dried leaves (50 mg) is mixed with mustard oil and administered twice daily for 3 days
23.	<i>Barleria prionites</i> L.	Acanthaceae	<i>Mullagorinta</i>	Leaf, stem bark	Diarrhoea, foot and mouth diseases	Decoction of bark (200 ml) is given to animals as an astringent in diarrhoea. Paste of leaves (20gm) is applied to inter digital space in animals suffering from foot and mouth disease until cure
24.	<i>Brassica nigra</i> L.	Brassicaceae	<i>Avalu</i>	Seeds	Kidney disorder	Seed oil (50 ml) is administered orally once for 5 days
25.	<i>Bryonia dioica</i> L.	Cucurbitaceae	<i>Buddakakara</i>	Leaf, fruit	Worm and fever	Decoction (100 ml) of leaf and fruit is administered once daily for 3 days

(Contd.)

Table 1. Contd.

Sl. No.	Species name	Family name	Vernacular name	Part(s) used	Veterinary use	Doses and mode of preparation
26.	<i>Butea monosperma</i> L.	Fabaceae	<i>Moduga</i>	Seed	Anthelmintic	Seed powder (200 mg) alone or in combination with honey is given as an anthelmintic
27.	<i>Caesalpinia crista</i> L.	Caesalpiniaceae	<i>Gaccha</i>	Leaf	Trypanosomiasis	Leaves along with leaves of <i>Dendrocalamus strictus</i> (20 gm each) crushed and mixed in 100 ml of water is administered thrice a day for 4 days
28.	<i>Calotropis procera</i> R.Br.	Asclepiadaceae	<i>Tella Jilledu</i>	Leaf, latex	Inflammation, snake-bite	Milky latex of plant is applied on inflamed areas to relieve inflammation and on snake bite to neutralize poison
29.	<i>Capsicum annuum</i> L.	Solanaceae	<i>Mirapa</i>	Fruit	Mouth disease	5 gm of fruit paste is dissolved in 1 liter of water administered thrice daily for 5 days
30.	<i>Caralluma adscendens</i> R. Br.	Euphorbiaceae	<i>Kundatikommulu</i>	Leaf	Bloat	Paste (200 mg) dissolved in 5 liters of water, administered twice daily for 3 days
31.	<i>Carica papaya</i> L.	Papavaraceae	<i>Boppay</i>	Latex	Anthelmintic	Latex (20 ml) mixed with feed and administered twice daily for 6 days
32.	<i>Cassia fistula</i> L.	Caesalpiniaceae	<i>Rela</i>	Fruit	Cold	Paste of green fruit is applied on neck to cure swelling due to cold
33.	<i>C. senna</i> L.	Caesalpiniaceae	<i>Sonamukhi</i>	Leaf, pod	Rheumatism, skin disease	Powder of dried leaves (20 gm) used in rheumatism and skin diseases once daily for 8 days
34.	<i>Ceiba pentandra</i> (L.) Gaertn.	Bombacaceae	<i>Burugu</i>	Leaf, stem bark	Trypanosomiasis	Decoction is administered twice daily for 3 days
35.	<i>Cipadessa baccifera</i> Miq.	Meliaceae	<i>Rendabha-ram</i>	Stem bark	Ephemeral fever	Stem bark decoction (500 ml) is administered with a pinch of pepper powder once daily for 4-5 days
36.	<i>Cissampelos pareira</i> L.	Menispermaceae	<i>Chiruboddi</i>	Aerial part	Swelling of abdomen	Boiling the aerial parts properly and preparing decoction, given 4-5 table spoon full thrice daily for 3 days
37.	<i>Citrus aurantifolia</i> L.	Rutaceae	<i>Nimma</i>	Fruit	Cold, nervous disorder	Fruit juice (200 ml) is administered twice daily for 3 days

(Contd.)

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Sl. No.	Species name	Family name	Vernacular name	Part(s) used	Veterinary use	Doses and mode of preparation
38.	<i>Clerodendrum phlomoides</i> L. f.	Verbenaceae	Urni	Root	Edema	Decoction of root (200 ml) is used orally to treat indigestion and generalized edema
39.	<i>C. viscosum</i> Vent	Verbenaceae	Gurrapu katilyaku	Leaf	Worms	Paste of the tender leaves (20 gm) is administered once daily for 3 days
40.	<i>Cochlospermum religiosum</i> L.	Cochlospermaceae	Konda gogu	Leaf, stem bark	Infertility	Decoction of leaf and stem bark is administered once daily for 10 days
41.	<i>Convolvulus arvensis</i> L.	Convolvulaceae	Pilimiteega	Leaf	Respiratory ailments	Leaf decoction (50 ml) is mixed with feed administered twice daily for 7 days
42.	<i>Costus speciosus</i> Koenig	Costaceae	Chengalva-cost	Root	Wounds	Paste of the root stock is applied externally to cure wounds
43.	<i>Cucurbita pepo</i> L.	Cucurbitaceae	Karkumbuda	Leaf	Antiparasitics	Leaf decoction is applied externally
44.	<i>Cuminum cyminum</i> L.	Apiaceae	Jeelakarra	Seed	Cough	Powder (25 mg) of the seeds is administered once daily for 3 days
45.	<i>Curcuma longa</i> L.	Zingiberaceae	Pasupu	Corn	Bleeding blood	Paste of corn (100 mg) administered twice daily for 5 days
46.	<i>Cuscuta reflexa</i> Roxb.	Cuscutaceae	Bangaru teega	Whole plant	Galactagogue	About 20 gm of plant is fried in mustard oil and is given twice daily after delivery as galactagogue
47.	<i>Cymopsis tetragonoloba</i> L.	Fabaceae	Goruchik-kudu	Seed	Nematodiasis	The mixture of cluster bean gram and red chilies (50 gm) is administered
48.	<i>Datura stramonium</i> L.	Solanaceae	Ummetha	Leaf	Antiparasitics, repellents	Leaf decoction is applied externally
49.	<i>Delonix regia</i> L.	Caesalpiniaceae	Turai	Stem bark	Ephemeral fever	Stem bark extract with pepper and garlic is administered twice daily for 8 days
50.	<i>Dillenia pentaphylla</i> Roxb.	Dilleniaceae	Kalinga	Stem bark	Anthrax	Stem bark paste is fed to animal daily twice for 3-4 days
51.	<i>Diospyros lotus</i> L.	Sapotaceae	Adavi sapota	Stem bark	Trypanosomiasis	Stem bark decoction (400 ml) is given every hour
52.	<i>Dolichandrone atrovirens</i> Roth	Bignoniaceae	Neeruddi	Stem bark	Ephemeral fever	Stem bark extract with <i>Anogeissus latifolia</i> (1:1 ratio) is administered 3-4 times daily for 2 days
53.	<i>Eucalyptus globulus</i> L.	Myrtaceae	Neelagiri	Oil	Skin and wounds	Oil is applied on skin problems and wounds

(Contd.)

Table 1. Contd.

Sl. No.	Species name	Family name	Vernacular name	Part(s) used	Veterinary use	Doses and mode of preparation
54.	<i>Ficus religiosa</i> L.	Moraceae	Marri	Bark	Small fox	Paste of bark (100 mg) mixed with powder of wheat and prepared pills administered orally once daily for 10 days
55.	<i>Fioria vitifolia</i> Mattei.	Malvaceae	Adavi benda	Stem bark	Ephemeral fever	Stem bark (200 gm) soaked in 2 liters of buttermilk for 3 days with sufficient quantity of pepper and garlic is administered twice daily for 3 days
56.	<i>Foeniculum vulgare</i> Miller	Apiaceae	Sompu	Seed	Reproductive disorder	Seed powder (50 mg) is administered once daily for 7 days
57.	<i>Gardenia latifolia</i> Ait.	Rubiaceae	Pedda kalinga	Stem bark	Ephemeral fever	Stem bark (150-200 gm) extract with 15-20 pepper and garlic is given twice daily for 3 days
58.	<i>Geodorum densiflorum</i> Schltr.	Orchidaceae	Donthula dumpa	Tuber	Ephemeral fever	Tuber (200 gm) extract with 15-20 gm of pepper and garlic is administered once daily for 3 days
59.	<i>Gnaphalium polycaulon</i> Pers.	Asteraceae	Bakhlu	Whole plant	Ephemeral fever	Whole plant extract (200-300 gm) with sufficient quantity of pepper and garlic is administered once daily for 3 days
60.	<i>Hedyotis corymbosa</i> L.	Rubiaceae	Tikka chutta	Whole plant	Trypanosomiasis	Whole plant decoction (1-2 liter) is administered with a pinch of pepper and garlic powder, is also used as nasal drops
61.	<i>Helianthus annuus</i> L.	Asteraceae	Poddutirugudu	Oil	Reproductive disorder	Seed oil (50 ml) is administered orally once for 5 days
62.	<i>Hordeum vulgare</i> L.	Poaceae	Barley, Yavaka	Seed, leaf	Gastrointestinal complaints	Seed powder with combination of jaggery is administered twice daily for 7 days
63.	<i>Jatropha curcas</i> L.	Euphorbiaceae	Nepalam	Leaf, stem bark	Pneumoni	Boiled decoction is administered once daily for 2 days
64.	<i>Lannea coromandelica</i> Murr.	Anacardiaceae	Gumpena	Stem bark	Anthrax	Stem bark decoction (250 ml) is administered daily twice for 15 days
65.	<i>Lawsonia inermis</i> L.	Lythraceae	Gorintaku	Leaf	Bruises wounds	Decoction leaf is administered directly on skin until cure
66.	<i>Lindernia parviflora</i> Haines.	Scrophulariaceae	Not known	Whole plant	Ephemeral fever	Whole plant crushed with 10-15 pepper and sufficient quantity of garlic is administered once daily for 3 days

(Contd.)

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Sl. No.	Species name	Family name	Vernacular name	Part(s) used	Veterinary use	Doses and mode of preparation
67.	<i>Lycopersicum esculentum</i> L.	Solanaceae	Tamata	Leaf	Eye problem	Fruit juice (500 ml) is administered twice daily for 3 days
68.	<i>Mangifera indica</i> L.	Anacardiaceae	Mamidi	Seed, stem bark, root	Poor milk flow	Combination of seed, stem bark and root paste (1:1:1) is administered once daily for 10 days
69.	<i>Miliusa tomentosa</i> Roxb.	Annonaceae	Barra duddi	Stem bark	Trypanosomiasis	Stem bark decoction (200-250 ml) is given twice daily for 3 days
70.	<i>Morinda citrifolia</i> L.	Rubiaceae	Togara	Fruit	Anthelmintic	Fruit juice (20 ml) is administered once daily for 3 days
71.	<i>Moringa oleifera</i> L.	Moringaceae	Mulaga	Seed, stem bark, root	Heminthosis	Paste of seed (20 gm) or stem bark (50 gm) or root (50 gm) is administered twice daily for 3 days
72.	<i>Mollugo nudicaulis</i> Lam.	Molluginaceae	Not known	Leaf	Ripen abscesses	Paste of fresh leaves (100 gm) is applied to ripen abscesses daily once for 4 days
73.	<i>Murraya koenigii</i> L.	Rutaceae	Karivepaku	Leaf	Diarrhoea	50 gm of leaves are crushed in water and drenched
74.	<i>Musa paradisiaca</i> L.	Musaceae	Arati	Root	Worms	Paste of crushed fresh roots (200 gm) dissolved in 1 liter water and administered once daily for 4 days
75.	<i>Nerium oleander</i> L.	Apocynaceae	Ganneru	Tuber	Antiparasitics, repellents, skin and wounds	Tuber is crushed into paste and applied over the wounds and skin
76.	<i>Nicotiana tabaccum</i> L.	Solanaceae	Pogaku	Leaf	Ectoparasites	Leaf decoction is applied on skin directly
77.	<i>Ocimum gmatissimum</i> L.	Lamiaceae	Nimmathulasi	Leaf	Constipation	Leaf paste is dissolved in drinking water for 3 days
78.	<i>Oryza sativa</i> L.	Poaceae	Vari	Seed	Gastrointestinal problems	Combination of boiled grains with jaggery is administered once daily for 15 days
79.	<i>Papaver somniferum</i> L.	Papavaraceae	Nallamandu	Seed	Nervous system disorder	Decoction (20 ml) is administered once daily for 10 days
80.	<i>Pedaliium murex</i> L.	Pedaliaceae	Enugu palleru	Fruit	Diuretic	Powder of dried fruits (100 gm) dissolved in 1 liter of water is administered once daily for 5 days
81.	<i>Phyllanthus amarus</i> L.	Euphorbiaceae	Nela usisri	Root, leaf	Indigestion, wounds	Powder of roots (20 gm) is given to animals suffering indigestion, juice of leaves (100 ml) is applied to wounds and inflamed areas

(Contd.)

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Sl. No.	Species name	Family name	Vernacular name	Part(s) used	Veterinary use	Doses and mode of preparation
82.	<i>Physalis minima</i> L.	Solanaceae	<i>Buddabusara</i>	Leaf	Swelling of abdomen	Twig of the plant (200 mg) is mixed with leaves of <i>Clerodendrum viscosum</i> (100 mg) and is administered once daily for 3 days
83.	<i>Piper nigrum</i> L.	Piperaceae	<i>Pippallu</i>	Fruit	Low milk flow	Fruits (20 mg) with grinded black gram paste is administered once daily for 10 days
84.	<i>Polyalthia cerasoides</i> Bedd.	Annonaceae	<i>Chilaka duddi</i>	Stem bark	Ephemeral fever	Stem bark (200 gm) crushed with 10-15 pepper and sufficient quantity of garlic is administered twice daily for 3 days
85.	<i>Psidium guajava</i> L.	Myrtaceae	<i>Jama</i>	Leaf, stem bark	Helminthosis, fever, diarrhoea	Boiled leaf decoction (500 ml) and stem bark is administered twice daily for 3 days
86.	<i>Pterolobium hexapetalum</i> L.	Caesalpiniaceae	<i>Korintha teega</i>	Whole plant	Cough	Decoction (50 ml) is administered once daily for 4 days
87.	<i>Radermachera xylocarpa</i> Roxb.	Bignoniaceae	<i>Isakarasi</i>	Stem bark	Ephemeral fever	15-20 pepper and garlic is fed to cattle twice daily for 2 days
88.	<i>Ricinus communis</i> L.	Euphorbiaceae	<i>amudam</i>	Seed oil	Purgative	Oil of seed (20 ml) is used as a purgative once daily for 5 days
89.	<i>Sansevieria roxburghiana</i> Schult.	Agavaceae	<i>Chapodishi</i>	Leaf	Trypanosomiasis	Warmed leaf juice is used as nasal drops thrice in a period of two hours and paste is also applied over the body
90.	<i>Securinega leucopyros</i> Muell.	Euphorbiaceae	<i>Sulamunata</i>	Leaf	Wounds	Paste of leaves (50 gm) is applied to wounds once daily for 4 days
91.	<i>Semecarpus anacardium</i> L.	Annonaceae	<i>Nalla jeedi</i>	Fruit	Haemorrhagic	Dried fruits (50 mg) are administered twice daily for 6 days
92.	<i>Senna occidentalis</i> Roxb.	Caesalpiniaceae	<i>Kasinth</i>	Leaf	Helminthosis	Soak in water and drench
93.	<i>Sida acuta</i> L.	Malvaceae	<i>Muttavapulagam</i>	Leaf	Diarrhoea	Decoction with <i>Musa paradisiaca</i> flowers, administered 4-5 times daily for 3 days
94.	<i>Solanum melongena</i> L.	Solanaceae	<i>Vanga</i>	Leaf	Skin wounds	Leaf paste is applied on skin wounds
95.	<i>S. nigrum</i> L.	Solanaceae	<i>Kamanchi</i>	Leaf	Gastrointestinal	Decoction (100 ml) of leaf is administered once daily for 10 days
96.	<i>S. tuberosum</i> L.	Solanaceae	<i>Bangaladumpa</i>	Tuber	Reproductive disorder	Tuber paste is administered twice daily for 6 days

(Contd.)

**Table 1. Contd.**

Sl. No.	Species name	Family name	Vernacular name	Part(s) used	Veterinary use	Doses and mode of preparation
97.	<i>Sonchus oleraceus</i> L.	Asteraceae	<i>Rathrinta</i>	Leaf	Skin wounds	Leaf paste is applied on skin wounds
98.	<i>Soymida febrifuga</i> A. Juss.	Meliaceae	<i>Somidi</i>	Stem bark	Trypanosomiasis	Stem bark mixed with same of <i>Terminalia alata</i> , <i>Dichrostachys cinerea</i> and <i>Solanum xanthocarpum</i> (100 gm each) is administered twice daily for 2 days
99.	<i>Strychnos nuxvomica</i> L.	Loganiaceae	<i>Musidi</i>	Leaf	Foot rot	Decoction of leaf is applied on foot thrice daily for one week
100.	<i>Tamarindus indica</i> L.	Caesalpiniaceae	<i>Chinta</i>	Stem bark	Mouth disease	Boiled decoction is administered thrice for 4 days
101.	<i>Tinospora cordifolia</i> (Willd.) Hook. f. & Thoms.	Menispermaceae	<i>Tippateega</i>	Stem, leaf	Fever, immunity	Stem and leaf decoction (50 gm) is administered once daily for 3 days
102.	<i>Tribulus terrestris</i> L.	Zygophyllaceae	<i>Palleru</i>	Leaf	Chronic cough	Juice of leaf (50 mg) is administered twice daily for 4 days
103.	<i>Vitex altissima</i> L.	Verbenaceae	<i>Nemaladugu</i>	Stem bark	Ephemeral fever	Stem bark and that of <i>Anogeissus latifolia</i> (1:1 ratio) along with 10-15 pepper and garlic crushed is administered twice daily for 3 days
104.	<i>V. negundo</i> L.	Verbenaceae	<i>Vavila</i>	Leaf	Rheumatism, arthritis	Decoction of leaves (200 ml) is administered twice daily for 3 days
105.	<i>Waltheria indica</i> L.	Sterculiaceae	<i>Nallabenda</i>	Leaf	Pneumonia	Boiled decoction (200 ml) is administered twice daily for 10 days
106.	<i>Zea mays</i> L.	Poaceae	<i>Jonna</i>	Corn	Reproductive disorder	Powder of the corn is administered for the reproductive disorders
107.	<i>Ziziphus jujuba</i> L.	Rhamnaceae	<i>Regu</i>	Fruit	Skin disease	Fruit pulp is administered for 10 days
108.	<i>Z. xylopyra</i> L.	Rhamnaceae	<i>Gotti</i>	Root	Anthrax	Roots crushed with <i>Calotropis gigantea</i> stem barks, <i>Erythroxylum monogynum</i> and <i>Pterocarpus marsupium</i> and 10-12 dry chillies is administered for 2-3 days with one liter of water once daily

Among these families Solanaceae ranks the highest position represented by eight species followed by Caesalpiniaceae with seven species. Twenty three families are represented by single species only. To treat a disease more than one species may be used. Ephemeral fever in cattle are treated by 14 plant species; Trypanosomiasis by 9 species; anthelmintic and wounds by 6 species; diarrhoea by 5 species; anthrax, cough reproductive disorders, skin diseases and wounds by 4 species; antiparasitics, helminthosis by 3 species; cold, fever, immunity, mouth disease, pneumonia, rheumatism and swelling of abdomen by 2 species; and remaining diseases such as bleeding, bloat, bruises, wounds, chronic cough, chronic ulcerous wounds, constipation, diuretic, edema, eye problem, footrot, galactagogue, gastrointestinal, haemorrhagic, indigestion, wounds, infertility, inflammation, snake-bite, kidney disorder, low milk flow, malarial fever, nematodiasis,

nervous system disorder, poor milk flow, purgative, respiratory ailments, riben abscesses, smallpox, and tick infestation were treated by one species.

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### **References**

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