

## FOLKLORE TRADITIONAL KNOWLEDGE ON DIGESTIVE DISORDERS OF DOMESTIC ANIMALS (CATTLE, SHEEP AND GOATS) IN THE MEDAK DISTRICT, TELANGANA, INDIA

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### ABSTRACT

The paper deals with exploration of folklore knowledge on medicinal plants used in digestive disorders of livestock (cattle, sheep and goats) practiced by local healers of Medak district, Telangana, India. An attempt is made to gather information from the local pastoral healers belonging to Golla, Kurma, Lambada, Mudiraj and Gouda communities. The author has interviewed 25 healers and recorded the methods of collection of herbal plants and methods of preparation of the drugs used by them. Livestock of the district are commonly prone to digestive disorders like anorexia, bloat diarrhea, dysentery (blood with stool), stomach ache, dyspepsia, intestinal worms, hydrocyanic acid and stomatitis. The author has recorded 66 species of medicinal plants during last five years which are being used by the healers belonging to 58 genera of 37 families of angiosperms. In all a total of 70 remedies were recorded under digestive disorders, (out of which 30 for diarrhea and dysentery 9 for bloat, 9 for stomach ache, 8 for dyspepsia, 5 for intestinal worms, 4 for anorexia, 3 for hydrocyanic acid tympani (occurs due consumption of poison leaves which contain hydrocyanic acid), and 2 for stomatitis). The author has recorded several forms of medicines like fresh juice from the fresh plant materials in the form of mixtures, pills, decoctions, powders etc. Healers generally use fresh plant materials like leaves, barks (of roots and stems), tubers, rhizomes either to make juice and decoction.

**Key words:** Folk-lore communities, Traditional healers, Herbal remedies, Veterinary diseases, Medak, Telangana.

### INTRODUCTION

**K**uruma, Golla, Lambada are pastoralists and Mudiraj and Gouda are other major folk-lore communities of the Medak district which is part of Telangana region, Andhra Pradesh. Earlier workers done some studies on Ethno-veterinary medicine in some parts of the state; Plants used in veterinary Medicine in Chittoor dist., AP by Reddy et al (1987)<sup>5</sup>, Folk Veterinary Medicine of Kurnool District, Andhra Pradesh by Goud,

P.S & Pullaiah, T (1996)<sup>2</sup>, Ethno-veterinary practices in Warangal by Reddy *et al.* (1998)<sup>6</sup>, Common surgical conditions in animals in some districts of AP by Ramdas *et al.*(2000)<sup>4</sup>, Folk-lore biomedicine for common veterinary diseases in Nalgongda dist by Reddy and Raju(2000)<sup>7</sup>, Ethno-veterinary medicine for livestock in Eastren Ghats of AP by Reddy *et al.* (2006)<sup>8</sup>. Ethno Veterinary Medicinal Plants of the catchment area of the River Papagni in the

Chittoor and Anthapur District of AP by Sanyasi Rao et al., (2008)<sup>9</sup>.

Healers of folk-lore communities of Medak district are still in possession of tremendous ancestral traditional knowledge on medicinal plants of their surroundings. In the absence of any comprehensive attempt to study the usage of Medicinal Plants by these communities to cure veterinary diseases in Medak district, Andhra Pradesh, the present study was under taken.

## MATERIAL AND METHODS

### Study Area:

Medak is located in Telangana region of Andhra Pradesh, India. Medak district forms part of the Deccan Plateau. The total geographical area of the district is 9.699sq.km, and it covers 3.5% of the total area of the state. It lies between 17<sup>0</sup>28' and 79<sup>0</sup> 10' of Eastern longitude. Generally dry weather, with hot summer and some pleasing showers, except during the south-west monsoon season in the Medak district. The average annual rainfall in the district is 896.7 mm. Temperatures range from a minimum of 34°C and a maximum of 40° Celsius. Traditionally livestock rearing has been a critical source of livelihood for people of Medak, with small and marginal farmers rear animals as an integral component of farming, or as pastoralist communities rearing sheep and goats. Pastoralist communities followed semi-migratory grazing system. A group of 5-6 shepherds join together and form an association or group or team called "Melam". This group of shepherds (Melam) could be from one village or from neighboring two or three villages. Melam move with their animals in search of fodder and water for their animals. The major livestock reared in the district are Sheep, Goats, Cattle, Buffaloes and Poultry. In the semi-arid context with a history cyclic droughts and seasons of good rains, animals have always played been crucial for peoples livelihoods.

Intensive field work was undertaken for a period of five years from December 2006 to December 2011. Locally well known traditional healers and elders from pastoral communities who are

still practicing traditional medicine identified. The author has taken help from the local registered veterinary practitioners for diagnosing the diseases described by the illiterate healers. During field work the author has visited pastoralist villages, Lambada thandas and adjoining forest localities.

### Plant Collection:

Standard methods of botanical collection and techniques of herbarium preparations were followed plants have been collected in flowering and fruiting stages for the preparation of herbarium. Plant specimens were prepared and tagged with collection number. The plant specimens were identified using district, regional and state flora's like Flora of Medak District by Pullaiah *et al.* (1998)<sup>3</sup>, Flora of the Presidency of Madras by Gamble (1957)<sup>1</sup> and other relevant literature. The herbarium of the plant specimens collected during this work has been prepared and mounted on the standard herbarium sheet and Vouched herbarium specimens were deposited in the Herbarium, Department of Botany, Osmania University, Hyderabad.

The traditional healers were interviewed from time to time to record the first-hand information regarding plants or with their parts, preparation of the medicine, dosages, method of administration and described recipe for animal ailments were recorded.

## RESULTS

The present study revealed that the rural folklore communities of Medak district have immense knowledge on medicinal plants available in their surroundings for veterinary health care treatments. Golla, Kurma and Lambada communities in the district have rich knowledge for treating the disease prevailing among the livestock. The author has recorded 66 species of medicinal plants during last five years which are being used by the healers belonging to 58 genera of 37 families of angiosperms. In all a total of 70 remedies were recorded under digestive disorders. Of these 70 remedies were recorded under digestive disorders (3 remedies for anorexia, 12 for bloat, 2 for dyspepsia, 32 for

diarrhoea/ dysentery, 6 for intestinal worms, 13 for stomach ache, 1 for hydrocyanic acid tympani occurs due consumption of poison leaves which contain hydrocyanic acid), and 1 for stomatitis).

### Disease wise treatments:

Disease wise treatments are given below alphabetically with local Telugu vernacular names of the diseases are in brackets. Healer name was given at the end of each recipe for authenticity.

#### 1. Anorexia (“Metha meyaka povadam”)

- Grind 25 g fresh rhizome of *Curcuma longa* along with handful leaves of *Pergularia daemia* and fed to affected animals once a day for 2 days.(Ref: Veeraiah, Kondapur)
- Grind handful fresh leaves of *Canthium parviflorum* to make 50 g bolus and it is given internally twice a day for two days. (Ref: Chinchettu Bandigonda, Gangapur).
- 1 kg leaves of *Trigonella foenum-graecum* and two well ripped bananas are fed to the affected animal for 2 days.(Ref: Satham Ramulu and Bheemaiah of Narsapur)

#### 2. Bloat (“Kadupubbu”)

- Tie across the mouth with stem fiber of *Butea monosperma* and keep whole day and remove it. (Ref: Chinchettu Bandikonda-Gangapur, Chevula Adavigonda, Rekhali).
- 200 ml stem bark extract of *Butea monosperma* is given internally twice a day for three days. (Ref: Manne Narayana, Muthrajipalli).
- 250 g leaves of *Tylophora indica* grind together with 10 g of *Piper nigrum* and 100 g of jaggery and mix it in 1 liter water. Half a liter of this mixture is drenched for sheep and goats and 1 liter for large animals as a single dose. (Ref: Golla pochaiah, Thimmapur).

- Drench 100 ml pulp juice of *Tamarindus indica* to the small ruminants and 500ml for large animals as a single dose.(Ref: Sara Hanumaiah (Ramachandrapur, Chinchettu Bandikonda-Gangapur).

- Handful full dry flowers of *Butea monosperma* are soaked in 200 ml rice water for 10 minutes and squeeze out the juice. Drench 100 ml of this juice twice a day for three days to small ruminants and double the quantity to large animals. (Satham Ramulu, Narsapur).

- 5 g of dried fruit powder of *Citrullus colocynthis* is mixed into 50 ml water. Drench this medicine as single dose( Ref: Kadali narsagonda, Uthpalli).

- 200 ml fresh root extract of *Tephrosia purpurea* is mixed with 500ml water and it is drenched as a single dose. (Ref: Golla Pochaiiah, Thimmapur, Peddakurma Narsaiah, Peddagotti mukkala).

- 50 ml *Tylophora indica* leaf extract is given along with 200 ml water twice daily till cured. (Ref: Golla Pochaiiah, Thimmapur).

- Drench 500ml of seed oil made out of *Sesamum indicum* as single dose to get relief from bloat. (Ref: Elacha Pentaiah, Nastipur).

- Drench 500 ml of coconut water *Cocos nucifera* twice daily for two days. (Ref: Kondi Veeraiah, Avancha).

- Grind handful leaves of *Cassia auriculata* and mixed into 200 ml of rice gruel and drench this mixture twice daily for 2 days (Ref: Encharla Pochaiiah, Avancha).

- 10 ml seed decoction of *Carum copticum* is mixed into 5 g of sweet soda and it is drenched as a single dose to cure bloat. (Ref: Golla Pochaiiah Thimmapur) .

#### 3. Diarrhea and Dysentery (“Purru/ Vasana purru”)

- Ground 100 g leaves of *Phyllanthus reticulatus* and mixed into 200 ml of buttermilk. Drench this mixture twice a day for three days. (Ref: P.veeraiah peddagottimukkala, Chinchettu Bandigonda-Gangapur, Kadal narsagonda, Uthpalli).
- Ground 150 g fresh stem bark of *Holarrhena antidysenterica* and mixed into 200 ml rice gruel and drench, twice a day for three days. (Ref: Golla narayana, Hathnura).
- Ground 50 g fresh stem bark of *Bombax ceiba* and it is mixed into 500 ml water. Drench this medicine twice a day for three days. (Ref: Jarpala Gangaram, Narayanpur thanda).
- 500 g stem bark of *Cassia fistula* is mixed with 250 g of jaggery to make a bolus. Administer orally twice a day for two days. (Golla narayana, Hathnura).
- Ground 10 g seeds of *Cassia tora* and mix in 100 ml water. Drench this mixture twice daily for three days. (Ref: Golla Pochaiiah, Thimmapur).
- Pound handful full leaves of *Andrographis paniculata* to squeeze out the juice and add 50 ml of Tamarind pulp juice. Drench this mixture once a day for one day.( Ref: Kadal Narsagonda, Uthapalli).
- Feed leaves of *Bambusa arundinaceae* once a day for two days (Ref: Chevula Adavigonda, Rekhal).
- Ground 25 g stem bark of *Grewia taelifolia* to squeeze out the juice.10 ml of this juice is drenched twice a day for 3 days. (Ref: Sampati Muthyalu, Gummadidala).
- Ground 25 g stem bark of *Bauhinia racemosa* to squeeze out the juice. 10 ml of this juice is drenched twice a day for 3 days. (Ref: Sampati Muthyalu, Gummadidala).
- Ground 25 g stem bark of *Abutilon indicum* to squeeze out the juice. 10 ml of this juice is drenched twice a day for 3 days. (Ref: Sampati Muthyalu, Gummadidala)
- 10 ml leaves extract of *Securinega leucopyrus* is mixed with about 250 g of curd and drenched twice a day for two days. (Ref: Bheemappa, Eedulapally village).
- 200 g dried leaf powder of *Securinega leucopyrus* is mixed into 500 ml water. Drenched this mixture twice a day for two days. (Ref: Bagamma, Sangapur village).
- Ground 100 g leaves of *Psidium guajava* along with same quantity of *Securinega leucopyrus* to squeeze out the juice. Drench 100 ml extract by adding buttermilk once a day for two days. (Ref: Gangamma, Chilkapali village).
- Feed handful full leaves of *Bambusa arundinaceae* once a day for two or three days. (Ref: Sangaiah, Jambigi village).
- Drench 100 ml leaf juice of *Ageratum conyzoides* to adult animal twice a day until cured. (Ref: Narsagonda, Gangapur).
- The whole plant of *Amaranthus tricolor* is decocted and 100 ml of this decoction is given internally twice daily for three days. (Ref: Laddi Bandigonda, Gangapur).
- 30 ml stem bark extract of *Bridelia montana* is given internally twice daily till cured. (Ref: Laddi Bandigonda, Gangapur).
- 20 ml stem bark extract of *Bridelia retusa* is given orally along with one glass of water twice daily for 2 days. (Ref: Jampati Sangonda, Gangapur).
- 50 ml stem bark extract of *Careya arborea* is given internally twice daily for 3 days.(Ref: Ailiah, Nallavalli).
- 10 g seed powder of *Celosia argentea* is mixed into to 500 ml buttermilk and

drenched twice daily for two days. (Ref: Kadali Narsigonda, Uthpalli).

- 100 ml fresh tuber juice of *Cissus vitiginea* is drenched twice daily until cured. (Ref: Satham Ramulu, Narsapur).
  - 100 ml stem bark extract of *Cordia dichotoma* is drenched twice daily till cured. (Ref: Laddi Bandigonda, Gangapur).
  - 200 ml stem juice of *Cuscuta reflexa* is given internally twice daily till cured. (Ref: Narsimlu, Ramchandrapur).
  - 50 ml stem bark juice of *Grewia hirsuta* is mixed into 200 ml buttermilk and drenched once daily till cured (Ref: Golla Pochaiiah, Thimmapur).
- 50 ml fresh stem bark juice of *Helicteres isora* is drenched once daily for three days. (Ref: Narsigonda, Gangapur).
- 50 ml root juice of *Holostemma ada-kodien* is drenched by adding 5g curcuma powder, twice daily till cured. (Ref: Elcha Pentaiah, Nastipur).
  - Grind 50 g stem bark of *Jatropha curcas* is mixed into 200 ml butter milk. Drench this medicine once daily for two days (Ref: Laddi Bandigonda, Gangapur).
  - Fresh leaf juice of *Sida acuta* is given along with buttermilk once daily till cured. (Ref: Satham Ramulu, Narsapur).
  - 10 ml Stem bark juice of *Streblus asper* is given with equal quantity of butter milk, twice daily till cured. (Ref: J Narsagonda, Gangapur).
  - 100 ml fresh stem bark juice of *Wrightia tinctoria* is drenched twice daily for 3 days. (Ref: Golla Pochaiiah, Thimmapur).
  - 100 ml fresh stem bark juice of *Zizyphus mauritiana* is given internally twice daily

for 3 days. (Ref: Golla Pochaiiah, Thimmapur).

- 100 ml stem bark juice of *Zizyphus xylopyrus* is given internally once daily till cured. (Ref: Mucha Narayana, Ramchandrapur)

#### 4. Dyspepsia (“Ajeerti”)

- Drench 100 ml leaf juice of *Acalypha indica* along with 5 g of hing to the affected animal to get immediate relief from dyspepsia. (Ref: Elcha Pentaiah, Nastipur).
- Feed leaves of *Basella alba* along with other fodder to get relieve from constipation. (Ref: Laddi Bandigonda, Gangapur).

#### 5. HCN poison (tympani occurs due to consumption of poison leaves which contain hydrocyanic acid) (“Namu ekkuta”).

- Crush handful full leaves of *Annona squamosa* to make bolus, 30 g size of bolus is given orally twice for one day. (Ref: Golla Pochaiiah, Thimmapur)

#### 6. Intestinal worms (“Nattalu”)

- Grind handful leaves of *Aristolochia bracteolata* along with 50g of *Cuminum cyminum*, 10g of Sonf to make a 30g size of bolus. Bolus is given orally in the morning and evening for one day. Dosage: 30g for sheep and goats and calves. (Ref: Golla Narayana- Hathnura).
- 20 g of seed powder of *Carica papaya* is given internally for three days for calves of bovines. (Ref: Satham Ramulu, Narsapur).
- Grind handful leaves of *Enicostemma axillare* along with 5g of common salt, 5g of *Curcuma longa* to make a bolus. 30g bolus is given internally twice a day for two days. (Ref: Golla Pochaiiah, Thimmapur, Shivampet, Cheeguri Ellaiah, Avancha).
- 2 g bristles of *Mucuna pruriens* are mixed into 50 ml butter milk and it is given orally

as a single dose. (Ref: Kadal Narsagonda, Uthapalli)..

- Grind 2 flowers of *Cucurbita maxima* and mixed into 100 ml milk. Drench this medicine once a day for three days to get rid of worms. ( Ref: Kondi veeraiah, Avancha).
- 1 seed of *Semecarpus anacardium* is ground with 50 g of jaggery and make 20g sized pills. Feed a pill twice a day for two to three days. ( Ref: Golla Pochaiiah, Thimmapur).

#### 7. Peste des petites ruminant ( “Purru Sorpu”)

- Grind 150 g fresh stem bark of *Holarrhena antidysenterica* along with equal quantity leaves of *Andrographis paniculata* and mix it in 200 ml rice gruel and drench, twice a day for three days. (Ref: Golla narayana, Hathnura).

#### 8. Poultry diarrhea (“Kollalo parudu”)

- Pound 50 g stem bark of *Ailanthus excelsa* with 10 g of *Curcuma longa* and mix into poultry feed. Feed this mixture once a day for 3 days. (Ref: Veeraiah, Kondapur).
- 5 ml fruits juice of *Citrus aurantifolia* is mixed into 10 ml country arrack. 3 drops of this mixture is given orally to a adult bird and one drop incase of small chicks once in the early morning for three days. (Ref: Veeraiah, Kondapur).
- 5 g rhizome powder of *Curcuma longa* is mixed in one liter water and it is given orally once a day for 3 days. (Ref: Gopya Naik, Chinagottimukkala).
- 3 drops tuber extract of *Dioscorea bulbifera* is given orally by adding 1 drop of lime juice to an adult bird once daily for 3-4 days. (Ref: Veeraiah, Kondapur).
- 3 drops leaf juice of *Momordica charantia* is poured orally to an adult bird once in the

morning for 3 days. (Ref: Muthyalu, Gummadidala).

#### 9. Stomachache (“Kadupu noppi”)

- Grind 2 bulbs of *Allium cepa* with 50 g roots of *Cleome gynandra*, 10g of *Trachispermum ammi* and mix it into 200 ml of rice water. 100 ml of this medicine is drenched to the adult animals twice daily for two days. (Ref: Bhumakelli Malliah, Atchampet).
- Grind 2 cloves of *Allium sativum* along with handful young leaves of each *Vitex negundo*, *Tylophora indica*, 50g *Cuminum cyminum*, 5 dry fruits of *Capsicum annum* and mix with 750ml of warm water. Drench this medicine to the cattle as a single dose. (Ref: Pochaiiah-Gudemgada).
- Make bolus with fruit pulp of *Cassia fistula* feed twice daily for two days. (Ref: Nadipi Anjavva, Saipet).
- 5 ml fruit extract of *Citrullus colocynthis* is mixed into 50 ml water and drenched as single dose. (Ref: Kadal Narsagonda, Uthapalli and Laddi Beerugonda, Gangapur).
- 50 g roots of *Cleome gynandra* are crushed along with 1 onion and 10 g of *Trachispermum ammi* and mixed into 200 ml of rice water and 200 ml of this solution is drenched twice daily for three days. (Ref: Bhumakelli Malliah,Atchampet).
- 50g leaves of *Clerodendrum multiflorum* are crushed and given internally twice daily for two days. (Ref: Elcha Pentaiah Nastipur).
- Grind together 10g fruits of *Cuminum cyminum*, 10 g leaves of *Aristolochia bracteolata*, *Pimpinella anisum* and mix them into 1 glass of water. Drench 200 ml of this medicine internally twice a day for 3 days. (Ref: Golla narayana, Hathnura).
- 10 g of tubers of *Cyperus rotundus*, 10 g stem bark of *Holarrhena anti dysenterica*

*antidysenterica*, 10 g of *Zingiber officinalis* sun dry them to make powder. 30 g powder is given internally along with 250 ml of buttermilk twice daily till cured. (Ref: Satham Ramulu, Narsapur).

- Grind handful leaves of *Enicostemma axillare* along with equal quantity of leaves of *Solanum melanginum* to make a bolus. 30g size bolus is given internally for sheep and goats 3 times a day. (Ref: Golla narayana, Hathnura).
- 20ml of stem bark juice of *Ficus racemosa* is given internally twice daily for three days. (Ref: Sadulu Venkaiah, Narsapur).
- 2 seeds of *Semecarpus anacardium* , 10g of *calcium carbonat* (*lime*) boil it in 500ml water for 10 minutes. 200ml of this medicine is given internally twice a day. (Ref: Linga goud, Thimmapur).
- Ground the leaves of *Solanum melanginum* along with *Enicostema axillare* to make bolus. 30 g are given internally thrice a day for one day. (Ref: Golla narayana, Hathnura).
- 50 ml fresh stem bark extract of *Woodfordia fruticosa* is drenched in the morning and evening to get relief from stomachache. (Ref: Golla Pochaiiah, Thimmapur).

#### 10. Stomatitis (“Noti gallu”)

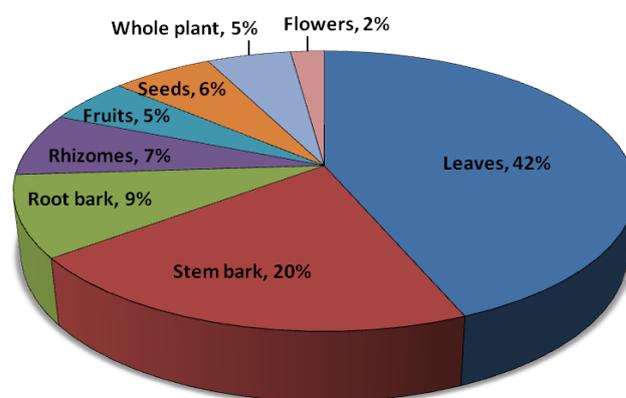
- Crush 5 dry fruits of *Capsicum annum* with salt and rub on the tongue once a day for 3-4 days (Ref: Laddi Anjigonda, Gangapur).

#### Plant Parts Used:

Out of total 70 treatments, 57 treatments were of single plant drugs, 10 of two plant drugs, and 3 treatments were than two plant drugs. Leaves are used predominantly in the drug preparation (42%) and followed by stem bark (20%), root bark (9%), tuber and rhizomes (7%), Fruits (5%), seeds (6%), whole plant (5%), and only 2% of drugs comes from flowers. Healers generally use fresh plant materials like leaves,

barks (of roots and stems), tubers, rhizomes either to make juice and decoction. Healers prepare final medicine either mix with water, butter milk and rice cleaned water locally known as *kali*. The author has recorded several forms of medicines like fresh juice from the fresh plant materials in the form of mixtures, bolus, decoctions etc. Healers generally use fresh plant materials like leaves, barks (of roots and stems), tubers, rhizomes either to make juice and decoction.

**Figure-1. Percentage of Different plant parts used to treat various diseases**



#### CONCLUSION

As of today the pastoralists and other folk-lore healers are still in possession of tremendous ancestral traditional knowledge on medicinal plants of their surroundings. It is the first hand information on Folk-lore veterinary herbal medicine from the district. The study established the importance of dependency of the rural people on folk-lore medicine.

Even today 8-20% of rural folk-lore is dependent of their veterinary health care problems. This shows that the social impact of the herbal drug is found to be profound and still play as an important role in their lives subsequently in the society. The Impact Factor is found to be 16-20% under Veterinary Health Care is recorded. This can be considered as a very important Social Impact Factor (SIF) influenced by herbal plants usage in the day to day lives of the folk-lore.

Due to changes in Social and Environmental pattern these traditional healers are losing their sheen in their medicinal practices; thus affecting the loss of their livelihood. There is a shift in the mind set of the people which is also one of the causes for the loss of forest cover subsequently loss of Biodiversity. This resulted in non availability of medicinal plants (raw material) used by the healers. The folk-lore knowledge recorded must be preserved in the form of traditional knowledge register of the Medak district. The conservation of the traditional medicinal practice knowledge of the pastoral communities of Medak district must be taken as top priority by the State and Central governmental agencies. AP- State Biodiversity Board must initiate to conserve this traditional knowledge in the form of Traditional Knowledge Register (TK Register) for Medak district. The State Forest Department, Govt., of AP. must take action towards the conservation of medicinal plant biodiversity as well as to check the loss of the habitats of these plants.

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