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## A review on ethnobotanical approaches to treat various ailments of livestock at field level in Kalyana Karnataka region of Karnataka state

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#### Abstract

This review paper aims at an in-depth analysis of the traditional approaches to treat various conditions of livestock at field level in Kalyana Karnataka region of Karnataka state, India. The study was conducted among local people including traditional healers and practitioners with knowledge of medicinal plants and the comprehensive review of available literature were selected for the collection of ethnomedicinal information. The information was documented through a survey, interview and field work. The information included details about the botanical and common name of the plant prescribed, part of the plant used in various disease conditions. This study helps to explore and document the information regarding usage of ethnoveterinary medicinal plants utilized by rural farmers and traditional herbal healers for livestock healthcare.

**Keywords:** Ethnoveterinary, traditional herbal healers, livestock health care, medicinal plants

#### Introduction

Ethnoveterinary knowledge is acquired through practical experience and has traditionally been passed down orally from generation-to-generation (Gobana *et al.*, 2019) [5]. India is well known for significant geographical diversity, which has favored the formation of different habitats and vegetation types. India is enriched with 15 per cent (3000-3500) out of 20,000 medicinal plants all over the world. About 90 per cent of these are found growing wild in different climatic regions of the country (Chopra and Nayar, 1956) [3]. To heal various diseases, tribal people around the world use natural or traditional herbal treatments, and around 25 percent of medicines are derived from plants (Radha *et al.*, 2022) [10]. Due to insufficient or limited accessibility of allopathic medicine in several parts of the country, most livestock holders and farmers are still using the ancient plant-based traditional knowledge for the treatment of livestock ailments (Bhat *et al.*, 2013) [11]. India has got great traditional knowledge in the field of ethnoveterinary medicines and practices, but the process of modernization, this knowledge is vanishing very rapidly (Devendrakumar and Anbazhagan, 2012) [4]. There was a connection between natural modern medicine's use of medicinal plants to cure ailments and traditional medicine's use of medicinal plants (Rana *et al.*, 2021) [11]. An increase in interest in herbal treatment among veterinarians has been noted internationally during the last decade (Prakash *et al.*, 2021) [9]. Animal herbal medicine is folks' belief, knowledge, methods and practices pertaining to the health of the animals which play a vital role in rural areas as chief source of medicine being used to cure livestock.

#### Materials and Methods

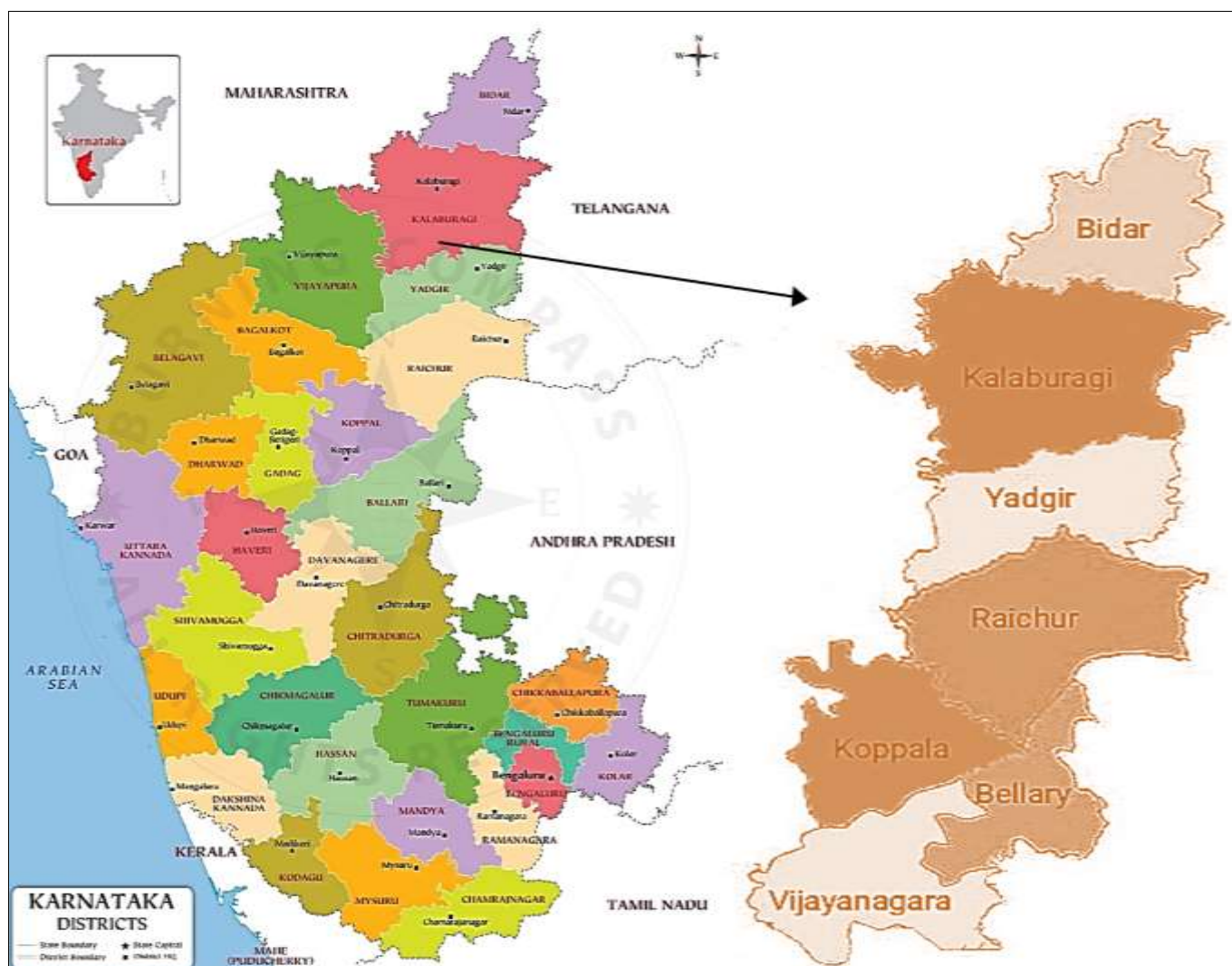
##### Study Area

Karnataka is located 11°30' North and 18°30' North latitudes and 74° East and 78°30' East longitude. It is situated on a table land where the Western and Eastern Ghat ranges converge into the complex, in the western part of the Deccan Peninsular region of India. The State is bounded by Maharashtra and Goa States in the North and Northwest by the Arabian Sea in the West, by Kerala and Tamil Nadu states in the South and by Andhra Pradesh and Telangana in the East. The study was conducted in seven districts of Kalyana Karnataka region which comprise of Bidar, Kalaburagi, Yadgir, Raichur, Koppala, Bellary and Vijayanagar located in northern part of Karnataka. The region is economically weaker but plant diversity is very rich and a good number of medicinal plants are used in the treatment of various livestock ailments.

### Data collection

Field trips to the study area were made to collect information on ethnoveterinary practices through among local people including traditional healers and practitioners with knowledge of medicinal plants and the comprehensive review of available literature were selected for the collection of

ethnomedicinal information. The information was documented through a survey, interview, field work and literatures. During the survey collected plants were enlisted along with the photographs for further taxonomical identification.



**Fig 1:** Study area Kalyana Karnataka region.

### Result

The recorded information on thirty-five plants species, used commonly as remedies for various diseases were listed in table 1 with their botanical name, local name, part used and their medicinal use as per the local ecological status and availability in Kalyana Karnataka region. Herbal medicine is an alternative treatment option using medicinal plants and common species available in household. Study revealed that gastrointestinal diseases like tympany, constipation and

diarrhoea were the most common in this region and other animal ailments in the study area were FMD, Orf, Snake bite, Ecto and endo parasitic infestation, Retention of placenta, Repeat-breeding, Mastitis, Infertility, Uterine prolapse, Milk fever, Udder oedema, maggot wound and fracture healing etc, in these conditions farmers are using herbal medicines. Most of the medicinal plants administered orally followed by dermal application in skin problems.

**Table 1:** Some commonly used medicinal plants in Kalyana Karnataka region of Karnataka

Sl. no	Botanical Name	English name	Local name	Part used	Medicinal uses
1	<i>Abrus precatorius</i> L.	Rosary pea	Gulaganji	Root, leaf, seed	Roots used as diuretics and leaves used as tonic and emetic
2	<i>Piper nigrum</i>	Pepper	Kari Menasu	seeds	Stimulate the digestive enzymes of pancreas, anti-inflammatory, anti-convulsant
3	<i>Curcuma longa</i>	Turmeric	Arashina, Haladi	Root	Antioxidant, anti-inflammatory, neuroprotective, anticancer, hepatoprotective, cardioprotective
4	<i>Zingiber officinale</i>	Ginger	Shunthi, Alla	Root	Antitumour, antimicrobial, neuroprotective, anti-inflammatory, antioxidant, antidiabetic, gastroprotective, hepatoprotective, antiemetic
5	<i>Cuminum cyminum</i>	Cumin	Jeerige	Seeds	Antioxidant, improves digestion, provides iron, anti-hypertensive, gastro-reno-hepato-protective, antimicrobial
6	<i>Piper betle</i>	Beetle leaves	Vilyadele, Paan	Leaves	Antimutagenic, antitumor, antioxidant, antiseptic
7	<i>Aloe barbedensis miller</i>	Aloe vera	Lolesara	Whole plant	Natural laxative, analgesic, antibacterial, antiviral, antifungal, wound healing
8	<i>Ocimum sanctum</i>	Tulsi	Tulasi	Leaves	Antimicrobial, anthelmintic, mosquito repellent, anti-inflammatory, cardio and hepatoprotective, antioxidant, antidiarrheal, antiseptic.
9	<i>Annona reticulata</i>	Custard apple	Seethaphal	leaves and seeds	Flavonoids, Antimalarial, anti-inflammatory
10	<i>Camara vulgaris</i>	Lantana camara	Rosal Gida	leaves	Flavonoids, alkaloids, tannins, Active principle against mycobacterium tuberculosis
11	<i>Nicotiana tabacum</i>	Tobacco	Tambaku, Hoge soppu	leaves	Ectoparasitic control (tick control)
12	<i>Sesamum indicum</i>	Sesame	Ellu	seeds and oil	Sesamin, sesamol, tocopherols, ROP, anti-inflammatory
13	<i>Punica granatum</i>	Pomegranate	Daalimbe	leaves	Anthocyanins, ellagitannins, alkaloids, punicic acid etc Antioxidant, antidiarrheal, anthelmintic, antiulcer
14	<i>Saccharum officinarum</i>	Jaggery	Bella	-	Cytoprotective and antioxidant
15	<i>Psidium guajava folium</i>	Guava leaves	Sibe ele, Peru ele	Leaves	Antidiarrheal, antispasmodic, indigestion
16	<i>Ricinus communis</i>	Castor oil	Haralenne	seed extract	Laxative, anti-inflammatory, antioxidant
17	<i>Allium sativum</i>	Garlic	Bellulli	leaves and cloves	Improves nutrient digestibility, antimicrobial, anti-inflammatory, antioxidant, anti-helminthic in dogs, immunostimulant
18	<i>Azadirachta indica</i>	Neem	Bevu	leaves, bark and seeds	Antioxidant, antibacterial, antiviral, antidiabetic, ectoparasitic, anti-inflammatory, endoparasites
19	<i>Mimosa pudica</i>	Touch me not	Muttidare Muni		antifertility, antibacterial, antivenom
20	<i>Acacia ferruginea</i>	Wattle	Banni Mara	Bark and leaves	Diarrhea, dysentery, piles and worms' infestation
21	<i>Acacia sinuate</i>	Ritha soapnute	Seegekai	Pod and leaves	constipation, jaundice and ulcer
22	<i>Albizia lebeck</i>	Sirisi	Bage	Leaves and seeds	wound, antidote for snake bite and dental disease
23	<i>Datura stomum</i>	Thorn apple	Dhatturi	Whole plant	Yellow juice of the plant used in scabies and in ophthalmia. Scorpion-sting poisoning, eczema, leucorrhoea, dental diseases, eye diseases
24	<i>Calotropis gigantea</i>	Crown flower	Ekka, Ekke	Whole plant	Diseases of nervous system, leprosy, splenic disorders, abdominal disorders, piles, worm infestation, cough, snake bite, convulsions, swelling in joints, skin diseases
25	<i>Coriandrum sativum</i>	Coriander	Kotambari	Whole plant	FMD
26	<i>Momordica chanatia</i>	Bittergard	Hagal Kayi	Fruit juice	Maggot wounds
27	<i>Ficus benghalensis</i>	Banyan tree	Aalada Mara	Latex, Bark and Leaves	Burning sensation, uterine diseases, fainting, vomiting, polyuria, diarrhoea, leucorrhoea, dental and gum disorders, poisoning, ulcers, aphrodisiac.
28	<i>Luffa acutangular</i>	Ridge gourd	Heere Kaayi	Fruit	Bowel disease in domestic fowl
29	<i>Luffa aegyptiaca</i>	Sponge gourd	Sore Kaayi	Fruit	Bowel disease in domestic fowl
30	<i>Tinospora cordifolia</i>	Gurjo	Amruta Balli	Leaves and root	Fever, jaundice, leprosy, worms, polyuria, poisoning, burning sensation, gout, delirium, vomiting, fever, digestive disorder, diarrhoea, snakebite poisoning, urinary disorders, emetic, general debility, dyspepsia, leprosy, tonic.
31	<i>Aegle marmelos</i>	Bengal quince	Bilva	Leaves	Wound healing, antipyretic, antidiarrheal, Repeat breeding
32	<i>Moringa olifera</i>	Drumstick tree	Nugge Kaayi	Leaves and seeds	Wound healing, antipyretic, anti-inflammatory, aphrodisiac
33	<i>Emblica officinalis</i>	Indian gooseberry	Nelli Kaayi	Fruit pulp	Antiflatulence, immunomodulator, appetizer
34	<i>Ferula foetida</i>	Asfoetida	Hingu	Exudate	Relieves gastroenteritis
35	<i>Butea monosperma</i>	Bastared tree	Muttuga	Leaves and bark	Fracture healing

## Discussion

Data was compared with the available literature and found that many of the herbal plants listed are not recorded earlier. Policepatel and Manikrao (2013) [8] reported *Ocimum sanctum* leaves for ring worm, leaf of *Datura stromium* to reduce swelling used externally, leaf, flower and bark of *Azadiracta indica* for all type of skin diseases and the leaves of *Tridax procumbens* for wounds and scabies are reported in Kalyana Karnataka region. According to Kalmath (2012) [6] who reported 41 plants largely used by the traditional practitioners and local peoples in Bidar district. Similar studies were reported by Verma (2014) [14], Sharma *et al.* (2022) [12], Parashurama and Shivakumar (2016) [7], Bhat *et al.* (2012) [2] and Sehgal (2013) [13] with related to ethnoveterinary medicine in Karnataka and India.

## Conclusion

It shows that the area of this region is very potential for the medicinal plant resources for sustainable use for the herbal pharmaceuticals for the management of various health disorders of the local people and surroundings, they feel that herbal medicines were extremely efficient in curing common diseases like diarrhoea, skin diseases, foot and mouth disease, Orf infection and to increase the immunity. Data from the Traditional practitioners will helpful further for the Scientific assessment of these medicines on phytochemistry, biological activity and clinical studies are, however necessary. This may provide a lead in the development of drugs to be used in modern system of medicine.

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## References

1. Bhatt A, Singh P, Kumar V, Baunthiya M. Documentation of ethnoveterinary practices used for treatments of different ailments in Garhwal Himalayan Region. *Journal of Environmental Nanotechnology*. 2013;2:22-29.
2. Bhat P, Hegde G, Hegde GR. Ethnomedicinal practices in different communities of Uttara Kannada district of Karnataka for treatment of wounds. *Journal of ethnopharmacology*. 2012 Sep 28;143(2):501-514.
3. Chopra LC, Nayar MC. *Glossary of Indian Medicinal Plants*: Council of Scientific and Industrial Research, New Delhi; c1956.
4. Devendrakumar D, Anbazhagan M. Ethnoveterinary medicinal plants used in Perambalur district, Tamil Nadu. *Research in Plant Biology*. 2012;2(3):24-30.
5. Gobana AH, Shure HA, Adem ME, Abdurahman TK, Jilo SA, Nigatu A. Review on the role of ethno veterinary practice for animal health. *IJBS*. 2019;1(2):42-48.
6. Kalmath SV. Existancy and Survey of Medicinal Plants of Bidar District, Karnataka (India). *World Research Journal of Medicinal & Aromatic Plants* 2012; 1(1):14-21.
7. Parashurama DR, Shivakumar H. Ethnoveterinary Knowledge of Folklore People in Kappathgudda Region of Gadaga District, Karnataka, South India. *International Journal of Adv. Research*. 2016;12:1631-1636.
8. Policepatel SS, Manikrao VG. Ethnomedicinal plants used in the treatment of skin diseases in Hyderabad Karnataka region, Karnataka, India. *Asian Pacific journal of tropical biomedicine*. 2013 Nov 1;3(11):882-886.
9. Prakash P, Radha, Kumar M, Kumari N, Prakash S, Rathour S *et al.* Therapeutic Uses of Wild Plants by Rural Inhabitants of Maraog Region in District Shimla, Himachal Pradesh, India. *Horticulturae*. 2021;7(10):343.
10. Radha, Prakash S, Sharma N, Kumar A, Kumari N, Puri S, *et al.* A survey on ethnoveterinary medicines used by the tribal migratory shepherds of Northwestern Himalaya. *Journal of Ethnopharmacology*. 2022;13(63):296.
11. Rana D, Bhatt A, Lal B, Parkash O, Kumar A, Uniyal SK. Use of medicinal plants for treating different ailments by the indigenous people of Churah subdivision of district Chamba, Himachal Pradesh, India. *Environment, Development and Sustainability* 2021;23:1162-1241.
12. Sharma Munish, Navneet Sharma, Munit. Ethnoveterinary studies of medicinal plants used to treat livestock in the Haridwar region of Uttarakhand, India. *Current Botany*; c2022. p. 53-63.
13. Sehgal AB, Sood SK. Ethnoveterinary practices for herbal cure of livestock used by rural populace of Hamirpur, (HP), India. *IOSR J Agri. Vet. Sci*. 2013;3(1):7-14.
14. Verma RK. An ethnobotanical study of plants used for the treatment of livestock diseases in Tikamgarh District of Bundelkhand, Central India. *Asian Pacific Journal of Tropical Biomedicine*. 2014 May 1;4:S460-S467.