

## ETHNO-VETERINARY PRACTICES FOR DISEASE CONDITIONS OF GOAT IN BAREILLY DISTRICT (UTTAR PRADESH)

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**Abstract:** The study was conducted to document the ethno-veterinary practices (EVPs) by goat farmers in Bareilly district of Uttar Pradesh among 100 farmers and 72 % of them are utilizing ethno-veterinary practices for treating their goats. *Piper nigrum* (Pepper), *Allium cepa* (Onion), *Curcuma longa* (Turmeric), *Brassica nigra* (Black mustard), *Allium sativum* (Garlic), Kala Namak (Black salt), *Trachyspermum copticum* (Ajwain), *Zingiber officinale* (Ginger), *Emblica officinalis* (Amla) and *Azadirachta indica* (Neem) are the commonly using practices against various disease condition like diarrhoea, indigestion, bloat, acidosis, fever, respiratory infection and parasitic infections, FMD and wound.

**Keywords:** Ethno-veterinary practice, Goat, Bareilly.

### INTRODUCTION

Goats are important domestic animals in tropical livestock systems, presently, India ranks second in goat production with 135.2 million goats (2012 census). Mutton and goat meat demand will go to 12.72 million tonnes, and the demand in rural and urban areas will be 6.05% and 93.95% respectively in 2020 (1). Even though they provide food and nutritional security the productivity of goats under the prevailing traditional production system is very low because of disease outbreaks and meeting the cost of treating with allopathic medicine. (2). Using Ethno-Veterinary Practices (EVP) is an important option to reduce the treatment cost, emergency treatment and also be an easily accessible, cost-effective, eco-friendly solution (3) to health problems. It covers people's knowledge, skills, methods, practices and beliefs about the healthcare of their animals and also includes the use of plants, leaves, barks, seeds, extracts, tubers, roots and various other parts of the plants (4&5). The present study has been undertaken to focus on the existing ethno - veterinary practices for treating goat health disorders in Bareilly district of Uttar Pradesh and to document the existing ethno veterinary practices for treating the prevalent disease conditions in goats.

## MATERIALS AND METHODS

Bareilly district is purposively selected for the study and 67% of the population is concentrated in rural areas involved mainly with agriculture and animal husbandry activities. Out of 14 blocks five blocks were randomly selected for the present study. From the five randomly selected blocks 2 villages from each block were selected randomly. Ten respondents from each of the selected village form a total of 100 respondents for the study. The data was collected and analysed by appropriate statistical measures viz. frequency, percentage and chi square ( $\chi^2$ ) test.

## RESULTS AND DISCUSSION

72 % of the farmers were using ethno - veterinary practices for treating their goats. This might be due to the unavailability and high cost of allopathic medicine and easy availability of ethno veterinary medicines (Table 1). The ethno -veterinary practices were used for treating diarrhoea, indigestion, bloat, acidosis, fever, respiratory infection, wound and endo parasitic infections which were observed as most common disease conditions in the study area.

*Cicer arietinum* is traditionally used as antibacterial, antifungal, antipyretic, antidiarrhoeal etc and also the hydroalcoholic extracts of *Cicer arietinum* have carbohydrates, proteins, amino acids and saponins in its roots which is involved in highest reduction of diarrhoea (24.63 %) (6). *Arachis hypogaea* is being used for the treatment of diarrhoea in the study area and *Brassica nigra* is also used for diarrhoea, indigestion, bloat and endo parasitic infections (7). *Piper nigrum* is being used in respiratory infection, fever and diarrhoea (4). *Ocimum sanctum* is useful in the treatment of bronchitis, skin diseases, ringworm, digestive disorders, urinary disorders and snake poisoning (8). *Areca catechu* as a solution used for endo parasitic infection (9).

*Allium cepa* used for fever, intestinal worms, hypoglycaemic, Stomachic, mange, eczema, scabies, jaundice, spleen disorders and peptic ulcers (10). Use of bamboo sticks in fracture condition in the study area is similar with the results of Rao *et al.* (2011). *Solanum nigrum* is used for wound healing (8).

Use of *Zingiber officinale* for the treatment of gastric ailments, respiratory tract infections, bone fracture, heart diseases and as an appetizer (10). *Azadirachta indica* is used for endo parasitic infections and wound healing, fever and it can also use for treating the diabetes, snake and scorpion bites, malaria, liver problems, skin diseases and infertility (4,8, 10 &11). *Allium sativum* can be used for endo parasitic infections and its various merits in FMD, skin

infections, itching, pruritis, rickets, snake bite, tympany, arthritis and digestive disorders. (11).

Leaves of *Vitex negundo* are boiled in water and the vapour is inhaled twice a day to get relief from fever and respiratory infections (8). *Ferula asafoetida* is being used for the treatment of diarrhoea and yolk sore, paralysis, bloat, mastitis, mange, intestinal parasites, indigestion and digestive disorders (9). *Mangifera indica* is used for treating respiratory infections and is also useful in the treatment of eye diseases and FMD (9).

### **SUMMARY**

The findings of this study revealed majority (72 %) of the farmers using ethno- veterinary practices for goat disorders so the existing ethno - veterinary practices are need to be validated (alone / mixed in combinations) and then need to be scientifically disseminated. At present there are few programmes on EVPs are in existence even though the farmers were not following these scientifically so the developed programmes need to be implemented at right time in proper manner. Finally integration of farmer's knowledge with formal research system will lead to desired progress and effective use of natural resources.

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**Table 1: Documented ethno - veterinary practices seen among goat farmers (N =72)**

Disease	Ingredients	Part (s) used	Route	%	$\chi^2$
Diarrhoea	<i>Cicer arietinum</i> (Bengal gram)	Seed	Oral	68	0.0003**
	<i>Arachis hypogaea</i> (Ground nut)	Seed			
	<i>Piper nigrum</i> (Pepper)	Fruit			
	<i>Trachyspermum copticum</i> (Ajwain)	Seed			
	<i>Allium cepa</i> (Onion)	Bulb			
	<i>Ferula assafoetida</i> (assafoetid)	Root			
Indigestion	<i>Nosadhar</i> (Ammonium chloride)	Salt	Oral	66	0.0014**
	<i>Allium cepa</i> (Onion)	Bulb			
	<i>Trachyspermum copticum</i> (Ajwain)	Seed			
	<i>Zingiber officinale</i> (Ginger)	Rhizome			
Bloat	<i>Piper nigrum</i> (Pepper)	Fruit	Oral	26	0.0001**
	<i>Nosadhar</i> (Ammonium chloride)	Salt			
	<i>Allium sativum</i> (Garlic)	Bulb			
	<i>Azadirachta indica</i> (Neem)	Leaves and flowers			
	<i>Zingiber officinale</i> (Ginger)	Rhizome			
	<i>Brassica nigra</i> (Mustard Oil)	Seed oil- as excipient			
Acidosis	<i>Nosadhar</i> (Ammonium chloride)	Salt	Oral	27	0.0001**
	<i>Trachyspermum copticum</i> (Ajwain)	Seed			
	<i>Kala namak</i>	Salt			

Fever	<i>Allium cepa (Onion)</i>	Bulb	Oral	60	0.0455**
	<i>Ocimum sanctum (Tulsi)</i>	Leaves			
	<i>Zingiber officinale (Ginger)</i>	Rhizome			
	<i>Piper nigrum (Pepper)</i>	Fruit			
Respiratory infection	<i>Curcuma longa (Turmeric)</i>	Root	Oral	64	0.0051**
	<i>Piper nigrum (Pepper)</i>	Fruit			
	<i>Mangifera indica (Mango)</i>	Leaves, fruits and seeds			
	<i>Zingiber officinale (Ginger)</i>	Rhizome			
	<i>Ocimum Sanctum (Tulsi)</i>	Leaves			
Endo parasitic infections	<i>Areca catechu (Areca nut)</i>	Seed	Oral	47	0.0452**
	<i>Allium sativum (Garlic)</i>	Bulb			
	<i>Brassica nigra (Mustard Oil)</i>	Seed oil -as excipient			
	<i>Allium cepa (Onion)</i>	Bulb			
	<i>Azadirachta indica (Neem)</i>	Leaves /Seed oil			
Ecto parasitic infections	<i>Ocimum sanctum (Tulsi)</i>	Leaves	Topical	6	0.0001**
	<i>Curcuma longa (Turmeric)</i>	Root			
	<i>Azadirachta indica (Neem)</i>	Leaves and seed oil			
FMD	<i>Acacia arabica willd (Babool)</i>	Bark	Topical	21	0.0001**
	<i>Azadirachta indica (Neem)</i>	Seed oil			
	<i>Bantulsi</i>	Leaves			
	<i>Honey/Jaggery/ Glycerin</i>	As electuary			
Wound	<i>Solanum nigrum</i>	Root, bark, leaves (Whole)	Topical	36	0.0051**
	<i>Vitex negundo (Nirgundi)</i>	Leaves and roots			
	<i>Ocimum sanctum (Tulsi)</i>	Leaves			
	<i>Azadirachta indica (Neem)</i>	Seed oil			

\*\* indicates highly significant results