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Research Article

ETHNO-VETERINARY HERBAL REMEDIES OF GUJJARS AND OTHER FOLKLORE COMMUNITIES OF ALWAR DISTRICT, RAJASTHAN, INDIA

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ABSTRACT

The present study encompasses the in-depth investigation on Medicinal plants which were used on Ethno-veterinary medicine in the district of Alwar, Rajasthan India. The present ethno-botanical explorations conducted in the Alwar district of Rajasthan revealed that about 37 species of plants belonging to 32 genera under 24 families have been noticed which they use for veterinary health care. A total of 27 healers and herbal practitioners were interviewed during the study. Total of 47 remedies were recorded for 19 veterinary disease conditions of which 21 remedies were recorded under digestive disorders (9 remedies for bloat, 3 stomach pain and 5 for constipation, 3 food poison and 1 diarrhoea) 9 remedies under reproductive problems (3 for anoestrus, 2 for galactagogue, 3 for retained placenta, and 1 for prolapsed uterus). 5 remedies for diseases of sense organs (2 skin infection, 3 for wounds and maggot wounds). 2 remedies were documented under infectious disease (1 for Foot and Mouth Disease, 1 for Foot rot, 2 for Haemorrhagic septicemia). 1 remedy recorded for general fever. Following data includes botanical name of species, family name, vernacular name, plant part used method of medicine and details of the applications. Among the plant parts used in different formulations, leaves are predominantly used and scored number one position followed by fruits, roots/ rhizomes, stem and bark.

KEY WORDS: Folklore knowledge, Ethno-veterinary medicine, Alwar, Rajasthan.

INTRODUCTION

Most of the areas in Alwar district of Rajasthan are rural areas, the major livelihood of rural communities are rearing livestock and followed by agriculture. Due to lack of health care facilities in rural communities, people completely depend on locally available medicinal plants which were used for their health care as well as their animal health care. The rural communities of the district are conserving and managing the forest lands which are adjacent to their villages locally known as Orans or Devbani/ community protected forest lands. These Orans are good micro biodiversity reserves, varying in size from few hectares to hundred hectares. More importantly, Orans are good refuge for wildlife in an otherwise densely populated landscape. In total, there are about 300 identified

Oran pockets of micro bio-reserves in the Alwar District. In many cases, they are used for community gatherings during festivals^[1]. People depend on these lands to procure access food, fodder and medicinal plants. As on today no work is done on ethno-medicinal studies on these Oran lands or Devbanis. The present work is the first hand information on veterinary medicine on Oran lands of 4 Tahasil of Alwar district.

Study area and the people

The Alwar is situated in the north-east of Rajasthan between 27°4' and 28°4' north Latitudes and 76°7' and 77°13' east Longitude. It is bounded on the north and north-east by Gurgaon (of Haryana) and Bharatpur district and

on the north-west by Mahendragarh district of Haryana, on the south-west by Jaipur and on the south by Sawai- Madhopur and Jaipur districts. Alwar is the one of the hottest places in India. During summer it goes up to 50.6 °C (123.1 °F). The average rainfall is 650 mm per annum.

According to 2001 India census, Alwar had a population of 160, 245. Males constitute 53% of the population and females 47%^[2]. The major communities of the district are Yadivanshi Ahirs and remaining are Meo, Gujjars, Brahmins, Mahajans, Saini and of Dalit community. Majority of the people's primary livelihoods are based on rearing large animals like buffaloes, cattle and sheep and goats. The Gujjar community elders have tremendous knowledge on use of medicinal plants to protect their health as well as their animal's health care. Earlier some attempts made by Takhar 2004^[3] in southern Rajasthan. Katewa, SS & Arora^[4] reported some folk medicine from Udaipur region.

The district is proud of having a reputed national park known as the "Sariska Tiger Reserve". The topography of Sariskais scrub-thorn arid forests, dry deciduous forests, rocks and grasses. This area was a hunting preserve of the in the past Alwar state and it was declared a wildlife reserve in 1955. And it was indentified as a tiger reserved area in the year 1978. The present area of the park is 866 km². The area of Sariska is being a part of the Aravali Hill Range forests. The dominant tree in the forests is Dhok (*Anogeissus pendula*). Other trees are Salar (*Boswellia serrata* Triana & Planch), Kodaya (*Sterculia urens* Roxb.), Dhak (*Butea monosperma* Lam. Kuntze), Gol (*Lannea coromandelica* (Houtt) Merr, ber (*Ziziphus mauritiana* Lamk.) and Khair (*Acacia catechu* Willd.). Bargad (*Ficus benghalensis* L.), Gugal (*Commiphora wightii* (Arn.) Bhandari) *Bambusa* spp. can also be met at some places and Arjun (*Terminalia arjuna* (Roxb.) Wight. & Arn) is habituated along the water canals or streams. Shrubs are numerous, such as Kair (*Capparis deciduas* (Forssk) Edgew), Adusta (*Justicia adhatoda* L.) and Bher (*Ziziphus nummularia* (Burm.f.) Wight & Arn).

MATERIALS AND METHODS

The data on medicinal plants had been collected during July to December, 2010 covering 4 Tehsils (Alwar, Bansur, Ramgarh and Thanagazi) of Alwar district. The area under investigation was searched for ethno veterinary medicinal plants carefully in the Gujjars and other pastoral community habitations of the district.

The field survey was carried out covering different seasons over a period of one year in 4 Tehasils of Alwar district. As first step we conducted four days workshop with local educated youth and pastoralist elders to understand their local medicinal system on animal health. This workshop was hosted by Krishi Avam Paristitiki Vikas Sansthan (KRAPAVIS) a local NGO based at Alwar. The workshop aimed at to discuss health care management of animals such as buffaloes, cattle, goats and sheep and poultry. Trained youth were also accompanied with the primary author to travel across the study area. Author has taken local veterinary doctor help for identification of animal diseases based on the symptoms recorded in the field notes. Healers' bio-data was also recorded and prepared a directory of the healers of the study area, which could then be used for future reference. Authors have used Bank on hooves^[6] for description of animal diseases.

ENUMERATION

Forty seven herbal remedies based on 37 medicinal plants were documented (Table 1). The plants are arranged alphabetically, the botanical name is followed by synonym(s), family, local names, informant (healer) name and village. The vernacular names of the medicinal plants are spelled out by the healers in their local dialect. The specimens are deposited in Anthra a non government organization based at Hyderabad, Andhra Pradesh by the first author. List of the plants recorded in the study are given belonging their medicinal uses.

Table 1: Herbal remedies were spelled out by the healers in their local dialect

Botanical name and Family	Local name	Part used	Medicinal uses	Reference
<i>Acacia nilotica</i> (L.) Del. (Mimosaceae)	Babul / Bawal	Stem bark	Pound the fresh stem bark to extract juice. 250ml of this extract is given orally twice daily for two days to the animal which is suffering with constipation	Shrimati Murti Devi, Akbarpur village
<i>Aegle marmelos</i> (L.), Corr. (Rutaceae)	Bhilpatru	Fruit pulp	200gm of fruit pulp is fed the animal to control dysentery	Khushiram Gurgar, Gujarwas) Community is also using for same purpose in AP Sanyasirao ^[5]
<i>Allangium salvifolium</i> (L.f.) Wang (Alangiaceae)	Ankola	Leaves	Leaves are fed to cow to enhance milk yield in animals	LalluramJatav, Kalikhol village
<i>Azadirachta indica</i> A. Juss. (Meliaceae)	Neem	Stem bark	100ml stem bark decoction is given orally once a day for 3 days to cure diarrhea	Daulatram Gurjar, Kerwopal
			Decoction of stem bark is given internally to the adult animal thrice a day to cure fever	Jagdishprasad Mina, Vijayapura village
<i>Bambusa arundinaceae</i> (Retz.) Willd. (Poaceae)	Bans	Leaves	100ml leaf decoction which was prepared with hand full leaves of <i>Bambusa</i> and Neem is given orally to control fever, once a day for three days	Daulatram Gurjar, Kerwopal village
<i>Brassica juncea</i> (L.) Czern. (Brassicaceae)	Sarshon	Seed oil	Apply oil externally by mixing 1 percent of salt for three days to cure skin infection on goats	Khushiram Gurgar, Gujarwas village
<i>Butea monosperma</i> (Lam.) Taub. (Papilionaceae)	Chila	Stem bark	200ml decoction of stem bark is given orally once a day for 3 days to reduce bloat	Daulatram Gurjar, Kerwopal village
<i>Calotropis gygantea</i> (L.) R.Br. (Asclepiadaceae)	Desiakda	Stem	100ml of stem extract and mix with equal quantity of butter milk and drench twice a day for 3 days to control bloat	Kaluram Gurjar, Thanagaji village.
			Wash with root decoction to the infected foot thrice daily for 3-4 days to control foot rot disease	Lalluram Jatav, Kalikhol village
<i>Cannabis sativa</i> L. (Cannabinaceae)	Bhanga	Leaves	Pound 100gm of fresh leaves and add 200ml of buttermilk into it. Drench this prepared medicine twice a day for one day to control stomach pain	Daulatram Gurjar, Kerwopal village
<i>Capparis decidua</i> (Forssk) Edgew. (Capparidaceae)	Kair	Fruit	50gm of dry fruit powder is fed to affected animals twice daily for 2-3 days to get rid of constipation	Shrimatinarmada Jatav, Dhakpuri village
<i>Capparis sepiaria</i> L. (Capparidaceae)	Jaal	Stem bark	Drench 100ml stem bark extract twice daily for three days to cure fever	Daulatram Gurjar, Kerwopal village.
<i>Capsicum annum</i> L. (Solanaceae)	Mirchi	Fruits	Crush 5 dry fruits along with 20gm of garlic and make bolus. Feed this medicine once a day for one day to	Kailash Gurjar, Sawar village

			cure stomach ache	
<i>Cassia fistula</i> L. (Caesalpiaceae)	Kadiyal	Fruits	Feed fruit pulp by mixing jaggery once daily for 2-3 days to cure stomach ache	Miladevi, Akbarpur village.
			100gm of dry fruits powder is mixed into 500ml water and drench it to get relief from constipation	Ramkishan Gurjar, Akbarpur village
<i>Cassia tora</i> L. (Caesalpiaceae)	Pawad	Seeds	50gm of seed powder is mixed with cattle feed and fed to lactating cow once a day for a month to increase milk yield	Lakhiram Mina, Mino ki Dhani village
<i>Citrullus colocynthis</i> (L.) Scharad. (Cucurbitaceae)	Andayani	Fruits	250gm of chopped fruit is mixed into 500 ml of buttermilk. Drench this mixture twice daily for 3 days to get rid of bloat	Ramkaran Gurjar, Gurjarwas village
<i>Citrus aurantifolia</i> (Christm. & Panz.) Swingle (Rutaceae)	Nimboo	Fruits	20ml of fruit juice is drenched along the same quantity of Neem leaf juice for two times to cure fever	Lakhiram Mina, Mino ki Dhani village
<i>Cucumis pepo</i> (L.) Dumort. (Curcubitaceae)	Safedkudi	Stem bark	50ml stem bark extract is given internally twice a day to the affected animal to reduce bloat due to food poison	Dhannaram Gurjar, Manyasa village
<i>Datura metel</i> L. (Solanaceae)	Dathura	Fruits	Fed 2 ripened fruits wrapped with Roti made of Sorghum flour to the animal for one time anoestrus condition	Hariram Mina, Mino kidhani village
<i>Ficus benghalensis</i> L. (Moraceae)	Bhargad	Stem bark	Grind 100gm of fresh stem bark along with 10gm seeds of <i>Carum copticum</i> (L.) Link. and 2 bulbs of onions together and make a bolus. Feed 50 of this bolus twice a day for two days to control bloat	PhatyaramGurjar, Ambarpur village
<i>Ficus glomerata</i> Roxb. (Moraceae)	Gula	Fruits	50ml fruits decoction is given orally by mixing 50gm of jaggery twice daily for one day for quick removal of placenta	Sonadevi Naruka, Bhaktapura village
<i>Gardenia lucida</i> Roxb. (Rubiaceae)	Dikamali	Leaves	Grind 250gm of fresh leaves and mix into equal quantity of butter and thus the prepared medicine is drenched twice a day for one day to cure constipation due to indigestion	Sonadevi Naruka, Bhaktapura village
<i>Grewia hirsuta</i> Vahl, Symb. (Tiliaceae)	Chapun	Roots	50ml of root decoction is given orally to the affected animal for two times a day for the quick removal of placenta after delivery	Bhourelal Gurjar, Bhaktapura village
<i>Leptadenia pyrotechnica</i> (Forsk.) Decne. (Asclepiadaceae)	Kheemp	Roots	100ml of root extract is given orally twice daily for two days to recover from food poison	DhannaramGurjar, Manyasa village
<i>Linum usitatissimum</i> L. (Linaceae)	Alsi	Whole plant	The whole plant is dried and then pounded to make powder, boil 100gr of powder in same quantity of water to make paste and apply this paste on animal's body to control ticks and lice.	Dhannaram Gurjar, Manyasa village

<i>Momordica dioica</i> Roxb. Ex Willd. (Cucurbitaceae)	KhadiKareli	Whole plant	The whole plant is decocted in 2 liters of water, 100ml decoction is given to an adult animal internally twice daily to cure diarrhea	Jasram Gurjar, Gurjar bas village
<i>Orobanchae aegyptica</i> Pers. (Orobanchaceae)	Bhatua/ quail grass	Leaves	Grind 500gm leaves along with 250 g of jaggery to make bolus. Feed this bolus to the delivered animal for quick removal of placenta	Ramsingh Gujar, Madhavpur village
<i>Plumbago zeylanica</i> L. (Plumbaginaceae)	Chitrawal	Roots	Make root powder and mixed with 25gm copper sulphate and 25gm of turmeric powder. Apply this mixture by adding sesame oil externally daily once for 2-3 days to control mange (scabies) in goats	Khushiram Gurgar, Gujarwas village
<i>Putranjiva roxburghii</i> Wall. (Euphorbiaceae)	Jaiputha	Seeds	Seeds are grinded to make 50gm size of bolus and it is fed to the cow for 15 days to enhance conception rate	Ramsingh Gujar, Madhavpur village
<i>Ricinus communis</i> L. (Euphorbiaceae)	Desi Eranad	Seeds	Grind 250gm of seeds and boil them in 2 liters of cow milk. Drench this medicine once a day for two days to get rid of bloat.	Lalaram Mina, Mino ki Dhani
			100ml of leaf extract is given orally twice a day to control bloat in large animals	Santosh Devi, Kothi Ki Dhani village
<i>Saccarum spontaneum</i> L. (Cyperaceae)	Surkand	Tubers	100gm of tubers fed to the affected animal to recover from food poison	Gyarasi Devi, Nimavatoki Dhani
<i>Salvadora persica</i> L. (Salvadoraceae)	Jhal	Stem bark	50ml stem bark decoction is given orally to the affected animal for three days to control fever	Daulatram Gurjar, Kerwapal village
<i>Solanum xanthocarpum</i> Schard & Wendl. (Solanaceae)	Fasarkateli	Seeds	Grind 100gm seeds along with equal quantity of wheat flour and mix with 150gm of ghee. 350gm of this mixture is given orally once daily for a week for cows which are suffering with prolapsed uterus	Hiradevi, Kothiki Dhani village
			100ml leaf decoction is drenched twice a day for one day to control bloat	Gyarasi Devi, Nimavatoki Dhani village
<i>Trigonella foenum-graecum</i> L. (Papilionaceae)	Methi	Leaves	Fed 1 kg of fresh methi leaves to the infected animal to control infectious diarrhea	Sona Devi Jatav, Dhakpuri village.
<i>Wrightia tinctoria</i> (Roxb.) R.br. (Asclepiadaceae)	Kalakuda	Leaves	100ml leaf extract is given internally twice daily to get relief from food poison in animals	Dhannaram Gurjar, Rahala Village
<i>Zingiber officinale</i> Rosc. (Zingiberaceae)	Adrak	Rhizome	100gm of dried rhizome powder is made into a bolus to feed an adult animal to control constipation	Sona Devi Jatav, Dhakpuri village
<i>Zyziphus jujuba</i> Mill. (Rhamnaceae)	Jadbada	Leaves	100ml of leaf decoction is drenched in the morning and evening to control bloat	Hiradevi, Kothiki Dhani village
<i>Ziziphus mauritiana</i> Lamk. (Rhamnaceae)	Jhaddesi	Stem bark	Stem bark decoction is used as tincture to wash wounds. Wash thrice a daily for 3-4 days for curing any wound	Lalluram Jatav, Kalikhhol village

CONCLUSION

It is first hand information on the ethno veterinary medicinal plants used by Gujjars and other rural folklore people of the Alwar district, Rajasthan. The study indicates that the primary health care of livestock is taking care by local folklore mainly Gujjars. According to the healers animals often affects by bloat due to consumption of *Prosopis juliflora* DC. leaves and constipation due to lack of sufficient water. Common diseases of animals are Bloat and Constipation and Skin diseases hence healers are also being specialized in treating these ailments successfully. Healers never charged any fee for treatment however; they ask farmers to bring additives like pepper, chilies, curcuma powder, Jaggery etc. while preparing medicine. Valuable herbal practices which have been practicing by folklore communities of Rajasthan have to be studied scientifically.

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