

Use of medicinal plants in animal healthcare- A case study from Gohpur, Assam

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The paper deals with the indigenous knowledge of local communities on medicinal plants used for curing various veterinary diseases in Gohpur, Sonitpur district, Assam state. Information collected are based on interview, observation and cross-checked with other herbal practitioners. *Assamese, Bodo, Mishing, Nepali, Santhal* and *Karbi* are the chief ethnic groups in this area. The uses of plant parts along with the mode of administration revealed that 20 plant species were used for curing 21 types of diseases.

Keywords: Indigenous knowledge, Medicinal plants, Veterinary diseases, *Mishing, Bodo*, Assam,

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The use of plants and animals as a source of medicine has been continued since ancient time for curing diseases of man and animals. Cattle are the common livestock in India and occupy a prominent position in agricultural systems and economy of the country. Their products are indispensable in our daily life. About 25% of the therapeutic drugs are obtained from plants and some of the plants are still to be explored and observed¹. The traditional drugs for animals based on both plant and animal products have received less attention. So far, some workers have studied and gathered information in the field of ethnobotany and veterinary medicines²⁻¹⁰. The aim of the study is to record the herbal drugs used in different ailments and injuries of cows, buffaloes and goats. There is no report of traditional veterinary medicines from Gohpur, Sonitpur district.

Study area

Sonitpur (26°21'-26° 93' N & 91° 71'- 92° 37' E) is the northern district of upper Assam. Gohpur (605 sq km) is situated extreme East of Sonitpur district (Fig. 1). Gohpur is bounded by Arunachal Pradesh in the North, Lakhimpur district on the East, Biswanath sub-division on the West and Brahmaputra river on the South. The area is low lying plain land. The temperature ranges from 17°C-37°C. Although some ethnobotanical work relating to this area has been already carried out, the ethnobotanical knowledge and practices on medicinal plants for

animal diseases have still not been comprehensively documented⁵. An attempt has been made to enumerate the species, which are being used by the local people to cure animal diseases. The area exhibits great ethnic and cultural diversity. Agriculture is the predominant occupation of the villagers, and cows, buffaloes, goats, and pigs are the common household livestock.

Methodology

The random survey was mainly based on interview and observation with practitioners, medicine men and knowledgeable persons. The plant specimen were collected, identified and deposited in the herbaria of Chaiduar College, Gohpur¹¹. The ethnobotanical data were recorded according to standard procedure¹².

Results and discussion

The records of collected plants are enumerated with their scientific name, family, local name, parts used and methods of application (Table 1). Information

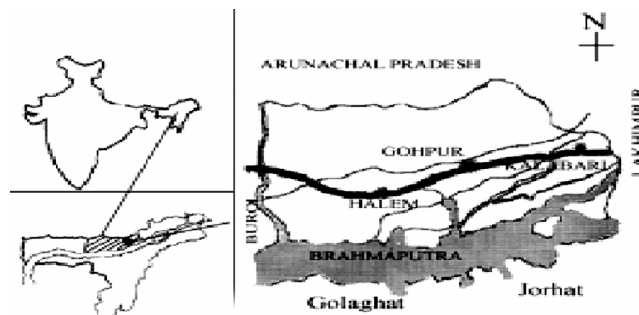


Fig. 1—Location map of the study area

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Table 1—Medicinal plants used in animal healthcare from Gohpur

Plant name/ Family	Local name	Uses
<i>Annona squamosa</i> L. Annonaceae	<i>Atlas</i> (As)	Leaf juice is applied to kill ectoparasite of domestic animals.
<i>Allium cepa</i> L. Liliaceae	<i>Piyaj</i> (As)	Bulb paste is applied in insect bites to relieve pain.
<i>Allium sativa</i> L. Liliaceae	<i>Naharu</i> (As)	Paste of garlic bulb and ginger rhizome in equal parts is given in indigestion of domestic animals.
<i>Brassica nigra</i> (L.) Koch. Brassicaceae	<i>Kola sariah</i> (As)	Pure mustard oil with rhizome paste of <i>Curcuma longa</i> is applied on the mischief part of cattle horn.
<i>Capsicum frutescens</i> L. Solanaceae	<i>Khud-jalakia</i> (As), <i>Banlu bwrdown</i> (Bo), <i>Lukuni murchi</i> (Mis)	Paste of ripe fruits mixed with mustard oil is applied to boils.
<i>Citrus aurintifolia</i> (Chr.) Sw. Rutaceae	<i>Gol-nemu</i> (As), <i>Narang ashi</i> (Bo)	About 10 gm fruit, preserved in common salt for 3-4 yrs, is given during discharge of mucus in the faeces.
<i>Christella parasiticus</i> (L.) Lev. Thelypteridaceae	<i>Bih-lagani</i> (As).	Leaf paste is applied to relieve pain and in snakebite.
<i>Cucumis sativus</i> L. Cucurbitaceae	<i>Tiyah</i> (As)	Fruit paste is given to expel accidentally swallowed leech from the stomach.
<i>Curcuma angustifolia</i> Roxb. Zingiberaceae	<i>Gorusat haladhi</i> (As)	Rhizome paste is applied to stop bleeding of cattle injured by leech.
<i>Curcuma caesia</i> Roxb. Zingiberaceae	<i>Kola haladhi</i> (As)	Fresh rhizome juice mixed with mustard oil is given once daily on empty stomach for 2-3 days, in dysentery. It is also applied to gout.
<i>Cynodon dactylon</i> (L). Pers. Poaceae	<i>Dubari-ban</i> (As)	Plant juice is given twice or thrice daily for a week to cure haematuria.
<i>Datura metel</i> L. Solanaceae	<i>Dhatura</i> (As)	Tender leaf juice mixed with sugar and water is given once daily for two days to prevent rabies. The dose varies according to the age of cattle.
<i>Ficus hispida</i> L. Moraceae	<i>Dimoru</i> (As)	Leaves with common salt are rubbed on tongue to cure sore of cow and bullock.
<i>Hibiscus subdarifa</i> L. Malvaceae	<i>Ranga tengamara</i> (As)	Leaf juice is given once daily empty stomach for 3-4 days in dysentery.
<i>Paederia scandens</i> (Lour.) Merr. Rubiaceae	<i>Bhedilata</i> (As), <i>Bungkiropak</i> (Mis)	Leaf juice is given once daily on empty stomach for a fortnight in spleen enlargement of cattle.
<i>Phaseolus mungo</i> Roxb. Papilionaceae	<i>Matimah</i> (As)	Seed soaked in water with equal amount of <i>Curcuma angustifolia</i> Roxb. rhizome made in to poultice and mixed with mustard oil is applied to cattle in skin diseases.
<i>Piper nigrum</i> L. Piperaceae	<i>Jaluk</i> (As)	Powder of dried fruits with water is applied immediately to relieve pain of insect bites.
<i>Polygonum strigosum</i> R.Br. Polygonaceae	<i>Mou-sarali</i> (As), <i>Moy - sarali</i> (Mis)	Tender roasted shoots are given once daily on empty stomach for 2-3 days in dysentery of cattle.
<i>Prunus domestica</i> L. Rosaceae	<i>Ahom-bagari</i> (As)	Paste of leaves with a naphthalene ball is applied on maggot infested wounds of cattle to kill the worms and to heal the wound, once daily for 2-3 days until cured.
<i>Saccharum officinarum</i> L. Poaceae	<i>Kuhia</i> (As), <i>Tabad</i> (Mis)	Leaves are given to hasten placental discharge of cow following delivery.

was collected from among *Assamese* (As), *Mishing* (Mis) and *Bodo* (Bo) communities. The study also indicated variations regarding traditional knowledge and use of plant parts among the tribes. Generally, medicinal plant parts are collected by the males and prepared by the females. In the study, 20 plant species belonging to 16 families were found to be used as medicine. A total of 21 prescriptions were recorded.

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References

- 1 Kumar S, Goyal S & Parveen F, Ethno-medico-botany of household remedies of kolayat tehsil in Bikaner district, Rajasthan, *Indian J Traditional Knowledge*, 2 (4) (2003) 357-365.
- 2 Borthakur S K & Goswami N, Herbal remedies from *Dimoria* of Kamrup district of Assam in North eastern India, *Fitoterapia*, 65 (1995) 333.
- 3 Jain S K & Borthakur S K, Ethnobotany of *Mikirs* of India, *Econ Bot*, 34 (1980) 264.
- 4 Jain S K, Notable foreign medicinal uses for some plants of Indian tradition, *Indian J Traditional Knowledge*, 2 (4) (2003) 321.
- 5 Saikia B, Ethnomedicinal plants from Gohpur of Sonitpur district, Assam, *Indian J Traditional Knowledge*, 5 (4) (2006) 529.
- 6 Jain S K & Srivastava S, Indian ethnobotanical literature in last two decades a graphic review and future direction, *Ethnobotany*, 13 (1& 2) (2001) 1-8.
- 7 Ghosh A, Herbal veterinary medicine from tribal areas of Bankura district, West Bengal, *J Econ Taxon Bot*, 23 (1999) 557.
- 8 Ghosh A, Ethnoveterinary medicine from the tribal areas of Bankura Medinipur district, West Bengal, *Indian J Traditional Knowledge*, 1 (1) (2002) 93-95.
- 9 Mukherjee A & Namhata D, Herbal veterinary medicine as practised by the tribals of Bankura district, West Bengal, *J Bengal Nat Hist Soc*, 7 (1988) 69.
- 10 Mistry N, Silori C S, Gupta L & Dixit A M, Indigenous knowledge on animal healthcare practices in district Kachchh, Gujarat, *Indian J Traditional Knowledge*, 2 (3) (2003) 240.
- 11 Kanjlal U C, Das A, Kanjlal P C & De R N, *Flora of Assam*, Vol IV, (Government of Assam, Taj offset press, New Delhi), 1940, 252.
- 12 Jain S K, *A Manual of Ethnobotany*, (Scientific Publication, Jodhpur), 1987.