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RESEARCH ARTICLE

TRADITIONAL HERBAL TREATMENT OF VETERINARY AILMENTS IN RAEBARELI DISTRICT (UTTAR PRADESH)

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ABSTRACT

The present paper aims to explore and document traditionally used medicinal plants for the treatment of various ailments of livestock in the district Raebareli of Uttar Pradesh. The study was carried out during June, 2008 to April, 2009 through interviews and discussions with the local inhabitants of the district. Total 40 plant species have been found to be used against 38 ailments of livestock in the form of 10 medicinal formulations. Voucher specimens of cited plant species were collected and identified as belonging to 39 genera and 28 families. The identified taxa are described by mentioning their scientific name, families, vernacular names, medicinal uses and their mode of administration. There is an urgent need to conserve properly the plant species of medicinal value growing in the study area and associated indigenous knowledge for sustainable use in veterinary healthcare.

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INTRODUCTION

India is a vast repository of medicinal plants that are used in traditional medical treatments (Chopra *et al.*, 1956). It is estimated that more than 75% of people in developing countries still rely upon traditional medicine based largely on plant species for their primary healthcare. The relationship between humans, plant and animal has been in existence since time immemorial. Ancient men had discovered natural products to satisfy his needs, including relief from his personal ailments as well as of his fellow domestic animals. It is an established fact that plants serve a potent medicine for curing various diseases of local people as well as livestock. This practice is based on folk beliefs, traditional knowledge, skills, methods and practices used for the curing diseases and maintaining health of animals. It provides the major source for the treatment of diseases in livestock throughout the world even today. It also provides cheaper options than comparable western drugs, the products are locally available and more easily accessible. The storage of the knowledge is solely depended on the collective memory of just a few entrusted persons within communities for it is just not common knowledge for everybody. The knowledge is believed to be collectively owned by ancestors and kept under the custody of living old men and women, depending on the community, sex, age, caste etc.

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There is a danger, however, this method of vesting knowledge in human custodians can be undermined by mortality, thereby losing important information to the future generations.

MATERIALS AND METHODS

Description of study area

The study was conducted in the Raebareli district of Uttar Pradesh during July, 2008 to June, 2009. The district is situated in the lower Gangetic plain and is located between 25° 49' N and 26° 36' N latitude and 100° 41' E and 81° 34' E longitude with an area of 4609 sq. Km. which is gradually sloping from north-west to south-east direction. The land surface is somewhat flat with alkaline or sodic soil. The area is characterised by tropical dry deciduous vegetation. Agriculture and animal husbandry are the main occupations of more than 80% population of the area. Residents still manage livestock in the same way as their forefathers. Usually people rear cows, buffalos or goats but pigs, donkeys and horses are not uncommon. The major livestock ailments are diarrhoea, dysentery, constipation, fever, anorexia, mastitis, conjunctivitis, cough and cold, wounds, foot and mouth disease, neck swelling, flatulence and protrusion of the umbilical cord during pregnancy of the animal. A perusal of literature reveals that there is no study on traditional veterinary medicine in the Raebareli district has been carried out so far. Therefore, the present study was undertaken to document and analyze local knowledge on the treatment of various livestock ailments.

Table 1. Traditional use of plants for the treatment of various veterinary ailments

S.No.	Plant species	Local name	Habit	Family	Parts used	Ailments
1.	<i>Abutilon indicum</i> (Linn.) Sweet	Kanghi	Shrub	Malvaceae	Leaves and seeds	Haematuria, Constipation
2.	<i>Acacia nilotica</i> (Linn.) Del	Babool	Tree	Mimosaceae	Thorns	Removal of placenta after delivery
3.	<i>Acalypha indica</i> Linn.	Kuppi	Herb	Euphorbiaceae	Leaves	Wound
4.	<i>Achyranthes aspera</i> Linn.	Latjira	Herb	Amaranthaceae	Roots and whole plant	Stomachache, removal of placenta after delivery and opacity of cornea
5.	<i>Aerva persica</i> (Burm. f.) Merrill.	Safed bui	Herb	Amaranthaceae	Roots, inflorescence, flowers and whole plant	Foot and mouth disease, digestive disorders, dysurea and eating soil
6.	<i>Allium sativum</i> Linn.	Lahsun	Herb	Liliaceae	Bulbs	Impaction and lumbago
7.	<i>Andrographis paniculata</i> (Burm. f.) Wall ex. Nees	Chirayata	Herb	Acanthaceae	Leaves and whole plant	Fever, cough and cold, foot and mouth disease
8.	<i>Anisomeles indica</i> (Linn.) O. Kuntze		Herb	Lamiaceae	Whole plant	Flatulence and leucorrhoea
9.	<i>Anthocephalus chinensis</i> (Lam.) A. Rich ex. Walp.	Kadamb	Tree	Rubiaceae	Leaves	Flatulence
10.	<i>Azadirachta indica</i> A. Juss.	Neem	Tree	Meliaceae	Leaves	Constipation and leucorrhoea
11.	<i>Bambusa arundinacea</i> (Retz.) Willd.	Bans	Culm	Poaceae	Leaves	Lactation
12.	<i>Bauhinia racemosa</i> Lam.	Kachanar	Tree	Caesalpinaceae	Leaves	Conjunctivitis
13.	<i>Calotropis procera</i> (Ait.) R.Br.	Madar	Shrub	Asclepiadaceae	Flowers and latex	Cough and cold, scorpion bite
14.	<i>Cassia fistula</i> Linn.	Amaltas	Shrub	Caesalpinaceae	Flowers	Cough and cold
15.	<i>Citrus medica</i>	Nimbu	Shrub	Rutaceae	Fruits	Lactation
16.	<i>Cleome viscosa</i> Linn.	Hulchul	Herb	Capparidaceae	Seeds	Diarrhoea and fever
17.	<i>Coccinia indica</i> Wight & Arn.	Kanduri	Trailing herb	Cucurbitaceae	Leaves	Cough and cold
18.	<i>Colocasia esculenta</i> (Linn.) Schott.	Arvi	Herb	Aracaceae	Petiole	Foot and mouth disease
19.	<i>Cordia dichotoma</i> Forst. f.		Shrub	Ehretiaceae	Leaves	Foot and mouth disease
20.	<i>Cuscuta reflexa</i> Roxb.	Amarbel	Climber	Cuscutaceae	Whole plant	Lumbago and rheumatism
21.	<i>Datura stramonium</i> Linn.	Dhatura	Shrub	Solanaceae	Young fruit	Wound
22.	<i>Dalbergia sissoo</i> Roxb.	Sheesham	Tree	Fabaceae	Leaves	Sunstroke and dysurea
23.	<i>Desmostachya bipinnata</i> (Linn.) Stapf.	Kush	Herb	Poaceae	Whole plant	Flatulence
24.	<i>Euphorbia hirta</i> Linn.	Badi dudhi	Herb	Euphorbiaceae	Leaves and whole plant	Diarrhoea and fever
25.	<i>Euphorbia antiquorum</i> Linn.	Shhund	Shrub	Euphorbiaceae	Latex	Dermatitis, eczema and neck swelling
26.	<i>Ficus religiosa</i> Linn.	Peepal	Tree	Moraceae	Leaves	Dysurea, haematuria and constipation
27.	<i>Holoptelia integrifolia</i> (Roxb.) Planch	Chilbil	Tree	Ulmaceae	Leaves	Eczema
28.	<i>Leucas aspera</i> (Willd.) Link	Gom	Herb	Lamiaceae	Whole plant and bark	Fever and wound
29.	<i>Melia azadirach</i> Linn.	Bakayan	Tree	Meliaceae	Leaves	Internal parasites
30.	<i>Nicotiana tobacum</i> Linn.	Tambakhu	Shrub	Solanaceae	Leaves	Flatulence
31.	<i>Ocimum sanctum</i> Linn.	Tulsi	Shrub	Lamiaceae	Leaves	Scabies, cancer, weight gain and good health
32.	<i>Pongamia pinnata</i> (Linn.) Pierre	Karanji, Dhithor	Tree	Fabaceae	Leaves	Wound and worms
33.	<i>Ricinus communis</i> Linn.	Arand	Shrub	Euphorbiaceae	Seeds	Constipation
34.	<i>Sida ovate</i> Forsk.	Bariyara	Herb	Malvaceae	Whole plant	Pain
35.	<i>Trianthema portulacastrum</i> Linn.	Patherchatta	Herb	Aizoaceae	Leaves	Diarrhoea
36.	<i>Tridax procumbens</i> Linn.		Herb	Asteraceae	Leaves	Diarrhoea
37.	<i>Tamarindus indica</i> Linn.	Imali	Tree	Caesalpinaceae	Fruits	Appetizer
38.	<i>Syzygium cumini</i> (Linn.) Skeels	Jamun	Tree	Myrtaceae	Bark	Diarrhoea
39.	<i>Zingiber officinale</i> Rosc.	Sonth	Herb	Zingiberaceae	Rhizome	Stomachache, pneumonia, paralysis and appetizer
40.	<i>Ziziphus mauritiana</i> Lamk.	Ber	Shrub	Rhamnaceae	Seeds	Uterine prolapsed, leucorrhoea and heatstroke

Methodology

The information pertaining to livestock ailments and use of plant species for their treatment were collected through intensive surveys of the area of the district monthly in all the 21 blocks during July, 2008 to June, 2009. The participatory Rural Appraisal (PRA) technique (Chambers, 1994) was adopted for my field study. The information on traditionally used plants for the treatment of livestock ailments was

collected through interviewing local informants, elder members of different communities, traditional healers, livestock owners, herdsman etc. Before taking the interview rapport was made with one or two persons preferably the chief, guidance sought and contact with other members of rural primitive communities. Generally two types of interviews were taken, firstly of individuals and secondly of groups. Of individuals, persons were selected at random on the way or entering a hut. To determine the authenticity of information

collected during field work, repeated verification of data from different informants and in different times was done. Thus, only the specific and reliable information cross-checked with 10 informants has been incorporated in present study. Information on various diseases in livestock, their causes, symptoms, medicinal plants or parts used and mode of administration of drug were recorded. Plant specimens were collected in flowering and fruiting stages taking due care to collect the healthy specimens. Field observations on phenology, habit, habitat, local names, local uses, frequency of occurrence etc. were recorded. Altogether a total of 100 informants comprising 60% male and 40% female from the age group 45-65 yrs. They were interviewed during the field study. During the study plant specimens were collected with field notes and preserved in the form of herbarium specimens (Singh and Subramaniam, 2008). The plants were identified with the help of relevant floras (Duthie, 1933; Raizada, 1976), followed by matching the specimens with the herbarium specimens deposited in the herbaria of BSI, Allahabad and NBRI, Lucknow. The herbarium specimens have been deposited at the Department of Botany, T.D.P.G. College, Jaunpur, Uttar Pradesh.

RESULTS AND DISCUSSION

The results of extensive floristic survey are presented in the Table 1. A total of 40 plant species belonging to 28 families are reported. Each species is described with its taxon name, vernacular name, family, plant parts used, and common ailments in animals. The plant parts used for medical preparations are bark, roots, stem, rhizome, leaves, flowers, fruits, petiole, seeds, gum, latex, thorn and tubers. In some cases whole plant is utilized. Different formulations are made from medicinally important plants which commonly include paste, juice, decoction, powder extract, infusion and seed oil for treating animals. The leaves predominates other plant parts as medicinal source followed by whole plant and bark. The common diseases occurred in the study area are constipation, diarrhoea, cough and cold, flatulence, foot and mouth disease, neck swelling, wound, fever, stomachache, rheumatism, removal of placenta after delivery, leucorrhoea, lactation, sunstroke, pneumonia, paralysis, uterine prolapsed, heatstroke, worms, dermatitis, eczema, and as appetizer. Traditional people residing in the study area have an amazingly good understanding of the use of medicinal plant parts and quantity needed and the methods used in harvesting, processing, storing, preserving and utilizing medicinal plants to ensure good drug efficacy. The best results from medicinal plant preparations can only be obtained when rural people are taught to judiciously harvest, process, store, preserve and utilize the preparations. Most of the reported plants in the present study are also used by different types of tribal people in India for the treatment of various diseases in animals (Coe and Anderson 1996; Singh and Pandey, 1998; Harsha *et al.*, 2005; Mini *et al.*, 2007; Satya and Solanki, 2009; Galav *et al.*, 2013).

Herbal medicine has long been recognized as one of the oldest form of remedies used by humans. People still rely on traditional healing practices and medicinal plants for their daily healthcare needs, in spite of the advancement in modern medicine. The low cost and almost no side effects of these traditional preparations with medicinal plants make them most adaptable by the local rural community. The veterinary medicinal plants listed here are locally available and easily

accessible and thus provide a cheaper treatment as compared to western drugs. The only limitation is the seasonal availability of certain plants, for which traditional people have acquired different ways to preserve them for other season uses. The herbs are the primary source of medicinal plants in terms of the number of species followed by shrubs and trees. This is perhaps because they are abundant weedy species that are frequently found in the nature and it is believed that the more abundant a plant is, the more medicinal virtues it may possess (Coe and Anderson, 1996). The wealth of the traditional knowledge of medicinal plants points to a great potential for research and the discovery of new drugs to cure the diseases of animals. But due to rapid socio-economic and cultural changes, the traditional knowledge of medicinal plants is now rapidly disappearing. Therefore, documentation of this knowledge is valuable for future generations and for scientific consideration of wider uses in treating domestic animals. However, there is a need to scientifically ascertain the authenticity of the claimed use of these plants. There is a great need to generate awareness among the local population towards the sustainable utilization and conservation of medicinal plants.

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