

“Ethnoveterinary Practices for Herbal Cure of Livestock Used by Rural Populace of Hamirpur, (H.P.), India.”

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Abstract: Despite the undoubted success of a scientific approach to pharmaceuticals, the last few decades have reformed towards the spectacular rise in interest in herbal medicinal products for cure of livestock by the indigenous people of Hamirpur (H.P.), India. The present study was carried out between 2008 to 2011. Recording of indigenous medicinal plants used for common diseases in animals along with the interviews with elderly persons, cattle owners, traditional farmers, healers and house wives was done. A total of 123 plant spp. belonging to 49 families wild in occurrence, were reported to be used in more than 60 ailments of livestock. Low cost and almost no side effects of these medicines make them acceptable by the local community. Ethnomedicine is an integral part of traditional medical practices in many countries of the developing world. Livestock is a major asset for resource poor small farm holders and pastoralists throughout the world. The present study is aimed at providing an overview of the ethnoveterinary preparations for various ailments of livestock particularly in Hamirpur District of Himachal Pradesh.

I. Introduction

Himalayas have a great wealth of medicinal plants and traditional inherent knowledge to use it. Himachal Pradesh situated in the lap of north-western Himalayas, a state with diverse culture and tradition is located between 30° 22' 40" north latitudes and 75° 45' 55" to 79° 04' 20" east longitude. The total area of the state is 55673 Sq.km with mountains ranging from 350 to 6,975m and average rainfall 152cm. A total of 13,082 Sq. km area is under thick forest cover which shelters 1200 sp. of birds, 359sp. of animals and more than 3,400 plant spp. Large variation is observed regarding ethnic uses of plants among people of Himachal Pradesh (Bhalla *et al.*, 2006). Hamirpur district is situated between 76°-17'-50" to 76°-43'-42" east longitudes and 31°-24'-48" to 31°-53'-35" north latitudes, in the south western part of state covered by lower Himalayas. The land is a rich repository of medicinal herbs. Plants are used in ethnoveterinary practices all over the country (Mishra *et al.*, 1996). Because of lesser accessibility to inner country side the land remains unexplored and unexploited by the tourists. This area shows maximum biodiversity. A brief account of 123spp. belonging to 106 genera 49 families and more than 60 veterinary ailments have been documented. The method of their usage and dosages were also recorded. So far no work has been carried out on the ethnoveterinary plants of Hamirpur District. The present communication aims to document the traditional knowledge about wild veterinary medicinal plants used by indigenous people of Hamirpur H.P.

II. Material And Methods

Ethnobotanical explorations were carried out in all the five subdivisions of the district, several times. For accurate and best possible information the elders, traditional healers, local practioners, 'vaids' and housewives were interviewed based on specific questionnaire designed by Jain & Goel, 1995 and informations were recorded in the ethnobotanical field note book. The collected plant specimens were dried, preserved and mounted as per the known herborizing practices outlined by Jain & Rao, 1977. The specimens were identified using regional floras and various revisionary and monographic works (Chauhan, 1999; Chowdhery & Wadhwa, 1984; Collett, 1902; Dhiman, 1976; Hooker, 1872-1897; Nair, 1977; Polunin & Stainton, 1984; Stainton, 1988) and later got authenticated by carefully matching with the specimens at the herbaria of Botanical Survey of India (BSI), Northern Circle and Forest Research Institute (FRI), Dehradun.

III. Results

The 123 plants along with the diseases of animals are tabulated showing their families local names and use in table-1.

Table-1
Ethnoveterinary Plants of District Hamirpur

S.No.	Botanical Names	Ailments	Parts Used	Local Names	Family
1.	<i>Abrus precatorius</i> L.	Wound healing	Poultice of Leaves	Ratti, Raktgunja	Fabaceae
2.	<i>Achyranthes aspera</i> L.	Expulsion of placenta	Roots	Puthkanda	Amaranthaceae
3.	<i>Achyranthes bidentata</i> Blume	Expulsion of placenta	Roots	Puthkanda	Amaranthaceae
4.	<i>Acorus calamus</i> L.	Relief from joint pains	Rhizomes mixed with mustard oil	Baryan	Araceae
5.	<i>Adhatoda vasica</i> Nees	Loss of appetite, relief from cough	Decoction of leaves	Basuti	Acanthaceae
6.	<i>Adiantum capillus-veneris</i> L.	Cough & Throat trouble	Leaves, Rhizomes	Hansraj	Adiantaceae
7.	<i>Agave americana</i> L.	Wounds & Fractured bones	Mucilage, Leaves	Ramban	Agavaceae
8.	<i>Aloe barbedensis</i> Mill.	To Cure dysentery	Leaves, Decoction	Ghi-kawer	Liliaceae
9.	<i>Aloe vera</i> Webb. & Benth.	Stomach disorders	Leaves, Decoction	Ghi-kawer	Liliaceae
10.	<i>Anetham sowa</i> Roxb. ex Flem.	Bay (Bloat)	Powdered seeds	Kaudi saunf	Apiaceae
11.	<i>Annona squamosa</i> L.	Killing bugs	Leaves	Sitaphal	Annonaceae
12.	<i>Arachis hypogaea</i> L.	Increasing Lactation	Fruits, Oil cakes	Moongphali	Fabaceae
13.	<i>Argemone mexicana</i> L.	Placental evagination	Seeds	Lea	Papaveraceae
14.	<i>Arisaema tortuosum</i> (Wall.) Schott	Prolapsed uterus	Rhizome, oil	Kirre Ri Chhhali	Araceae
15.	<i>Artemisia vulgaris</i> L.	Burn injuries	Leaf paste	Charmad	Asteraceae
16.	<i>Artocarpus lakoocha</i> Roxb.	Increase Milk Content	Leaves	Dheun	Moraceae
17.	<i>Asparagus adscendens</i> Roxb.	Emetic, Coolent	Roots	Sanspai	Liliaceae
18.	<i>Avena sativa</i> L.	Lactation	Seeds	Joi, Javi	Poaceae
19.	<i>Bambusa arundinaceae</i> (Retz.) Roxb.	Expulsion of placenta	Leaf paste	Bainjh	Poaceae
20.	<i>Bambusa nutans</i> Wall.	Abjhana (Anoestrus)	Leaf paste	Bans	Poaceae
21.	<i>Bauhinia vahlii</i> Wight & Arn.	Stomach trouble	Leaves	Tor	Fabaceae
22.	<i>Bauhinia variegata</i> L.	Enhancing lactation	Leaves	Kachnar, Karale	Fabaceae
23.	<i>Berberis asiatica</i> Roxb. ex DC.	Eye Wash, Dysentery	Leaf Extract	Kasmal	Berberidaceae
24.	<i>Boerhavia</i>	Cudding	Seeds, Plant	Itsat, Utsata	Nyctaginaceae

	<i>diffusa</i> L.				
25.	<i>Bombax ceiba</i> L.	Stomach disorders	Leaves, Flowers	Simbal, Simal	Boraginaceae
26.	<i>Brassica campestris</i> L.	Check abortions, Wounds	Leaves, Seeds, oil cakes	Sarson	Brassicaceae
27.	<i>Brassica juncea</i> (L.) Czern. & Coss.	Intestinal Worms	Oil cakes, Oil	Rai	Brassicaceae
28.	<i>Brassica nigra</i> (L.) Koch	Lactation	Seeds, Oil	Rai, Ohari	Brassicaceae
29.	<i>Cannabis sativa</i> L.	Skin eruptions, Insect bites	Leaves	Bhang	Moraceae
30.	<i>Capsicum annuum</i> L.	On rabied dog's Bite	Fruits	Mirch	Solanaceae
31.	<i>Cardiospermum halicacabum</i> L.	'Patrara', (acute tympany)	Seeds, Fruits	Tikku-malu	Sapindaceae
32.	<i>Carduus nutans</i> L.	Lactation	Whole plant	Lea	Asteraceae
33.	<i>Carum copticum</i> Hiern.	Abdominal pains, Bloating	Seeds	Ajwain	Apiaceae
34.	<i>Cassia fistula</i> L.	Constipation, bloating	Fruits	Allia, Aahali, Kanyar	Fabaceae
35.	<i>Celastrus paniculatus</i> Willd.	Strength	Leaves, Seeds	Sankhiryan, Sankheere	Celastraceae
36.	<i>Centipeda minima</i> (L.) A. Br. & Asch.	Dandu (Prolapsed Uterus)	Leaves	Nakchikdu	Asteraceae
37.	<i>Chenopodium album</i> L.	Expulsion of placenta	Stem, Leaves	Kunnah, Bathu	Chenopodiaceae
38.	<i>Chenopodium ambrosioides</i> L.	Constipation, Basaihar (mastitis)	Seeds,	Kah-ajwain	Chenopodiaceae
39.	<i>Cicer arietinum</i> L.	Weakness in animals, Frequent abortions	Seeds, Leaves	Chollae	Fabaceae
40.	<i>Cissampelos pareira</i> L.	Dysentery	Whole plant	Patindu, Bhatindu	Menispermaceae
41.	<i>Citrus grandis</i> (L.) Osbeck.	Remove indigestible matter	Fruit Juice	Chakotra-Khatta	Rutaceae
42.	<i>Citrus limon</i> (L.) Burm. f.	Expel ectoparasites	Fruit Juice	Khatta, Galgal	Rutaceae
43.	<i>Colebrookia oppositifolia</i> Sm.	Burn injuries, Appetizer	Leaves, stem	Dushane, Dus	Lamiaceae
44.	<i>Colocasia esculenta</i> (L.) Schott	Dandu (prolapsed uterus)	Leaves	Kachalu, Geju	Araceae
45.	<i>Cordia dichotoma</i> Forst. f.	Expelling worms	Leaves, Fruits	Lasura	Cordiaceae
46.	<i>Cucumis sativus</i> L.	Burn injuries	Fruit paste	Kheera, Kakri	Cucurbitaceae
47.	<i>Cucurbita hispida</i> Thunb.	Pregnancy Loss	Fruits	Petha, Dhuda Petha	Cucurbitaceae
48.	<i>Curcuma domestica</i>	Wound healing	Rhizomes	Haldi, Haldan	Zingiberaceae

	(Medik.) Valeton				
49.	<i>Cymbopogon citratus</i> (DC.) Stapf	Patrara (acute Tympany)	Stem, Leaves	Lemongrass	Poaceae
50.	<i>Cynodon dactylon</i> (L.) Pers.	Burn injuries	Leaves	Doob, Dhruv, Doorva	Poaceae
51.	<i>Dalbergia sissoo</i> Roxb. ex DC.	Burn injuries, dysentery, abortions	Leaves	Tahali, Shisham	Fabaceae
52.	<i>Datura metel</i> auct. non L.	Magico-religious treatment	Leaves, Flowers	Datura	Solanaceae
53.	<i>Datura stramonium</i> L.	Magico-religious treatment	Seeds, Fruits	Datura, Dhatura	Solanaceae
54.	<i>Dendrocalamus hamiltonii</i> Nees & Arn. ex Munro	Expulsion of placenta	Leaves, Stem	Baingh, Maggar	Poaceae
55.	<i>Dodonaea viscosa</i> L. Jacq.	Fractured bones	Leaves	Mehandru	Sapindaceae
56.	<i>Embllica officinalis</i> Gaertn.	Dhaknu (Cough & cold)	Dry Fruits	Ambla, Amla	Euphorbiaceae
57.	<i>Equisetum debile</i> Roxb. ex Vauch.	Evagination of uterus	Stem, Branches	Ghornali	Equisetaceae
58.	<i>Eruca sativa</i> Lam.	Enhancing lactation, Basaihar (mastitis)	Seeds	Taramira	Brassicaceae
59.	<i>Eucalyptus umbellata</i> Domin	Skin ectoparasites	Leaf	Safeda	Myrtaceae
60.	<i>Eupatorium adenophorum</i> Spreng.	Constipation	Leaves decoction	Kali Basuti	Asteraceae
61.	<i>Euphorbia pulcherrima</i> Willd.	Throat problems	Milky latex	Lalpatta	Euphorbiaceae
62.	<i>Euphorbia royleana</i> Boiss.	Stimulating ovulation, Tail infection	Milky latex	Chu, Chui	Euphorbiaceae
63.	<i>Ficus pamata</i> Forsk.	Padjibhi (glossitis)	Leaves and latex	Phalgu, Anjhir	Moraceae
64.	<i>Ficus religiosa</i> L.	Lactation	Leaves	Peepal	Moraceae
65.	<i>Foeniculum vulgare</i> Mill.	Mastitis	Seeds	Saunf, Soay	Apiaceae
66.	<i>Fumaria indica</i> (Haussk.) Pugsley.	Pit (Jaundice)	Whole plant	Pitpapara, Papara, Pitpapada	Fumariaceae
67.	<i>Glycine max</i> Merr.	Increasing Lactation	Plant and Seeds	Soyabean	Fabaceae
68.	<i>Glycyrrhiza glabra</i> L.	Throat problems	Leaves and roots	Malathi	Fabaceae
69.	<i>Gossypium arboreum</i> L.	Check abortions, Enhancing lactation	Oil cakes and seeds	Kapah, Kapas	Malvaceae
70.	<i>Grewia oppositifolia</i> Roxb.	Cud , Enhancing lactation	Leaves	Beul, Bhuel	Tiliaceae

71.	<i>Holarrhena pubescens</i> Wall. ex G. Don	Prolapsed uterus	Paste of Bark	Kurchi, Keur, Inderjaun	Apocynaceae
72.	<i>Hordeum vulgare</i> L.	Lactation Enhancer	Stem and Seeds	Jau, Satu	Poaceae
73.	<i>Jasminum humile</i> L.	Febrifuge	Twigs and Roots	Chameli	Oleaceae
74.	<i>Jasminum multiflorum</i> Roth.	Febrifuge	Twigs and Roots	Malti	Oleaceae
75.	<i>Lens culinaris</i> Medic.	Bloating	Seeds	Masar	Fabaceae
76.	<i>Lepidium sativum</i> L.	Basaihar (mastitis)	Seeds	Hallon	Brassicaceae
77.	<i>Leucaena leucocephala</i> (Lam.) de Wit.	Lactation Enhancer	Leaves	Alseenia	Fabaceae
78.	<i>Linum usitatissimum</i> L.	Basaihar (mastitis)	Seed oil	Alsi	Linaceae
79.	<i>Mallotus philippinensis</i> (Lam.) Muell.-Arg.	Stomach pain	Leaves, Fruits, Seeds and Fruit Powder	Kambhal, Kambal	Euphorbiaceae
80.	<i>Mangifera indica</i> L.	Placenta (jer girana)	Leaves	Amb, Aam	Anacardaceae
81.	<i>Mentha spicata</i> L.	Repel exoparasite	Leaves and Stem	Pudina	Lamiaceae
82.	<i>Millettia extensa</i> Benth. ex Baker	Ectoparasite	Root Paste	Salangaya	Fabaceae
83.	<i>Murraya koenigii</i> (L.) Spreng.	Cooling effect against sun stroke	Leaves Extr.	Gandhla, Curry patta	Rutaceae
84.	<i>Murraya paniculata</i> (L.) Jack.	Patrara (acute tympany)	Leaves	Gandhla	Rutaceae
85.	<i>Musa sapientum</i> L.	Pregnancy loss	Inflorescence	Kela	Musaceae
86.	<i>Nasturtium officinale</i> R. Br.	Diabetes in animals	Stem and Leaves	Chuch	Brassicaceae
87.	<i>Ocimum basilicum</i> L.	Cough	Leaves decoction	Bhabhri	Lamiaceae
88.	<i>Ocimum sanctum</i> L.	Cough	Leaves decoction	Ram-Tulsi, Baramasi	Lamiaceae
89.	<i>Oroxylum indicum</i> Vent.	Constipation	Bark powder	Tat-palanga	Bignoniaceae
90.	<i>Pennisetum americanum</i> L.	Enhancing lactation	Whole plant	Bajra, Barley	Poaceae
91.	<i>Pennisetum purpureum</i> Schum.	Milk consistency	Whole plant	Chari	Poaceae
92.	<i>Plumbago zeylanica</i> L.	Basaihar (mastitis)	Root paste	Chitrak, Chitra	Plumbaginaceae
93.	<i>Pogostemon benghalensis</i> Burm. f.	Cudding	Leaves, Whole plant	Kali Basuti, Dusyan	Lamiaceae
94.	<i>Prunus persica</i>	Wounds, Intestinal	Leaves	Aru, Adu	Rosaceae

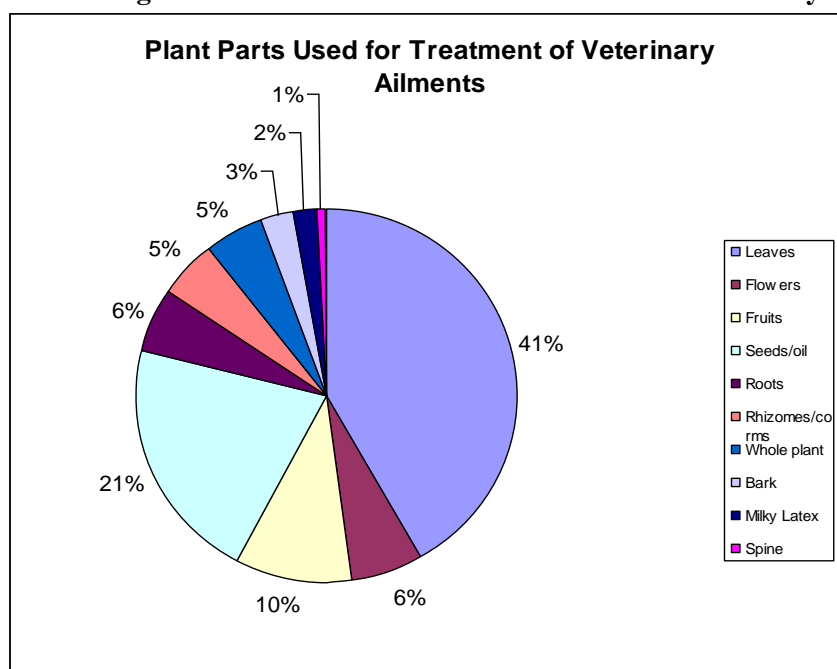
	Benth. & Hook. f.	worms	(Mature and young)		
95.	<i>Psidium guajava</i> L.	Dysentery	Leaves	Amrood	Rosaceae
96.	<i>Pyrus pashia</i> Ham.	Foot sore	Leaves and Fruits	Kainth, Kaenth	Rosaceae
97.	<i>Randia dumetorum</i> (Retz). Lam.	Toe infection, 'gahli' (Tail gangrene)	Trunk and Spines	Rada	Rubiaceae
98.	<i>Reinwardtia indica</i> Dum.	Suppuration of boils	Leaves, Flowers	Basant, Piyan	Linaceae
99.	<i>Rhynchosyilis retusa</i> Blume	Fractured bones	Leaves and Flowers	Bhangru	Orchidaceae
100.	<i>Rosa damascena</i> Mill.	Constipation	Flowers	Gulab	Rosaceae
101.	<i>Saccharum officinarum</i> L.	Abdominal pain, Constipation	Stem juice, Leaves, Jaggery, Molasses	Ganna	Poaceae
102.	<i>Sapindus mukorossi</i> Gaertn.	Dog bite	Leaves and Fruits	Reetha, Doda, Doddae	Sapindaceae
103.	<i>Sesamum indicum</i> DC.	Enhancing milk production	Oil, Oil cakes	Til	Pedaliaceae
104.	<i>Setaria viridis</i> Beauv.	Placental evagination	Leaves	Hathi grass	Poaceae
105.	<i>Solanum tuberosum</i> L.	Burn injuries	Tubers	Aloo	Solanaceae
106.	<i>Soymdia febrifuga</i> A. Juss.	Bone fractures, injuries	Stem Bark	Ruhan, Rehana	Meliaceae
107.	<i>Stephania glabra</i> (Roxb.) Miers	Flatulence, Mouth ulceration, Poisonous teats	Fruits, Corms	Bis-Khappar	Menispermaceae
108.	<i>Terminalia arjuna</i> (Roxb.) Wt. & Arn.	Burn injuries	Bark	Arjun Tree	Combretaceae
109.	<i>Terminalia bellirica</i> (Gaertn.) Roxb.	Cough, Dysentery, Constipation	Seed husk, Fruits	Behra, Bahera	Combretaceae
110.	<i>Terminalia chebula</i> Retz.	Cough	Fruits	Harar	Combretaceae
111.	<i>Tinospora cordifolia</i> (Willd.) Miers.	Enhancing lactation	Stem and Leaves	Gulaja, Giloy, Galon	Menispermaceae
112.	<i>Trifolium alexandrinum</i> L.	Milk production	Whole plant	Barseem	Fabaceae
113.	<i>Trigonella foenum-graecum</i> L.	Bloating	Seeds	Methe, Methi	Fabaceae
114.	<i>Triticum aestivum</i> L.	'Taruna' (abortion)	Grains/Seeds	Gehun	Poaceae
115.	<i>Vanda roxburghii</i> R. Br.	Fractured bones	Leaves, Flowers	Bhangru	Orchidaceae
116.	<i>Verbascum</i>	Constipation, 'Ban'	Aerial plant	Ban	Scrophulariaceae

	<i>thapsus L.</i>	(Obstruction)	parts	Tambakhoo	
117.	<i>Vernonia anthelmintica</i> Willd.	'Basaihar'(Mastitis)	Seeds, Leaves	Brahmjiri	Asteraceae
118.	<i>Vitex negundo</i> L.	Appetiser, Mastitis	Leaves, Twigs	Banna	Verbenaceae
119.	<i>Wendlandia heynei</i> (Roem. & Schult.) Sant. & Merch.	Expelling leeches	Leaves, Juice	Panseera	Rubiaceae
120.	<i>Woodfordia floribunda</i> Salisb.	Wounds healing	Leaves, Flowers	Dhai, Dhavae, Dhaun	Lythraceae
121.	<i>Zanthoxylum armatum</i> DC.	Indigestion	Seeds, Fruits	Tirmer	Rutaceae
122.	<i>Zea mays</i> L.	Constipation	Seeds, Flour	Makki, Bhuta	Poaceae
123.	<i>Zingiber officinale</i> Rosc.	Polapsed uterus	Rhizomes	Adrak	Zingiberaceae

IV. Discussion

Present studies revealed that 123 spp. of plants growing in wild or cultivated, are used by the indigenous people of Hamirpur as herbal cure of the domestic animals. It is reported that 59 leaves (41%), 9 flowers (6%), 14 fruits (10%), 8 roots (6%), 30 seeds/ oil (21%), 7 Whole Plant (5%), 7 Rhizomes/Corms (5%), 4 Bark (3%), 3 Latex (2%), 1 spine (1%) (Figure-1) are used for formulation of ethnoveterinary medicines. Excessive use of some of the wild plants is leading to the destructive harvesting. Therefore, there is a need to generate awareness among the local populace towards the sustainable utilization and conservation of medicinal herbs. Livestock being their source of income as well as only diet and nutrition (milk, butter, butter-milk, curd, curry) has special place in the life of rural populace of Hamirpur District. Lack of finances, awareness and easy accessibility of herbs is making the indigenous people to choose herbal cure of cattle, more commonly.

Figure-1 Percentage of Plant Parts Used for the Treatment of Veterinary Ailments.



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