



EVM Plant Resources Used For Animal Health Care System From Bhore Area, District Pune, Maharashtra.

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ABSTRACT

Rural people from Bhore region have utilized more than 82 plant resources for Animal health care. 16 different ailments were recorded from study area. The present study deals with different ethno-veterinary practices performed by local farmers and Vaidus to treat their livestock. The enumeration of plants for different ailments are listed with their plant parts along with different ingredients. The disease wise plants are used as for snake bite 6, for wound healing 9, for diarrhea and dysentery 6, for repel insects on animal body 6, yoke gall 3, liver diseases 4, deworming 5, prolapsed of uterus 3, bloats 3, wound maggots 5, cold & Cough-4 and fever 5 are reported for the first time from Bhore area.

Key words: Animal health care, plant resources, Bhore area.

I. INTRODUCTION

India has ancient roots of utilizing plant resources for curing diseases of horses and cow herds. In the ancient India, Rigveda is one of the old literature mentioning cattle and their management. Several texts like Krishi –Parashara (400 BC) described a cattle shed and more emphasis given on cleanliness of the shed. Cattle sheds were regularly fumigated with dried plant products that contained volatile compounds. The Kautilya in his Artha-Sastra specially mentioned that government officer called the superintendent of cattle, his exclusive duty was to supervise livestock in the country, classification of livestock according to as calves, tame steers, draft oxen, bulls stud bulls, buffaloes, female calves, heifers, pregnant cows, milchkin, barren livestock, etc. He also knew treatments for curing livestock diseases such as those affecting the horns, teeth, buccal cavity and sore throat, lumbago, acute dysentery, plasters used to treat bone fractures, etc. (Tamboli and Nene 2005). Elephants were used for different services in ancient India. Elephant doctors were appointed to take care of elephant stables and apply necessary medicines for suffering from diseases, overwork and old age. (Shammasastry, 2004). The cow herds people have the knowledge of many animal diseases from which cattle might suffer and also knew the plant based remedies

like garlic (*Alliumsativum* L.) Pipali Mula(*Piperlongum* L.) Nagkeshara(*Mesuaferrea* L.) ginger (*Zingiber officinale*Rosc), etc. (Raichaudhuri, 1964).

Ethno-veterinary practices are especially used for ruminants such as cattle and other large animals. Livestock owners from Cameroon have an amazing good knowledge of ethno-botany, most of medicines are prepared from plants parts. They have a good understanding of the plant parts and quantities needed and the methods of harvesting, processing, storing, preserving and utilizing medicinal plants to ensure good drug efficacy and to enhance the survival of plant germplasm. (Toyang, *et al* .1995).

In recent years research workers have given importance to traditional knowledge pertaining to ethno-veterinary from different states. Pandey *et al* (2000) recorded ethno-veterinary plants from Gonda region, U. P. and 27 plants reported. Reddy *et al*. (2000) mentioned 35 plants for ethno-veterinary use in Anantpur district. A.P. Chitralkha and Jain (2006) reported ethno-veterinary practices from tribal region of Jhabua District, M.P. Ravikumar, *and et al*. (2004) validation of ethno-veterinary plant resources from Dindigul District of Tamil Nadu. Ramdas and Ghotge have formed ANTHRA group a non-government organization and made valuable contribution in ethno-veterinary survey from Andhra Pradesh and Maharashtra.(Ramdas *et al*. 2000; Ramdas and Yaksi, 2001). Kulkarni and Kumbhojkar (2002) have made contribution in ethno-veterinary medicinal practices among Mahadeokoli tribe and 128 plant resources were used for different ailments. Bhor region of Pune district has not surveyed for ethno-veterinary studies. The area has been exploited to understand the use of medicinal plants for livestock diseases. Present work carried out for Ph.D. degree dissertation and first hand information on 82plants used by local people or Bhagat and Vaidushas been collected.

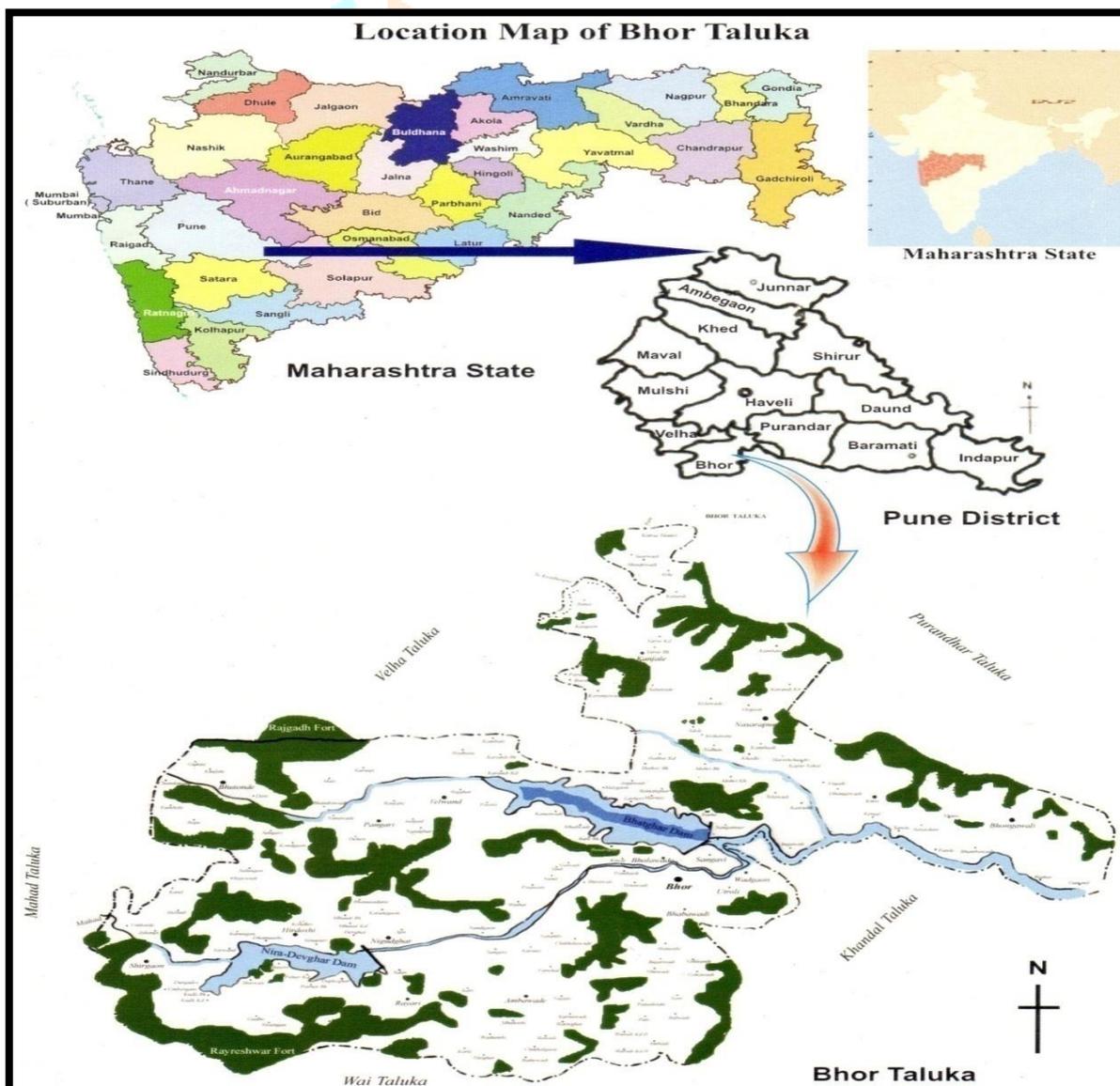
II. AREA UNDER STUDY

Bhor taluka covers an area of 892.0 Sq Km. It is situated 54 km South of Pune and between 18 ° and 18°.45' N latitude and 73° -15' E. longitude. It has 185 villages and total population is 1, 71719. The climate of the area is moist during rainy season and moderate in winter and summer season. Vegetation in the forested area includes, evergreen, moist deciduous, dry mixed deciduous and scrub types. Forest in hilly area of Western part is of evergreen type due to heavy rainfall and higher elevations of the Sahyadri main ridge (650 to 1424 m altitude). This is an undisturbed, well developed evergreen forest often showing distinct layers and a variety of habitat patterns. The southern part of Bhor taluka has moist deciduous forest along higher elevation. The dry mixed deciduous forest covers the broad western part of the area.

The main occupation of local people is agriculture. Some people collect forest products like fruits, gum, honey, medicinal plants from surrounding forest area. They have an accurate knowledge of the environment, including species and ecological relations that exist among them by their long association with nature. The livestock for each family depend upon their agricultural holdings. Generally poor farmers have one buffaloes and cows to fulfill the milk need. Two bullocks are required for agricultural practices. Very few women are interested in keeping sheep and goat. Well known herbalist are belonging to Carpenter, barber and low caste economically backward communities are giving herbal medicines to infected animals.

III. MATERIAL AND METHODS

The data on ethno-veterinary has been collected from field visits and personal interviews and questionnaire. The data is generated for Ph.D. work since 2004 to 2010. Villages from the study area are given in Map. (Map enclosed). Local government health care facilities are not available to remote hilly areas poor people. They were depending on herbalist to cure livestock in adverse conditions. The doses are given by herbalists based on their long experience. Most of them are illiterate and long association with nature. Their traditional knowledge is a part of their living and they never charge to plant based medicines. Juice of the plant part is prepared by crushing or pressing by addition water or without water, decoction is prepared by boiling plant part in water Powder is prepared by drying plant part and grinding. Paste is prepared by rubbing plant part in few drops of water. Ash is prepared by burning plant parts. Some combinations was made for healing purpose like butter milk, jaggery, turmeric powder, coconut oil, castor oil, salt, etc.



82 plants are arranged according to ailments. Botanical name, family, local names, part used, local use and administration are given in Table 1. The herbalists knowledge of plant parts used for the treatment in the form of extract, juice, powder and decoction, etc. are given with appropriate administration. Specimens are deposited at AHMA (Agharkar Herbarium of Maharashtra Association) or Agharkar Research Institute, G.G. Agarkar Road, Pune-411 004. The data on ethno-medico-botany has been identified and confirmed with the help of regional flora and relevant scientific literature. The specimens were also confirmed by comparing them with authentic specimens of herbaria.



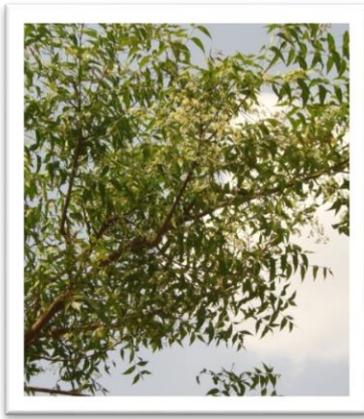
Local Informants and Data Collection



Bhor area livestock



Carica papaya L.



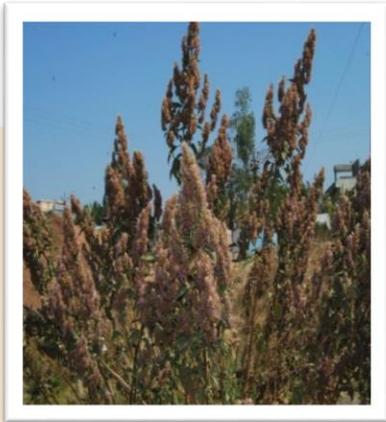
Azadirachta indica Juss.



Tridax procumbens L.



Holarrhena pubescens
(Buch-Ham) Wall. ex.G.Don



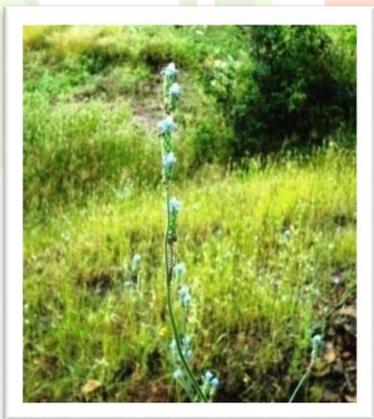
Pogostemon benghalensis
(Burm.f.) O. Ktze.



Lobelia nicotianaefolia
Roth .ex. R. & S.



Bambusa arundinacea (Retz.) Willd



Lavandula bipinnata (Roth.)O.Ktze.



Adathoda zeylanica Medic

Table No. 1 Enumeration of Plants Used For Ethno-Veterinary Treatment

Botanical name	Family	Local name	Part used	Local use	Ailments.	Administration
<i>Adathoda zeylanica</i> Medic.	Acanthaceae	Adulsa	L & R	Extract	Cough and cold	One glass of leaf and roots extract is given twice a day for 2 to 3 days to cure cough and fever.
<i>Solanum virginianum</i> L.	Solanaceae	BhuiRingan	RB	Decoction	Cough and Cold	250 ml root decoction is given twice a day for 5:6 days to cure cough.
<i>Carica papaya</i> L.	Caricaceae	Papaya	L	Warm leaf	Cough and Cold	5 to 6 leaves warm and tide on chest of animal.
<i>Nyctanthes arbor-tristis</i> L.	Oleaceae	Parijatak	L & St	Paste	Cough and Cold	10 to 15 gms stem paste with one glass of water is given orally to animal
<i>Azadirachta indica</i> Juss	Meliaceae	Kadu neemb	L	Juice/ powder	Wound healing	Leaf juice or leaf powder is applied on wound twice a day for seven days to heal the wound.
<i>Lantana camara</i> L.	Verbenaceae	Ghaneri	L	Juice/ powder	Wound healing	Leaf juice or leaf powder is applied on wound twice a day for six to seven days to heal the wound.
<i>Terminalia cuneata</i> Roth.	Combretaceae	Arjun	L & B	Powder	Wound healing	Leaf & bark powder is applied on wound once a day for six to seven days to heal wound.
<i>Tagetes erecta</i> L.	Asteraceae	Zendu	L	Juice	Wound healing	Fresh leaf juice is applied on wound and wound maggots once a day for six to seven days to heal wound
<i>Tridax procumbens</i> L.	Asteraceae	Dagadi Pala	L	Juice	Wound healing	Leaf juice is applied on wound thrice a day for four to five days.
<i>Pogostemon benghalensis</i> (Burm.f.) O. Ktze.	Lamiaceae	Phangli	L	Juice	Wound healing	Leaf juice or powder is applied twice a day for six to seven days to heal the wound.
<i>Cassia tora</i> L.	Caesalpinaceae	Takala	L	Paste	Wound healing	Leaf paste is applied on wound till cure.
<i>Colebrookea oppositifolia</i> J.E. Smith.	Lamiaceae	Bhaman	L	Juice	Wound healing	Take equal quantity of leaves of (<i>Colebrookea oppositifolia</i> , <i>Tridax procumbens</i> and <i>Embilbia officinalis</i>) leaves were shade dried and grind in grinder made into powder is applied on wound once day for week.
<i>Leucas stelligera</i> Wall. ex. Benth	Lamiaceae	Bhurambi	L	Leaf juice, powder	Wound healing	Leaf juice or powder is applied on maggoty wound once a day for three/four days to kill maggots from wound.
<i>Clematis gouriana</i> Roxb. ex DC.	Ranunculaceae	Morvel	L	Juice	Wound maggots	Juice applied on wound for healing purpose and control maggots.
<i>Luffa acutangula</i> (L.) Roxb	Cucurbitaceae	Dodaka	L	Juice	Wound maggots	Leaf juice along with pinch of salt is applied on maggoty wound once a day for four to five days to kill maggots and to

<i>Lobelia nicotianaefolia</i> Roth. ex. R. & S.	Lobeliaceae	Dhawali	L	Juice	Wound maggots	heal the wound.(Plate-IV) Leaf juice or powder is applied on maggoty wound once a day for five to six days to kill maggots and heal the wound.
<i>Lavandula bipinnata</i> (Roth.)O.Ktze	Lamiaceae	Kidmari	L	Juice	Wound maggots	Leaf juice is applied on wound to control germs/ wound maggots.
<i>Azadirachta Indica</i> A.Juss.	Meliaceae	Neem	L	Juice	Wound maggots	Leaf juice is mixed with Kamphor and Dikemali applied on wound maggots, once a day for two to three days.
<i>Murraya koenigii</i> (L.) Spreng	Rutaceae	Kadi patta	L	Juice & powder	Diarrhoea and dysentery	15 ml leaf juice or two teaspoon powder is mixed with two glass of water orally is given to animal thrice a day for three days.
<i>Holarrhena pubescens</i> (Buch-Ham) Wall. ex.G.Don	Apocynaceae	Kuda	R	Decoction	Diarrhoea and dysentery	150 ml root decoction is given twice a day for two to three days to control dysentery.
<i>Lawsonia inermis</i> L.	Lythraceae	Mehendi	Sd	Soaked seeds	Diarrhoea and dysentery	10 to 15 gram seeds are soaked in water and given thrice a day for three days.
<i>Paracalyx scariosus</i> (Roxb.) Alit.	Fabaceae	Ranghevda	L	juice	Diarrhoea and dysentery	100 ml leaf juice is given twice a day for two to three days to control dysentery and diarrhoea.(Plate-IV-25.2)
<i>Aegle marmelos</i> (L.) Corr.	Rutaceae	Bel	F	Pulp	Diarrhoea and dysentery	50/60 ml fruit pulp decoction is given once a day for three days.
<i>Mentha spicata</i> L.	Lamiaceae	Pudina	L	Powder	Diarrhoea and dysentery	30 gms leaf powder is given twice a day for two to three days to control dysentery & diarrhoea
<i>Plumeria alba</i> L.	Apocynaceae	Chafa	St	Decoction	Bloat	100 ml stem decoction is given twice a day for two days
<i>Pongamia pinnata</i> L.	Fabeaceae	Karanj	Sd	Decoction	Bloat	100 ml seed decoction is given twice a day for two days
<i>Woodfordia fruticosa</i> (L.) Kurz.	Lythraceae	Dhyati	L	Juice	Bloat	200 ml leaf juice is given for one day to cure bloat.
<i>Gloriosa superba</i> L.	Liliaceae	Kalalawi	Tub	Paste	Prolapse of uterus	Tuber paste is applied to hand and pushed prolapse of uterus, It will go in normal position.
<i>Hibiscus cannabinus</i> L.	Malvaceae	Ambadi	Sd	Powder	Prolapse of uterus	Seed powder is applied on uterus
<i>Grewia tiliifolia</i> Vahl.	Tiliaceae	Dhaman	B	Juice	Prolapse of uterus	Clean cloth is soaked in 150 ml bark juice and wrap around uterus, then pull it slowly in its original position .
<i>Daucus carota</i> L.	Apiaceae	Gajar	R	Root feeding	Deworming	5-6 carrot roots are feed to animal for ward off

						worms for two to three days.
<i>Carica papaya</i> L.	Caricaceae	Papai	Sd	Powder	Deworming	50 gms seed powder along with 100 ml water is given twice a day for three to four days.
<i>Areca catechu</i> L.	Arecaceae	Supari	Sd	Powder	Deworming	30 gms seed powder along with 100 ml water is given twice a day for four to five days to remove worms from intestine.
<i>Lagenaria siceraria</i> (Molina) Standl.	Cucurbitaceae	DudhiBhopla	Sd	Seed feeding	Deworming	100 gmSeeds are crushed and fed with bread for three to four days.
<i>Mucus pruriens</i> (L) DC.	Fabeaceae	Khajkuhiri	F	Fruit hairs	Deworming	Pinch of hairs powder is mixed in 100 gm jaggery and given along with bread (Roti) twice dayin for four days.
<i>Pogostemon benghalensis</i> (Burm.f.) O. Ktze.	Lamiaceae	Phagnali	L	Leaves smoke	Insect repellent	Smoke of dried leaves used to repel tick and flea.
<i>Catunaregam spinosa</i> (Thunb.) Tirveng.	Rubiaceae	Gela	F	Juice	Insect repellent	Fruit juice sprinkled in cow shed for repelling mosquito, flea, tick and other harmful insects.
<i>Artemisia nilagirica</i> (Cl) Pamp.	Asteraceae	Dhordavana	WP	Dhordavana	Insect repellent	Whole plant is burned in cow shed and smoke was used for repelling mosquito, flea, tick and other harmful insects.
<i>Azadirachta indica</i> A. Juss	Meliaceae	Neem	L	Paste	Insect repellent	The leaf paste is applied on body for two to three days for removing ticks.
<i>Achyranthus aspera</i> L.	Amaranthaceae	Aghada	L	Paste	Insect repellent	The leaf paste is applied on body for two to three days.
<i>Datura metel</i> L.	Solanaceae	Dhotara	L	Paste	Insect repellent	The leaf paste is mixed with leaves of <i>Tinospora cordifolia</i> and applied on body for three to four days to repel flies and remove lice and ticks.
<i>Achyranthus aspera</i> L.	Amaranthaceae	Aghada	R	Juice	Liver diseases	50 ml root juice is mixed with one half liter butter milk is given to animal for 3-4 days to cure liver disorder.
<i>Allium cepa</i> L.	Liliaceae	Kanda	Bub	Paste	Liver diseases	50 gms bulb paste is mixed with two spoon turmeric powder and 50 gms jaggary is given daily to animal for seven to ten days to cure liver disease.
<i>Tinospora cordifolia</i> (Willd.) Miers.	Menispermaceae	Gulwel	St	Decoction	Liver diseases	100 ml stem decoction along with jaggary is given to animal for five to six days for liver disorder.
<i>Ricinus communis</i> L.	Euphorbiaceae	Erand	L	Juice	Liver diseases	50 to 60 ml leaf juice is given to animal for four to five days to cure liver disease.

<i>Cyperus rotundus</i> L.	Cyperaceae	Nagarmotha	Tub	Powder	Snake bite	50 gms rhizome powder it mixed with one litre water is given twice a day as antidote for snake bite.
<i>Wrightia tinctoria</i> R.Br.	Apocynaceae	Kalakuda	Tub	Powder	Snake bite	40 to 50 rhizome powders is mixed with water and given orally twice a day as antidote for snake bite.
<i>Pogostemon benghalensis</i> (Burm.f.) O. Ktze.	Lamiaceae	Phagnali	L	Juice	Snake bite	Leaf juice 100 ml is given orally against snake bite.
<i>Leucas stelligera</i> Wall ex Benth.	Lamiaceae	Bhurambi	L	Juice	Snake bite	Leaf juice 4 to 5 drops is poured in nostrils and eyes for snake bite.
<i>Aristolochia indica</i> L.	Aristolochiaceae	Pauri	F	Juice	Snake bite	50 ml Fruit juice is mixed with ½ lit butter milk is given to animal once time for snake bite.
<i>Colebrookea oppositifolia</i> J.E. Smith.	Lamiaceae	Bhaman	L	Juice	Snake bite	Leaf juice 4 to 5 drops is poured in nostrils and eyes four time per day for two days to suppress effect of snake bite
<i>Pongamia pinnata</i> (L.) Pierre.	Fabaceae	Karanj	Sd	oil	Yoke gall	Seed oil is rubbed on yoke gall once a day till cure.
<i>Wattakaka volubilis</i> (L.f.) Stapf.	Asclepidaceae	Khandvel	L	Paste	Yoke gall	Leaf paste is mixed with turmeric powder and butter. Mixture is applied on yoke gall once a day for three to four days.
<i>Artocarpus heterophyllus</i> Lam.	Moraceae	Moraceae	B	Ash	Yoke gall	Bark ash is mixed with coconut oil and applied on yoke gall for three to four days.
<i>Leucaena latisiliqua</i> (L.) Gillis.	Mimosaceae	Subabhul	L	fodder	Lactation	One to two Kg leaves are fed to goat and sheep for increasing milk yielding capacity.
<i>Pennisetum ericanum</i> (L.) K. Schum	Poaceae	Bajari	Sd	Cooked seed	Lactation	One half Kg cooked seed along with 20 gms jaggery is given once a day after delivery for one week to increase milk production.
<i>Acorus calamus</i> L.	Araceae	Ekhand	R	Powder	Removing Ticks	200 gms root powder is mixed with 200 ml water & rubbed on cattle body for removing ticks
<i>Pogostemon benghalensis</i> (Burm.f.) O. Ktze.	Lamiaceae	Phangali	L	juice	Removing Ticks	Fresh leaf juice is applied on animal body for removing ticks.
<i>Cyperus rotundus</i> L.	Cyperaceae	Nagarmotha	RH	Powder	Removing Ticks	Rhizome powder is mixed with water and rubbed on animal body for removing ectoparasites
<i>Nicotiana tobacum</i> L.	Solanaceae	Tambakhu	L	Decoction	Removing Ticks	Leaf decoction is applied on cattle body for removing ectoparasite
<i>Ocimum</i>	Lamiaceae	Tulas	L	Juice	Fever	20 to 25 ml leaf juice is

<i>tenuiflorum</i> L.						given twice a day for 2 to 3 days to cure fever.
<i>Zingiber officinalis</i> Rose.	Zingiberaceae	Ale /Adrak	RH	Juice	Fever	20 ml rhizome juice is mixed with 50 to 60 gm jaggery is given twice a day for 2 to 3 days to cure fever
<i>Echinops echinatus</i> Roxb.	Asteraceae	Utkatari	R	Paste/ powder	Fever	25 to 30 gms of root paste along with 50 to 60 ml water is given twice a day for two to three days to cure fever
<i>Tinospora sinensis</i> L.	Menispermaceae	Amrutvel	St & L	Juice	Fever	100 ml mixture of stem and leaves juice is given twice a day for two to three days to cure fever of cattle
<i>Achyranthes aspera</i> L.	Amaranthaceae	Aghada	WP	Ash	Fever	Two tablespoon entire plant ash along with 50 gms jaggery and 50 ml water is given twice a day for two to three days to cure fever .
<i>Lobelia nicotianefolia</i> Roth. ex. R.&S.	Lobeliaceae	Dhawali	RW	Water	Conjunctivitis	Root is dip in clean water five to six water drops are dropped in eye for curing watering of eyes and redness of eyes.
<i>Moringa oleifera</i> Lam.	Moringaceae	Shevaga	L	Juice	Conjunctivitis	Leaf juice five to six drops is dropped in eye twice a day for two days to clear eyes or to reduce the pain of eyes.
<i>Leucas stelligera</i> Wall. ex. Benth.	Lamiaceae	Bhurambi	L	Juice	Conjunctivitis	Five to six drops of leaf juice are dropped in eyes to clear the redness of eyes.
<i>Nicotiana tobacum</i> L.	Solanaceae	Tambakhu	L	Split	Conjunctivitis	5 gms leaf are chewed and spit is forcibly thrown in animal eyes. It is used for curing watering and redness of eyes
<i>Allium cepa</i> L	Liliaceae	Kanda	Bub	Juice	Conjunctivitis	Five to six drops of bulb juice are dropped in eyes to cure stickness of eye and watering of eye.
<i>Carthamus tinctorius</i> L.	Asteraceae	Karadai	Sd	Feed	Retention of placenta	One half kg seeds are fed to animal after delivery for removing placenta
<i>Pandanus furcatus</i> Roxb.	Pandanaceae	Kewada	FL	Feed	Retention of placenta	One or two flowers are fed to cattle after delivery for retention of placenta.
<i>Pennisetum americanum</i> (L.) K. Schum	Poaceae	Bajari	Sd	Feed	Retention of placenta	One half kg seeds are fed to animal after delivery for removing placenta
<i>Bambusa arundinacea</i> (Retz.) Willd	Poaceae	Kalak	L	Feed	Retention of placenta	One to two kg leaves feed to delivery animal
<i>Oryza sativa</i> L.	Poaceae	Bhat	Sd	Feed	Retention of placenta	One half kg seeds are fed along with one half kg oil cake for retention of

						placenta.
<i>Sesbania sesban</i> (L.) Merr	Fabaceae	Shevari	L	Fodder	Lactation	2 Kg leaves are fed to cattle, goat and sheep once a day for 7 days.
<i>Arachis hypogea</i> L.	Fabaceae	Bhuimung	F & WP	Oilcake	Lactation	One half Kg oilcake is given twice a day for one week
<i>Xanthium indicum</i> Koen.	Asteraceae	Landaga	F	Powder	Lactation	50 gms fruit powder along with 100 gms oilcake is given twice a day for one week
<i>Withania somnifera</i> (L.) Dunal	Solanaceae	Gulvel	WP	Powder	Lactation	50 gms root powder along with wheat flour is given twice a day for one week.
<i>Tinospora cordifolia</i> (Willd.) Miers	Menispermaceae	Gulvel	WP	Powder	Lactation	Three to four tablespoon whole plant powder along with wheat flour is given twice a day for one week.
<i>Guizotia abyssinica</i>	Asteraceae	Karala	Sd	Oilcake	Lactation	One half kg seed oilcake is given twice a day for one week to increase milk production.
<i>Asparagus racemosus</i> Willd.	Liliaceae	Aswal	R	powder	Lactation	Two to three tablespoon root powder along with wheat flour is given twice a day for six to seven days

L-Leaves, B-Bark, Sd-Seed, FL-Flower, F-Fruit, Tub-Tuber, St-Stem, Bub-Bulb, R-Root, RH –Rhizome, RB-Root bark, Res-Resin, Supt R-Supporting root, WP- Whole plant.

IV.RESULTS AND DISCUSSION

Ethno-veterinary remedies are found to be effective against a common disease in animals. There is no veterinary health care facilities in remote and hilly area. Veterinary doctors in rural areas has to play a critical role in preventive and curative healthcare system of livestock (Ghotge and Ramdas, 2008).

Local people from Bhor region are using 82 plants for common diseases in their territory.16 animals diseases are recorded from Bhor Region. These people reside in very remote hilly areas and there is no any communication withveterinary doctor during the adverse condition of animal's health. In this situation, they are depend on locally available plant resources to treat diseases, cuts & wounds, dysentery, cough, bloat, control of maggots from wounds, etc. Healers are using some additives like salt, jaggery, buttermilk, butter, etc for preparation of medicine. Due to long experience they are diagnosing diseases and giving excellent treatment. Cattle population is increases in villages under a program of `Milk Flood' but there is no adequate government medical facilities. Young generation is not aware about their traditional

knowledge and life style of herbal healers. Documentation of traditional practices of herbal medicines for cattle health care is an asset of future.

It is very important to note that people are using *Gloriosa superba* L. for prolapse of uterus, *Jatropha curcas* L. and *Woodfordia fruticosa* (L.) Kurz. for bloat or gastric trouble, insect repellent plants like *Catunaregam spinosa* (Thunb.) Tirveng fruit juice is spray in cow shed for control of insects. Fumigation is an age old method still performed by local people with *Artemisia nilagirica* L. and *Pogostemon benghalensis* (Burm.f.) O. Ktze. leaves. For treating dysentery and diarrhoea in animals they prefer 7 plants out of which *Mentha spicata* L. and *Aegle marmelos* (L.) Corr. are commonly used. Wound healing plants like *Tagetes erecta* Letc. are natural plant sources. The local people are commonly using one plant parts for different ailments like *Achyranthus aspera* L. –liver disorder and insect repellent, *Azadirachta indica* A.Juss. – wound healing, de-worming and insect repellent, *Colebrookea oppositifolia* J.E. Smith.- wound healing and snake bite, *Pogostemon benghalensis* (Burm.f.)O.Ktze.- insect repellent and snake bite, *Annona squamosa* L.- wound healing and insect repellent. It is observed from the interview of the farmers that 80 % believe on traditional treatment. Some farmers are regularly treating their livestock from herbalist due to low cost treatment and without side effects.

V.CONCLUSION

Veterinary doctors are preferred only the glamorous biotechnological aspects of the medicinal plants. Modern veterinary medicines are very expensive technology and chemically produced. The parallel use of two systems like allopathic and traditional veterinary medicines in remote areas will reduce dependency on expensive imported veterinary drugs. The traditional knowledge of local people will be the possibility of discovering new drugs. Many multinational corporations spend millions of dollars on research investigating the medicinal properties of various plants. The plants mentioned in the present work will need to be screened for active principles and clinical trials for therapeutic action and conservation of traditional knowledge their cultivation improved economic condition of tribal communities.

VI. REFERENCES

- 1) Chitralkha K. and Jain, A.K. 2006. Plants used in ethno-veterinary practices in Jhabua District, M.P. *Ethnobotany* 18: 149-152.
- 2) Ghotge N. and Ramdas, S.R. 2008. *Plants used in animal care*. Pub by The Anthra Colletive, N.D.A. Road, Bavdhan, Pune -411021. pp. 1-515.
- 3) Kulkarni, D.K. and Kumbhojkar, M.S. 2002. Ethno-veterinary Medicinal practices in Mahadeokoli tribe. *J. Maharashtra agric. Univ.*, 27(2): 172-176.
- 4) Pandey, H.P. , B.K. Varma and Narain, S. 2000. Ethno-veterinary plants of Gonda region, U.P. India. In *Ethnobotany and Medicinal plants of Indian subcontinent* (Ed. J.K. Maheshwari) Scientific Publisher, Jodhpur, pp. 199-203.

- 5) Ramdas, S.R. and Yaksi S. 2001. Changing livelihoods, livestock and local knowledge systems: women stake their claims in Andhra Pradesh and Maharashtra. *Indian Journal of Gender Studies*: 8(2):175-194.
- 6) Ramdas, S.R. Ghotge, N.S., S. Ashalata, Mathur, N.P., Bromme, V.G. and Rao, S. 2000. Ethno-veterinary remedies used in common surgical conditions in some districts of Andhra Pradesh and Maharashtra, India. *Ethnobotany* 12: 100-112.
- 7) Ravikumar, R.K., Rao, B.S. and Bose, S.C. and Sudhakar, K. 2004. Validity of ethno-veterinary practices adopted by farmers in Dindigul District of Tamil Nadu. *J. Asian Agri-History* 8(1): 55-61.
- 8) Raychaudhuri, S.P. 1964. *Agriculture in Ancient India*. ICAR, New Delhi.
- 9) Reddy, K.N. and Raju, R.R. V. 2000. Plants in ethno-veterinary practices in Anantpur Dist., A.P. In *Ethnobotany and Medicinal plants of Indian subcontinent* (Ed. J.K. Maheshwari) Scientific Publisher, Jodhpur, pp.347-357.
- 10) Shamasastri, R. 2004. Kautily's Artha-sastra- Elephants. *J. Asian Agri-History* 8(1): 67-71.
- 11) Tamboli, P.M. and Nene, Y.L. 2005. Science in India with special reference to Agriculture. *J. Asian Agri-History* 9(1): 27-49.
- 12) Toyang, N.J., Django, C.N., Nuwanyakpa, M. and Kinyuy W.C. 1995. Ethno-veterinary medicine practices in the Northwest Province of Cameroon. *Indigenous Knowledge and Development Monitor* 3 (3): 20-22.

