5.1 INTRODUCTION:-

Plants help us in preserving the erosion of soil, attract the water laden clouds, retention of subterranean water and provide us timber, wood and medicine also. Man from the beginning has had a tendency to draw material from nature for his use. The identification of plants useful to man from among natural stands, commenced in pre-historic times. Several of these plants catering to basic human needs, such as food, fodder, fiber, medicines etc were domesticated.

The biological environment in which the man live have bearing on the evolution of above and it also sustain the cultural, spiritual and economic needs of indigenous people. In other words, the plants are the part of human life from birth to death. This interrelationship has evolved over generation of experience and practices.

Animal comprise a major part of agriculture practice and economy of shekhawati region. The people of this region depend upon plants for curing various veterinary ailments of their domestic animals. Plants of ethnoveterinary significance have been identified by the folk through the process experience over hundred of years. Plants used in veterinary diseases of India are published by Jain, S.K (1999). During ethnoveterinary survey of shekhawati area a large number of practioners and traditional knowledge bearer man and women were intervied who are using wild plants for remedies to cure their cattle suffering from diseases. The data presented here are based on first hand information collected from practioners of veterinary medicine and the owners of the cattle and through the personel observation on the use of remedies for different animal diseases. The data was further verified, cross checkeh and was considered valid if the author was satisfied with the efficacy of the remedies.
The potentiality of such folk knowledge has also been considered crucial to
During the ethnoveterinary survey of the study area, folk user of about 265
ethnoveterinary herbs have been documented. In the following account, plants are
arranged alphabetically by botanical names followed by their families in paranthesis,
local name in italics, brief botanical description, ecology, flowering and fruiting, In
respect of details regarding ethnoveterinary uses, plant part(s) used form of
preparation, method of administration, and dosages of herbal drugs used in the
treatment of animal diseases.

5.2 ENUMERATION

5.2.1. **Abrus precatorius** (Plate 6)

*Family:* Fabaceae  
*Local name:* Chirmi, Ratti, Charmoli, Chanboi

*Locality:* Mansa Mata

Twigging shrubs, with 10-20 pairs of leaflets and pink or white flowers
having 9 stamens, pods 3 to 5 seeded; seeds red with black blotch around the
hilum. Common among the clump of trees and shrubs throughout the state; Frequent
on the hilly tracts in dense forests.

F1. & Fr.: August – January.

Methodology of dose consumption:

Paste of two to three soaked seeds is given to treat constipation and
expelling of retained placenta. extract of 2 to 3 seeds is given to animal with chapati
for 3 to 5 times a day for oestrus induction. Paste of root is applied over mammary
glands of animals to treat mastitis. Leaf extract is mixed with starch of rice and given
orally to treat anthrax. Leaves are roated with milk of goat and given orally to treat
insect bite.

5.2.2. **Abutilon indicum** (plate 1)

*Family:* Malvaceae

*Local name:* Kanghi, Jhumka
**Locality:** Chirana

Shrub; leaves simple, petiolate, cordate, nearly entire or irregularly toothed, surface rough with closely felted white hairs, stipules deflexed; flowers axillary preducedulate; fruits of ripe carpels separating from the axis. Common in wastelands, gardens and neglected corners of the cultivated fields.

F1. & Fr.: August – December.

Methodology of dose consumption:

Paste of about 20 gm seeds is given orally once in a day for relief from constipation. About 500 gm leaves are given to the animal along with fodder to treat haematuria. Leaves are roasted with milk and given orally to treat dysentery.

**5.2.3 ***Acacia catechu* (plate 4)

**Family:-Mimosaceae**

**Local name:-**Katha, Khair

**Locality:** Bola ki dhani

Tree, up to 10 m in height; bark dark grayish brown, 2.25 cm thick; spikes axillary, cylindrical; flowers small, sessile, pale creamy white; fruits flat, pods brown, spiny with a triangular beak at the apex and narrowed at the base; seeds 3-10 per pod. Grow in abundance in drier region.

F1. & Fr: May- September.

Methodology of dose consumption:

Young leaves and flowers are fed to the animal to induce labour pain.

**5.2.4 ***Acacia concinna* (plate 1)

**Family:-Mimosaceae**

**Local name:-**Sikakai, kochi
**Locality:** Aravali Hills

A common, prickly, scandent shrub; leaves bipinnate; flowers in yellow, globose, auxiliary heads; pods brown, wrinkled and notched when dry; seeds 6-10 in a pod. Occur in tropical forest throughout India.

F1. & Fr.: May – October.

Methodology of dose consumption:

Seeds are crushed with buttermilk and given orally to treat food poisoning.

**5.2.5 *Acacia leucophloea***

**Family:** Mimosaceae

**Local name:** khar, Safedkikar, Rijua

**Locality:** Mandrella

Deciduous tree; leaves alternate, compound, stipules spiny; heads yellow, small, not more then 0.62 cm in diameter, flowers small; pods sessile, 10-12 cm in length, sub indehiscent, clothed with pale brown or grey persistent tomentum. Grow in arid, desertic and semidesertic areas with typical xerophytic characters.

F1. & Fr.: August – February.

Methodology of dose consumption:

Decoction of about 50gm roots is given once in a day for 8 days for the treatment of fractured bone. Pods are given to animals along with fodder for oestrus induction.

**5.2.6 *Acacia nilotica***

**Family:** Mimosaceae

**Local name:** Kikar, Babul, Desi-babul

**Locality:** Pilani
Tree, branchlets straight, finely grey downy; leaves bipinnate, leaf rachis downy with several glands; peduncle short, densely grey downy, profusely bracteates; heads yellow; pods rigid coriaceous, subindehiscent, persistently grey-downy, 8 to 12 seeded. Xerophyte, growing scatteredly in crop fields in the drier region of Rajasthan and along roads, avenues etc.

F1. & Fr.: September- March.

Methodology of dose consumption:

Combination of bark, jiggery, seeds of *Trachyspermum ammi* and *Vernonia cinera* is given to the animal twice a day upto one month as a tonic to remove overall weakness. Infusion of bark has cooling effect on animal body. Decoction of 2 to 3 years matured thorns is given to the animal for removal of retained placenta after delivery. Pods are given with fodder during pregnancy and after delivery to increase lactation. Decoction of bark is applied over hooves twice a day to treat foot and mouth disease. About 1 kg. immature pods are given to the animal every morning and evening to increase the lactation. Decoction of stem bark act as antiseptic and applied on wounds.

5.2.7 *Acacia pennata*

**Family:- Mimosaceae**

Local name:- Cheela

**Locality:** Beed of jhunjhunu

Large, scandent bush or liana with polished bark; prickles slightly recurved; pinnae 8-10 pairs, with glands between the upper ones; leaflets 40-50 pairs; flowers creamy – white or pale – yellow; pods -oblong, glabrous. Rare, in mixed dry deciduous forests.stalked, linear

F1. & Fr.: September-February.

Methodology of dose consumption:

Extract of root bark is given orally once in a day to treat rheumatism.
5.2.8 *Achyranthes aspera*

**Family:-** Amaranthaceae

**Local name:-** Andhijhara, Kanta, Undhokanto, Modokanto, Kharia

**Locality:** Bibasar

Herb, 20-45 cm height. Leaves petioles, branched; leaves simple, very variable, generally thick, young tomentose on both surfaces; solid spike, lengthening during fruiting as much as 60 cm; flowers numerous, greenish white, sharply reflexed against the stout pubescent inflorescence axis; achene with oblong or ovate utricle, enclosed in the hardened perianth; seeds oblong brown. Common weed, occur in dry sandy localities.

**Fl & Fr.:** August-November

**Methodology of dose consumption:**

Decoction of about 100 g roots and 50 g rhizomes of *Curcuma longa* prepared in 200 ml urine of child is given to camel to treat stomachache. Half cup of root extract is given to animal to increase lactation. It acts as lactagogue. Root extract is also given to animal as a tonic. Decoction of the whole plant is given for removal of retained placenta after delivery. Leaf extract is used as eye drops for treating opacity of cornea. Seed powder is given to animal to treat dysentery.

5.2.9 *Adhatoda zeylanica* (plate 5)

**Family:-** Acanthaceae

**Local name:** - Adusa, Aduaa

**Locality:** Lohagal

Gregarioous shrub, sometime arborescent, growing upto 7 m. high; leaves simple, petiolate, minutely pubescent; spikes terminal, often several together; flowers bracteates, bracteolate, white, 1.25 cm broad; capsule 1.8 cm long, pubescent, 4 seeded; seeds glabrous. Commonly occurs on foot hills.
5.2.10 *Aegle marmelos* (plate 1)

**Family:- Rutaceae**

**Local name:** - Bel, Bel- Patra, Beely

**Locality:** Ardawata college

Deciduous tree armed with spines; leaves trifoliate; flowers creamy white in axillary panicles; fruits globose with stony rind and mucilaginous pulp. Sparsely scattered in mixed deciduous forests of the Aravallis; often planted in gardens.

**FI & Fr.: January-July**

**Methodology of dose consumption:**

The spine is pricked in the tail of the animal for 9 days to treat its degeneration. Poultice of leaves grinded with butter is tied to treat fractured bone. Fruit pulp is applied locally to treat mouth diseases.

5.2.11 *Aerva lanata* (plate 2)

**Family:- Amarantheaceae**

**Local name:**- Kali Bui, Choti-bui
Locality: Churu

A small herbaceous plant; leaves suborbicular to lanceolater; flowers bisexual, in axillary spike passing into long leafy inflorescence; fruits rotund, compressed. Mostly in wasteland; locally abundant in arable and fallow fields.

FI & Fr.: August- March.

Methodology of dose consumption:

Decoction prepared by mixing roots and fruits of Citrullus colocynthis is given to the animal to treat constipation. Roots are crushed and given orally as an antidote in snake bite.

5.2.12 Aerva javanica (plate 2)

Family:-Amaranthaceae

Local name:-Bui, Safed bui

Locality: Malsisar

Hairy- tomentose shrub; linear to suborbicular leaves, upto 6 mm broad; flowers woolly, in dense, naked sessile spike; fruits rotund, compressed. Commonly found in gregarious patches in association with Leptadenia pyrotechnica, Calotropis procera, and Saccharum benghalense on sand dunes.

Fl.& Fr.: August-January.

Methodology of dose consumption :

Decoction of flower and leaves is given to the animal to treat digestive disorders and also to promote the discharge of urine in dysuria. Decoction of roots is given orally and paste of roots is applied on foot and mouth to treat foot and mouth disease. Extract of the whole plant is given to the animal when he/she start eating soil. Decoction of inflorescence is used to wash hooves of animal to treat foot and mouth disease.

5.2.13 Aerva pseudotomentosa
Family:- Amaranthaceae

Local name:- Bui, Safed bui

Locality: Malsisar

Hairy- tomentose shrub; linear to suborbicular leaves, upto 6 mm broad; flowers woolly, in dense, naked sessile spike; fruits rotund, compressed. Commonly found in gregarious patches in association with Leptadenia pyrotechnica, Calotropis procera, and Saccharum benghalense on sand dunes.

Fl. & Fr.: August-January.

Methodology of dose consumption:

Decoction of flowers and leaves is given to animal to treat digestive disorders and to promote urination. Decoction of roots is given orally and paste of roots is applied on foot to treat foot and mouth disease. Extract of plant is given to animal when he/she start eating soil. Poultice of inflorescence is tied to treat swelling due to muscular injury in camel.

5.2.14 Aeschynomene aspera

Family:- Fabaceae

Local name:- Dhadoom

Locality: Khetari

Annual herb, upto 1.5 m high; stem and rachis of leaves warty; leaves long, flowers in 1 to 4 – flowered, axillary, viscid racemes, yellow; pods straight flat, muricatated, indented on the lower sututre; seeds black.. Common in low-lying areas, near ponds and in rice field.

Fl. & Fr.: August- November.

Methodology of dose consumption:
Mature pods are crushed and given to cows and buffaloes for oestrus induction.

5.2.15 *Agave Americana* (plate 5)

**Family:-** Agavaceae

**Local name:-** Jangli-gawar-patha

**Locality:** Ajit sargar Bandh

Perennial herb with rhizome; leaves simple, alternate, large densely crowded in massive rosettes, thick, fleshy, coated with wax, apex spiny; flowers come after many (5 to 68 sometime 100) years of existence; gigantic racemose or paniculate inflorescence with ultimate branches of few-flowered cymes; flowers large, showy, bisexual; capsule oblong-clavate, beaked. Wild; xerophyte.

**Fl. & Fr.:** Almost throughout the year.

**Methodology of dose consumption :**

Paste of the leaves is applied over broken horns for early healing.

5.2.16 *Ageratum conyzoides* (plate 3)

**Family:-** Asteraceae

**Local name:-** Tokariyo

**Locality:** Udaipurwati

Erect hairy, annual herb; leaves ovate or rhomboid-ovate, triangular; head in terminal corymbs; achenes 1.5-1.8 mm long, angled, black; pappus – scales serrate, awn-tipped. Common in wet and shady habitats from plains to hills, often gregarious in orchards.

**Fl. & Fr.:** Throughout the year.

**Methodology of dose consumption :**
The poultice of whole plant is tied over boil and wound as an antiseptic.

**5.2.17 *Ailanthus excels* (plate 2)**

**Family:-Simroubaceae**

**Local name:-** Arru, Ardu

**Locality:** Sonasar

Large trees; with pinnate leaves crowded at the end of branches; flowers yellow in terminal and axillary panicles; fruit samara, spindle shaped, 1-seeded.

**Methodology of dose consumption :**

Bark extract is given to animals by drenching tube to treat flatulence. Extract of bark is also given to animals orally twice a day for three days to treat asthma, bronchitis and pneumonia. Leaf decoction (250ml) is given orally to treat fever.

**5.2.18 *Alternathera pungens***

**Family:-Amaranthaceae**

**Local name:-** Kuttiya

**Locality:** Khetari

Prostrate perennial herb; leaves rhomboid- ovate to broadly ovate; flowers axillary; seeds rounded, faintly reticulate. Widespread as a weed, along road sides, railway tracks.

Fl. & Fr.: Almost throughout the year.

**Methodology of dose consumption :**

Decoction of whole plant is rubbed over the animal body to remove lice and ticks.

**5.2.19 *Alangium salvifolium***

**Family:-Alangiaceae**
Local name:- Aankol, Ankola

Locality: Aravali Hills

Small deciduous tree or rambling shrub; wood olive brown, hard and close grained; leaves simple, alternate, ovate-lanceolate; flowers in close fascicles, peduncles, pedicels and calyx tube usually woolly, silky white, berries black, crowned by somewhat enlarged calyx-limb, pubescent or glabrous; seeds albuminous. Prefers dry climate; profusely in the vicinity of forests.

Fl. & Fr.: February-June.

Methodology of dose consumption:

50 gm root is grinded with 500 ml of butter milk and given to the animal once in a day for three days as an antidote to dog bite. Paste of 100 gm leaves is given orally to the animal with water to treat malarial fever as well as enlargement of liver.

5.2.20 Albizia lebbeck (plate 5)

Family:-Mimosaceae

Local name:- Siris, Saras, Siras

Locality: Mandrella

Deciduous tree; with 1-4 pairs of pinnae, 4-10 pairs of leaflets; flowers pale green, in umbellate heads; pods flat, straw-coloured. Frequently found in plain areas.

Fl. & Fr.: August-December.

Methodology of dose consumption:

Milk of sheep is mixed in latex of this plant and used as eye drops to treat conjunctivitis. Tribals claim that it can be used by human beings also to treat conjunctivitis.

5.2.21 Allium cepa

Family:-Liliaceae
**Local name:** Kanda, Pyaj

**Locality:** Bibasar

Scapigerous annual herbs; leaves fistular; flowers white in umbels. Commonly cultivated for its underground stem (bulb) used as vegetable.

Fl. & Fr.: October- January.

Methodology of dose consumption:

To overcome the calcium deficiency and overall weakness after delivery, bulbs of Allium cepa are fed to the cattle.

**5.2.22 Allium sativum**

**Family:**-Liliaceae

**Local name:**-Lahsan

**Locality:** Bibasar

Bulbose herbs; bulb short, bulblets or cloves fleshy, creamy yellow, ovoid, acuminate; leaves 15-30 cm long; flowers white, in umbels. Commonly cultivate as winter crop.

Fl. & Fr.: August-October.

Methodology of dose consumption:

Paste of 250 g single tillered bulbs is mixed with two eggs of hen and 1 litre of milk and given to the animal to treat impaction and lumbago. Bulbs of Allium sativum are boiled in seed oil of Brassica campestris, cooled it and given orally to the animal to treat weakness, foot and mouth disease and impaction.

**5.2.23 Aloe vera (plate 2)**

**Family:**- Liliaceae

**Local name:**-Gawarpatha
**Locality:** Chirawa

A coarse looking plant with a short (30-60 cm high) stem; leaves succulent, green, large, densely crowded; flowers in racemes, bright yellow, tubular, stamens frequently projected beyond the perianth tube. Common in burial places, where it is invariably grown on the graves by muslims.

Fl. & Fr.: October - March.

Methodology of dose consumption:

Pulp of leaves is applied to treat skin irritation, burns and inflammation.

5.2.24 *Amaranthus spinosus* (plate 3)

**Family:**- Amaranthaceae

**Local name:**- Chouli, Chawli, Adak dhatura

**Locality:** Rajgarh

Erect, annual herb, upto 60 cm in height; stem green, woody, glabrous, branched, armed with prickles; leaves simple, axils with 5 spines; spike axillary, usually densely flowered; unisexual; seeds very small, black shining. Grows wild or semi wild, preferably in wastelands.

Fl. & Fr.: Throughout the year.

Methodology of dose consumption:

The whole plant is fed to the animals as galactagogue.

5.2.25 *Ampelocissus latifolia* (plate 3)

**Family:**- Vitaceae

**Local name:**- Khata nimbu

**Locality:** Bagar
Climber, tendrils leaf opposed, stem weak hollow, glabrous; leaves alternate, petiolate, simple; cymes compact, densely woolly, peduncle long, stout, woody, peduncle bears a long wiry forked tendril below the cyme; fruits black, 2-seeded. Grows in hilly terrain; wild.

Fl. & Fr.: July-October.

Methodology of dose consumption:

About 50 g tubers are crushed and given to the animal with water, twice a day for three to treat the fractured bone. This extract is also given to animals by drenching tube to treat flatulence. Extract of aerial part is given orally to animals by drenching tube to treat bronchitis.

5.2.26 Anacardium occidentale

Family: Anacardiaceae

Local name: Kaju

Locality: Sakambari

Spreading evergreen perennial tree to 12 m tall; leaves simple, alternate, obovate, glabrous; flowers numerous in terminal panicles, 10-20 cm long, male or female, green and reddish, radially symmetrical nearly; fruit a reniform achene, about 3 cm long, 2.5 cm wide, called the cashew-apple.

Fl. & Fr.: January – May.

Methodology of dose consumption:

Latex is applied to treat the foot disease and as antiseptic on wound.

5.2.27 Anethum graveolens

Family: Apiaceae

Local name: suwa

Locality: Udaipurwati
Annual or biennial herb; stem erect, slightly grooved; leaves alternate, light green, decompounded, contain oil; flowers in compound umbel; fruits brown, oval, dry, grooved, consist of 2 compressed, indehiscent parts, winged, odour and taste characteristically aromatic. Plant of cold climate, grows well in good harden soil.

Fl. & Fr.: August – January.

Methodology of dose consumption:

Milch-cattle are fed with porridge prepared from seeds of this plant seeds of Trigonella foenum-graecum and Triticum aestivum as a galactagogue. Powder of seeds is given orally to the animals in vulvo-vaginal –uterine- prolapse.

5.2.28 Anisomeles indica

Family:- Lamiaceae

Local name:- phulmajri, Gobariya

Locality: Khetari

A small, smelling, softly pubescent herb, 90-180 cm high, sparsely hairy or densely pubescent; leaves ovate, acute or obtuse to sub-acuminate, crenate-serrate, rounded –cordate to cuneate at base; flowers sessile, in dense, axillary whorls, combined into terminal dense spikes, bluish-purple. Occurs in wastelands and scrub-jungles.

Fl. & Fr.: August –December.

Methodology of dose consumption:

Extract of whole plant is given to animals to treat indigestion. Decoction of the plant is given to buffaloes to treat flatulence and leucorrhoea. There is a belief that if animals suffering from foot and mouth disease pass across this plant, they become well. Extract of stem is given to animals to treat indigestion.

5.2.29 Annona squamosa (plate 3)

Family:- Annonaceae
**Local name:-** Sitaphal, Anduri

**Locality:** Ardawata

Evergreen shrub of small tree; with oblong-lanceolate leaves, nearly glabrous and slightly scented; flowers drooping, yellowish green; fruits globose or ovoid with projecting areoles. Naturalized in the valleys and along streams throughout the Aravalli range.

**Fl. & Fr.:** April-August.

**Methodology of dose consumption:**

Paste of 100 g leaves is given to the animal with fodder to treat constipation. Five to seven leaves are ground with a pinch of sodium carbonate, a pinch of resin of Ferula asafoetida and mixed with 200 to 400 g oil of sesamum indicum or Arachis hypogaea of Ricinus communis or Linum usitatissimum and given to the animal with drenching tube or bottle to remove the internal parasites. Dosage of this preparation depends on body weight of the animal. Leaf paste is applied over the infected part of the body to remove external parasites. Paste of leaves is applied over hooves of animal to treat foot and mouth disease. It is also sprayed in the shed of animal as a disinfectant. The injured part of cows and buffaloes is bandaged with the leaves of this plant for early healing of the wounds. Extract of bark is given to animals orally to treat bronchitis.

**5.2.30 Anogeissus latifolia**

**Family:- Combretaceae**

**Local name:-** Dhokada, Dhavada

**Locality:** Khetari

Usually small tree, leafless during most of the hot season; trunk erect, branchlets drooping, bark whitish grey, smooth, having shallow, irregular depression; leaves alternate or apparently opposite; flowers in dense, globose heads on axillary peduncles. Common in mixed dry deciduous forests associated with Anogeissus pendula.
Fl. & Fr.: September-March.

Methodology of dose consumption:

Extract prepared from 100 g powdered bark is given to animal twice a day for two days to get relief from fever.

5.2.31 *Apluda mutica*

**Family:** Poaceae

**Local name:** Bhangto, Tamta bheda

**Locality:** Singhana

Annuals; leaves linear-lanceolate, long acuminate, base narrowed; ligule membranous, rounded; panicles of 2 to many, simple racemes terminating the culms, enclosed in a peduncled spathe; spikelets in three, one sessile and two pedicelled; seeds caryopsis. Common on the hills, among hedges of cultivated field and bushes in wastelands preferring moist places.

Fl. & Fr.: August-February.

Methodology of dose consumption:

Whole plant is fed to the animal as antidote against insect-bite. Paste of whole plant is used to treat mouth sores of cattle.

5.2.32 *Argemone Mexicana* (plate 3)

**Family:** Apaveraceae

**Local name:** Satyanshi, Dholari

**Locality:** Ojtoo

A prickly herb; 60-90 cm with yellow latex; leaves sinuate, pinnatifid, green and white, half amplexicaul; flowers 50 mm in diameter, yellow, sepals cuspidate; capsules 20-38 mm long. Growing gregariously in open–waste places. A troublesome weed for both Kharif and Rabi crops.
Methodology of dose consumption:

Leaf extract is applied locally on wounds and boils as antiseptic. Latex is applied externally to treat various skin diseases.

5.2.33 *Argyreia nervosa*

**Family:** Convolvulaceae

**Local name:** Samandarbel

**Locality:** Losal

White tomentose, large twiner; with ovate-cordate leaves which are glabrous above and tomentose beneath; flowers rose-purple and white, in subcapitate cymes. Cultivated in the gardens for large handsome foliage and beautiful flowers.

Methodology of dose consumption:

Poultice of leaves is tied over neck to treat tonsillitis in animals. Leaf extract is applied locally on wound.

5.2.34 *Arisaema tortuosum* (plate 4)

**Family:** Araceae

**Local name:** Haap rao dakaro, Suran, Khotukand

**Locality:** Harsh

Perennial dioecious herb; with depressed, globose tubers; leaves 2-3, arising from the root-stock, pendately 7-9 lobe; petiole 20-60 cm long, spadix curved or sigmoid; spathes greenish; fruits ovoid, red. Rare, in shady localities in the gardens, ravine slopes and forest edges.

Methodology of dose consumption:

Fl. & Fr.: July-August.
Methodology of dose consumption:

Decoction of tuber is given to animals through drenching tube to treat flatulence, and other gastric disorders. Fresh tuber is crushed and given to domestic animals along with green fodder to treat fractured bone.

5.2.35 *Aristolochia bracteolate* (plate 4)

**Family:** Aristolochiaceae

**Local name:** Kadhu, Kalipad

**Locality:** Copper

Prostrate bitter herb; root perennial; stem slender, decumbent, angled, striate; leaves petiolate, reniform or broadly cordate, glaucous beneath; peduncle bracteates; flower solitary, tubular with globose base, villous nearly 2.5 cm long; fruit pyriform, many seeded; seeds triangular, Common in wastelands, along with river banks and paddy fields.

**Fl. & Fr.:** August – September.

Methodology of dose consumption:

About 10 g root is given with bread of wheat, thrice in a day upto 4 days to treat fever. Leaf decoction is given orally to treat arthritis.

5.2.36 *Arundo donax*

**Family:** Poaceae

**Local name:** Baru

**Locality:** Pilani

Erect, stout, tall perennial grass, upto 2.5 m high, with creeping woody rhizome; culms fistular; leaves 15-50 by 2-5 cm, distichous, linear-lanceolate; spikelets 1-1.5 cm long, light brown, 2- flowered; fruits caryopsis with linear hilum.
Commonly found in marshy habitats along the rivers and streams, particularly in dried up beds.

Fl. & Fr.: August-October.

Methodology of dose consumption:

Decoction of rhizome is given orally to treat dysentery.

5.2.37 Asparagus racemosus

Family:- Liliaceae

Local name:- Satawari

Locality: Fatehpur

A slender, scrambling scandent suffruticose perennial, woody, prickly shoots with reflexed spines; cladode more or less acicular and triquetrous falcate, 13-26 mm long; divaricate, finely acuminate; flowers white, sweet-scented, 6 mm on filiform articulate pedicels, 6-12 mm long in very short racemes; berries 2.5-6 mm in diameter, scarlet red on ripening. Frequently found along with hedge in plains and hilly areas.

Fl. & Fr.: November-January.

Methodology of dose consumption:

Milch-animal is fed with whole plant of Asparagus racemosus early in the with empty stomach to increase the secretion of milk. Paste of stem is applied on broken horn for early healing.

5.2.38 Azadirachta indica (plate 4)

Family:- Meliaceae

Local name:- Neemda, Neemoda, Limbada, Neemdi;

Locality: Pilani
Evergreen tree, 12-17 m high, trunk straight, bark brownish black, longitudinally fissured; leaves crowded at the ends of branches; petiole 6 cm long; leaflets subopposite; bracts caduceus, ovate-lanceolate; panicles axillary. Thrives best in drier climate with normal temperature not exceeding 40°C and rainfall varying from 45 to 112 cm/year, prefers black-cotton soil though grows on all kind of soils.

Fl. & Fr.: March-July.

Methodology of dose consumption:

Leaves of Azadirachta indica are given as fodder to the animal to treat leucorrhoea.

5.2.39 Bacopa monnieri

Family:- Scrophulariaceae

Local name:- Brahmi, Baam

Locality: Khetari

Annual creeper, rooting at each node; stem soft, succulent, soft hairs present; leaves alternate, simple, sessile or subsessile, oval shaped; flowers 0.8-1.5 cm long; capsule 2-grooved, valves separating from entire column, many seeded. Grows in damp or marshy areas, on the banks of ponds, canals and crops fields.

Fl. & Fr.: Throughout the year.

Methodology of dose consumption:

Paste of whole plant of Bacopa monnieri is given to the animal to treat paralytic attack. A single dose is sufficient.

5.2.40 Balanites aegyptiaca (plate 7)

Family:- Balanitaceae

Local name:- Hingor, Hingule, Hingota, Hingora, Hingot

Locality: Lalpur
Spiny tree, about 6 m high; branches glabrous or puberulous and ending in very strong ascending spines; leaves alternate, trifoliate, ashy green, leaflets coriaceous; cymes axillary, 4 to 10 flowered, flowers green, velvety pubescent; fruit ovoid, ovoid about 5 cm in length, fleshy drupes, 1 seeded; oily but exalbuminous. Xerophyte, found chiefly on black cotton soil; does not thrive in rocky areas.

Fl. & Fr.: February-May.

Methodology of dose consumption:

Stem bark is powdered and given to the cattle to increase the secretion of milk. It is also given to treat intestinal worms. Paste of bark is given orally to animals in snake-bite as antidote.

5.2.41 Barleria prionitis (plate 7)

Family:- Acanthaceae

Local name:- Bajradanti, Kanta sulio

Locality: Lohagal

Unarmed undershrub; leaves elliptic-oblong; yellow flowers in dense spikes, calyx-lobes glandular; capsules 4-seeded. Common grows on hilly tracts.

Fl. & Fr.: August-November.

Methodology of dose consumption:

Paste of leaves is applied locally on skin to treat eczema and itching.

5.2.42 Bauhinia purpurea

Family:- Caesalpiniaeae

Local name:- Khata hatra

Locality: Chirawa
Shrub or small tree; leaves suborbicular; flowers in terminal racemes; pods linear, flat, apiculate, reddish brown. Commonly planted in the gardens and along the roads.

Fl. & Fr.: May-November

Methodology of dose consumption:
Decoction of stem bark is given to treat swelling of neck. Decoction is also given to treat fractured bone.

5.2.43 Bauhinia racemosa

Family:- Caesalpiniaceae

Local name:- Jhinjha

Locality: Jakhora

Small tree, with drooping branches; leaves simple, deeply 2-lobed; flowers white, in terminal or leaf-opposed racemes; pods slightly falcate. Grows in the hilly tracts and plains.

Fl. & Fr.: April-July.

Methodology of dose consumption:
Extract of leaves is given orally to treat diarrhoea. Paste of stem bark is applied locally to treat wound.

5.2.44 Bauhinia variegata (plate 7)

Family:- Caesalpiniaceae

Local name:- Kachnar

Locality: Sikar

Small to medium –sized deciduous tree. Leaves minute stipules 1-2 mm, early caduceus; flower racemes unbranched at ends of twigs; pods dehiscent, strap-
shaped, obliquely striate, 20-30 by 2-2.5 cm; seeds brown, flat nearly circular with coriaceous testa. Planted as an ornamental tree on account of its beautiful flower.

Fl. & Fr.: February-April.

Methodology of dose consumption:

Luke warm decoction of bark is used to wash wound of foot and mouth disease.

5.2.45 *Bidens biternata*

Family:- Asteraceae

Local name:- Samara Kodaki

Locality: Jhunjhunu beed

Erect annual herb; leaves 1- pinnate; heads 10-30 flowered, solitary, pedunculate, yellow; ray florets ligulate, neuter or female; disk florets tubular, bisexual; achenes 0.5-2.0 cm long. Linear, glabrous, black; pappus 2-4, rigid, retrorsely hispid, awned. Naturalized in the forests from plains to the hills.

Fl. & Fr.: August-January.

Methodology of dose consumption:

Decoction of whole plant is given orally to increases the secretion of milk and applied locally on cut and wounds as antiseptic.

5.2.46 *Biophytum sensitivum* (plate 7)

Family:- Oxalidaceae

Local name:- Lajwanti

Locality: Sikar
Erect annual herb; stem clothed with appressed or erecto-patent hairs; leaves with 3-12 pairs of leaflets; flowers yellow; capsule subglobose, apiculate, stellately 5 valved. Rare, in the forests and gardens in shady habitats.

Fl. & Fr.: September-October.

Methodology of dose consumption:

Extract of leaves is applied locally for healing of cut and wounds.

5.2.47 Blepharis linariaefolia (plate 6)

Family:- Acanthaceae

Local name:- Unt-Kantilo

Locality: Bisau

Rigid herb; stem 7.5-15 cm or shorter; leaves opposite or in a whorl, simple, linear or narrowly oblong, pubescent, toothed or spinescent; heads few or many flowered; spikes terminal or on suppressed axillary branches; flowers tubular, softly hairy; capsules shining brown, ellipsoid, compressed, 2-seeded. Usually found on gravelly soils.

Fl. & Fr.: August-November.

Methodology of dose consumption:

Decoction of whole plant is given to increase the secretion of milk.

5.2.48 Bombax ceiba (plate 6)

Family:- Bombacaceae

Local name:- Semal, Hemlo, Heembal, Sanwal

Locality: Sikar

Balsamiferous tree, nearly 7 m high; bark reddish or grey, peeling off in flakes; leaves alternate or nearly opposite, petilate, imparipinnate with opposite sessile
leaflets, very variable in size, shape and degree of pubescence, deciduous, racemes axillary or terminal, shorter than leaves; flowers small, white; drupes trigonous, containing three 1-seeded pyrenes; seeds pendulous, compressed. Very common in forests.

Fl. & Fr.: February-June.

Methodology of dose consumption:

The poultice of paste prepared from the bark of Bombax ceiba is tied around fractured bone and then Bambusa arundinacea strips are tied with the help of fallen human hairs dipped in mustard (Brassica campestris) oil. Flowers of Bombax ceiba are mixed with fodder and given to animal for disposal of placenta after delivery. Flowers of Bombax ceiba are mixed with the powdered stem bark of Alangium salvifolium and given to the animals for the disposal of placenta after delivery. The flowers are kept in an earthen pot filled with water for whole night and sugar is mixed in this infusion and candy is prepared and given orally to animals to treat urinary disorders.

5.2.49 *Boswellia serrata* (plate 6)

**Family :- Burseraceae**

**Local name :-** Salar, Halar

**Locality:** Lohagal

Balsamiferous tree, nearly 7 m high; bark dark reddish or grey, peeling off in flakes; leaves alternate or nearly opposite, petiolate, imparipinnate with opposite sessile leaflets, vary variable in size, shape and degree of pubescence, deciduous; raceme axillary or terminal, shorter than leaves; flowers small, white; drupes trigonous, containing three 1-seeded pyrenes; seeds pendulous, compressed. Very common in forests, abundant on Aravalli in mixed dry deciduous forests.

Fl. & Fr.: April- December.

Methodology of dose consumption:
Decoction of stem bark is given to animals to treat arthritis and digestive disorders (indigestion, windiness and flatulence). Infusion of 2 kg powdered bark is divided in three equal doses and each dose is given orally to animal early in the morning to dissolve iron piece engulfed by the animal accidentally.

5.2.50 Brassica campestris

Family :- Brassicaceae

Local name :- Sarson

Locality: Bola krishi farm

Annual erect herb; radical leaves 20-30 by 3-5 cm; cauline ones 3-6 by 1-2 cm; flower in terminal raceme, yellow; seeds minute, glabrous, yellowish-brown. Extensively cultivated as a winter season crop for the edible oil obtained from the seeds.

Fl. & Fr.: January – April.

Methodology of dose consumption:

A pinch of Ferula asafetida (hing) mixed with 500 ml oil of Brassica campestris is given to the animal with the help of drenching tube to treat indigestion and flatulence. ‘Sindoor’ (vermilion, red lead) is mixed with few drops of oil of Brassica campestris and applied on broken horn for early healing. Sulphur is mixed with oil of Brassica campestris and applied on the body of animal to all kinds of skin diseases.

5.2.51 Brassica juncea

Family :- Brassicaceae

Local name :- Rai

Locality: Bibasar

Erect, annual herbs; radical leaves 10-25 by 4-8 cm, pinnatifid, cauline ones 3.5-8.0 by 2.0-3.5 cm, oblong-lanceolate; flowers in 10-15 cm long, terminal and
axillary recemes, bright yellow; seeds rounded minutely pitted, blackish brown. Widely cultivated as a cold season crop; also grows wild in garden fertile soil.

Fl. & Fr.: December-February.

Methodology of dose consumption:

Bulbs of Allium cepa, Allium sativum and seeds of Brassica juncea are grinded thoroughly mixed with butter milk and then given to animal twice a day for 3 days to treat diarrhoea.

5.2.52 Butea monosperma (plate 8)

Family: Fabaceae

Local name: Dhauk, Palas, Tesu, Khankra

Locality: Lohagal

Erect tree, young stem clothed with grey or brown silky hairs; leaves alternate, petioles 7.5-15.0 cm long, trifoliate, leaflets 10-20 cm long, leathery, lower surface covered with dense silky hairs; racemes 15 cm long; flowers thickly clothed on the outside with silvery small hairs; pods narrowed suddenly into a stalk longer than calyx. Common throughout the hilly tracts; rarely on blackish clayey soil of plains.

Fl. & Fr.: March-June.

Methodology of dose consumption:

Gum of Butea monosperma is very effective for removal of external parasites. Flowers of Butea monosperma are mixed with fodder of the animal for disposal of placenta after delivery. In foot and mouth disease the feet of the animal are washed with boiled mixture of its urine and 200 gm bark powder of Butea monosperma. Warmed bark extract is given orally to animal suffering from gastroenteritis. The bark paste is applied on the fractured bone of domestic animals. The bark powder is mixed with the ash of Capparis deciduas and given orally to treat fractured bones. 100 gm decoction of bark is given orally against snake bite.

5.2.53 Blumea lacera
Family :- Asteraceae

Local name :- Phatakdi, Kakronda

Locality: Churu

Aromatic herb; leaves obovate-oblong; viscid; head in spiciform leafy compound panicles. Common in wet and shady localities.

Fl. & Fr.: February-June.

Methodology of dose consumption:

The paste of leaves is applied locally on wounds of animals to kill the worms.

5.2.54 Caesalpinia bonduc (plate 8)

Family :- Caesalpiniaceae

Local name :- Kantkaranj, Katha

Locality: Udaipurwati

An extensively climbing or scrambling shrub covered with short, straight prickles, those on the leaf rachis reflexes branchlets fulvous hairy; leaves simple or large persistent compound or pinnatifid, stipules foliaceous, pinna 6-8 pairs; flowers pale yellow; young pods softly echinate, old broad-oblong, prickly, dehiscent, 1 to 2 seeded. Grows in dry and semiarid regions, usually in open hedges; evergreen.

Fl. & Fr.: August –April.

Methodology of dose consumption:

50 gm seed powder is given orally to treat fever, worms and flatulence. 50 ml decoction of roots with the paste of 11 black peppers (Piper nigrum) is given to cows for disposal of retained placenta after delivery.

5.2.55 Calligonum polygonoides (plate 8)

Family :- Polygonaceae
Local name :- Phog

Locality: Churu

Much branched, woody upto 2.5 m high shrub; leaves small, linear short-lived; flowers pinkish, fasciculate in the axils of ochreae; fruits oblong, clothed with reddish-brown bristles. A typical sand dune plant forms and association with Leptadenia pyrotechnica and Aerva javanica.

Fl. & Fr.: March –June rarely in December.

Methodology of dose consumption:

Extract of the plant is given to treat constipation. Decoction of whole plant is given to treat urinary problems. The extract of plant is given to animals through drenching tube to treat colic whereas decoction of whole plant is given to treat dysuria.

5.2.56 Calotropis gigantean

Family :- Asclepiadaceae

Local name :- Safad Akdo

Locality: Nawalgarh

Tree; leaves sessile or with petiole 0.2-0.7 mm long; inflorescence of 1-3 fascicles; flowers 14-15 mm by 3-4.5 cm diam; pedicels 2.5-3.2 cm long, sepals lanceolate-ovate to ovate, 5-7 mm long, corolla subrotate; lobes ovate, 15-17 mm by 10-11 mm wide, cream-tipped internally, stamina corona lobes 11-12 mm by 6-6.5 mm wide, broadly flanged, cream, with base elongated into an upturned vesicle ca 5 mm long. Occurs widely in wastelands of arid regions.

Fl. & Fr.: Most of the year.

Methodology of dose consumption:

Poulitice of roasted leaves is tied to treat swelling as well as on dislocated joints, sprains and fractured bone.
5..2.57 *Calotropis procera* (plate 8)

**Family :-** Asclepiadaceae

**Local name :-** Akdo, Aak, Aakro

**Locality:** Aduka

A stout, hoary, tomentose shrub; leaves opposite, simple, oblong, cordate; peduncles often paired, tomentose and often branched; flowers about 12 mm, having lobes erect, white with purple blotch on the upper half, coronal process with a purple tinge, obtuse, muticous tip and fleshy upturned white base; follicles recurved, somewhat sausageshaped, outer and inner coats with fibrous tissue between; seeds ovate, 6 mm, smooth long comas, occurs widely in wastelands of arid region.

Fl. & Fr.: Most of the year.

Methodology of dose consumption:

Four to five drops of the fresh latex of the plant is dropped on the injured portion as an antiseptic. Mixture of 50 ml hydrochloric acid (HCl), 50 ml latex of *Calotropis procera* and 50 ml latex of *Mangifera indica* is prepared and used as an antidote to scorpion bite.

5..2.58 *Capparis deciduas* (plate 9)

**Family :-** Capparaceae

**Local name :-** Kair, Ker

**Locality:** Churu

Leafless, much branched, dense shrub, thorns in pairs, straight; glabrous, linear; pungent leaves found on very young shoots; flowers in simple corymbs on short lateral shoots, red brown, 2.5 cm in diameter; fruits 1.25-1.9 cm, glabrous, long-beaked. Commonly occur throughout the desert on hard gravelly and clayey soil, rarely on sandy plains and dunes.
Fl. & Fr.: March-July.

Methodology of dose consumption:

Decoction of \( \frac{1}{2} \) kg shoots of Cissus quadrangular, \( \frac{1}{2} \) kg ash of stem of Capparis deciduas and ash of roots of Ziziphus jujibe, \( \frac{1}{2} \) Kg jiggery with milk is given to the animal once in a day, till the healing of fractured bone.

5.2.59 Capparis sepiaria

**Family:** Capparaceae

**Local name:** Katar, Kali-Katar

**Locality:** Rajgarh

A large climbing shrub, thorns curved; leaves elliptic; petioles 0.2 cm long; umbels simple; flowers white, pedicles short; fruit brone in clusters, pisiform, black, Preferably grows in dry climate.

Fl. & Fr.: March-August.

Methodology of dose consumption:

Oil of Ricinus communis, crushed rhizomes of Curcuma longa and jiggery are mixed in equal ration i.e. 2 kg each. 250 gm of this mixture is mixed with 250 g coal prepared from wood of Capparis sepiaria and given to the animal with 1 kg of milk. This heals up the fractured bone fast if given daily. Extract of root is given orally to animals in diphtheria.

5.2.60 Capsicum annum

**Family:** Solanaceae

**Local name:** Lal-mirch

**Locality:** Mandrella

Perennial herb; leaves lanceolate; white flowers and slender, green, red or orange berries; calyx enclosing the base of berry, Cultivated throughout the area for its edible berries.
Throughout the year.

Methodology of dose consumption:

Paste of dried fruit powder is mixed with sugar and applied in the throat of animal to treat tonsillitis.

5.2.61 *Capsicum minimum*

**Family**: Solanaceae  
**Local name**: Rukunimirshi

**Locality**: Khetari

Perennial herbs; with lanceolate leaves; flowers white and slender, green, red or orange fruits.

**Fl. & Fr.**: September – December

Methodology of dose consumption:

Paste of ripe fruits is fed to animal 4 to 5 times in a day to treat stomach disorder.

5.2.62 *Cardiospermum halicacabum*

**Family**: Sapindaceae  
**Local name**: Chirphut, Parpotiea, Kanfuti

**Locality**: Udaipurwati

Annual wiry herb; thinly pubescent or nearly glabrous with acuminate leaflets; flowers white, very minute; capsules depressed, pyriform; seeds tomentose, globose, Mainly in wastelands; plains to the lower slopes.

**Fl. & Fr.**: July-March

Methodology of dose consumption:

Leaf paste is applied on the body to kill lice and other parasitic insects.
5.2.63 *Carica papaya*

**Family:** Caricaceae  
**Local name:** Papita, hajarkakri  

**Locality:** Pilani

Soft wooded, dioecious tree with usually unbranched trunk and milky sap; leaves in terminal cluster, palmately lobed; fruit a berry; laticiferious glands occurs in roots, stem, leaves and fruits. The plant thrives best in rich soil of uniform texture.

**Fl. & Fr.:** Throughout the year.

**Methodology of dose consumption:**

Latex of Carica papaya is applied on the skin to treat eczema.

5.2.64 *Carissa congesta*

**Family:** Apocynaceae  
**Local name:** Karonda  

**Locality:** Kithana

Erect or scandent shrubs, armed with straight, paired horizontal spines; leaves 2-6 by 1.5-4.0 cm, elliptic-oblong to ovate, acute, mucronate; flowers white, in corymbose cymes. Usually met with in the forests and wastelands.

**Fl. & Fr.:** January – April.

**Methodology of dose consumption:**

Latex of Carissa congesta is applied on the fractured bone or dislocated joint for early healing.

5.2.65 *Cassia angustifolia Vahl*

**Family:** Caesalpiniaceae  
**Local name:** Sonamukhi  

**Locality:** Surajgarh
Shrub; leaves usually 5-8 jugate, leaflets oval, lanceolate, glabrous; racemes axillary erect, waxy many-flowered, usually considerably exceeding the subtending leaf; bracts membranous, ovate or obovate, caduceous; pods are 3.5-7 cm by 2 cm wide, greenish brown to dark brown in colour and contain 5-7 obovate dark brown and nearly smooth seeds. Cultivated plant.

Fl. & Fr.: August- December.

Methodology of dose consumption :

Leaves are fed to the camel to treat flatulence.

5.2.66 Cassia auriculata
Family :- Caesalpiniaceae
Local name :- Anwal, Tarwan
Locality: Khetari

A much branched handsome shrub, 1.0-3.25 m high with hairy twigs; leaves pinnately compound, leaflets 8-12 pairs; flowers large, yellow in subterminal corymbs; pods 0.75-1.25 cm by 1.75 cm, flat, obtuse at each end; seeds 6-10. Xerophytic in nature; wild in dry regions, cultivated in other areas; prefers cottony soils.

Fl. & Fr.: October-March.

Methodology of dose consumption :

Tender shoots of plant grinded with buttermilk and jiggery is given orally to treat dysentery. Leaf paste is applied locally to treat boils, swellings and wounds.

5.2.67 Cassia tora
Family :- Caesalpiniaceae
Local name :- Punwad, Punwadia
Locality: Lohagal

A small weed, subshrub, upto 75-100 cm; branchlets glabrous; leaves upto 4 cm long, leaflet 3 pairs, obovate, thin, coriaceous, glabrous above, pubescent below;
racemes terminal, corymbose; pods short, stipitate, flat, compressed; seeds oblong, longitudinal. Sparsely distributed from plains to the hills; often found in association with Cassia obtusifolia.

Fl. & Fr.: August-November.

Methodology of dose consumption:

Boiled seeds are given to the animals to treat hypogalactia.

5.2.68 *Cassia fistula* (plate 9)

**Family:** Caesalpiniaceae  
**Local name:** Amaltas, Bahawa, Garmale, Karmalo

**Locality:** Sakambari

A tree with grey bark; pinnate leaves; flowers yellow, blossoms in pendant racemes; fruits elongated, brown to black, cylindrical lomentum with numerous compartments. Prefer laterite soil; often planted as road side tree.

Fl. & Fr.: May-June.

Methodology of dose consumption:

Two-three pods are fed to the animal to treat flatulence. Decoction of about 100 gm of pods or stem bark (if pods are not available) of *Cassia fistula* is given to the animal as a purgative.

5.2.69 *Catunaregam spinosa*

**Family:** Rubiaceae  
**Local name:** Kharedi

**Locality:** Bisau

A large deciduous armed shrub upto 9 m in height with strong spines; leaves simple, wrinkled; flowers at first white, later turning yellow, fragrant, solitary or 2-3 together at the ends of short leaf bearing branchlets; fruits globose berries yellow
when ripe, crowned with large calyx limb; seeds many angular, embedded in the pulp. Sparsely distributed from plains to the hills.

Fl. & Fr.: March-June.

Methodology of dose consumption:

About 500 gm of whole plant, 50 gm of jiggery and 25 g of dried rhizome powder of Curcuma longa is given to animal with fodder to treat diarrhoea.

5.2.70 *Celastrus paniculata* (plate 9)

Family: Celastraceae

Local name: Mal-kangni, Mali

Locality: Lohagal

Large climbing shrub, unarmed straggler/liane upto 12 m, branchlets puberulose; leaves alternate, ovate ovate to orbicular, thin, coriaceous, base obtuse to subacute, margin dentate, petiole upto 3 cm; panicle terminal; flowers polygamous, greenish white; capsules 0.6-1.0 cm; seeds 6, ellipsoid to ovoid, upto 5 mm. Extensive straggler as liance on trees; common in dry deciduous forests, particularly in the east of Aravalli.

Fl. & Fr.: March-September.

Methodology of dose consumption:

One cup infusion of seeds is given orally to the animal for seven days to treat paralysis. Seed oil mixed with seed oil of Sesamum indicum is massaged to treat paralysis.

5.2.71 *Celosia argentea* (plate 9)

Family: Amaranthaceae

Local name: Surli, Garkha

Locality: Khetari

Common weeds; herb upto 1-2 m; leaves elliptic-ovate below, linear-lanceolate above; spikes dense, cylindric, very showy; flowers 4 mm across, pink,
gradually turning white, bract lanceolate 6 mm, scarious; capsules globose, reticulate. On hills in arable lands, as a weed of cultivated field; conspicuous in harvested field; less common in plains.

Fl. & Fr.: August- November.

Methodology of dose consumption:

Root extract of Celosia argentea mixed with Tamarindus indica fruits or leaves is given orally to treat food poisoning.

5.2.72 *Ceropegia attenuate*

**Family:** Asclepiadaceae  
**Local name:** Khadula  
**Locality:** Aravali hills

Tall, tuberous herb; leaves subsessile, linear, acute, tapering at base; cymes axillary or extra axillary, shortly peduncled, 1 to 2 flowered. Rare, in exposed rocky grounds.

Fl & Fr.: July-October.

Methodology of dose consumption:

Bulbs and leaves are given to animal orally to remove the stone in urinary tract.

5.2.73 *Ceropegia bulbosa* (plate 10)  
**Family:** Asclepiadaceae  
**Local name:** Khadula  
**Locality:** Aravali hills

Twining, perennial herb, with an underground, tuberous stem; leaves glabrous; cymes pedunculate, 6 to 10 flowered; seeds linear- oblong with membranous wings. Rare, in exposed rocky habitats, particularly on hillocks.

Fl. & Fr.: July-December.
Methodology of dose consumption:

Leaves of Ceropegia bulbosa are given as fodder as a prophylactic measure against tumour formation.

5.2.74 *Chenopodium album*

**Family:** Chenopodiaceae  
**Local name:** Bathua, Chilario, Kaligera

**Locality:** pratappura

Herb; leaves oblong rhomboid; flowers born in clusters in paniculate, ebracteate spikes; seeds rugose. Weed in cultivated fields, gardens and other humid places.  
Fl. & Fr.: October –April.

Methodology of dose consumption:

Paste made from leaves is applied on wounds of animals for early healing.

5.2.75 *Chlorophytum tuberosum* (plate 10)

**Family:** Liliaceae  
**Local name:** Safed musli, Futra

**Locality:** Ghardana

Annual herb; with small root stock and many cylindric root fibres ending in ellipsoid tubers; 
leaves linear-lanceolate, acute, undulate, margined; scape solitary, scattered flowers forming dense racemes; seeds irregularly orbicular usually compressed, pitted, black. Rare, on the hills of protected areas.

Fl. & Fr.: June – October.

Methodology of dose consumption:

Three to four tubers of Chlorophytum tuberosum are mixed with fodder of animal to treat diarrhoea. It also acts as a galactagogue.
5.2.76 *Cicer arietinum*

**Family :-** Fabaceae

**Local name :-** Chana

**Locality:** Chirawa

Much-branched herbs, with pinnate leaves and turgid-oblong fruits. Commonly cultivated as a Winter season crop.

Fl. & Fr.: December-March.

Methodology of dose consumption :

Fresh leaf extract is given to animal to treat constipation.

5.2.77 *Cissampelos pareira* (plate 10)

**Family :-** Menispermaceae

**Local name :-** Kalipar

**Locality:** Lohagal

Twining perennial shrub; leaves reniform, orbicular or cordate, 4.5 by 6.5 cm, peltate, chartaceous, 5 by 7 nerved, pubescent, base cordate or truncate; male inflorescence pendent type, flowers greenish; female inflorescence in thyroid clusters; fruits red when ripe, subtended by the conspicuous auricular bracts. More abundant on the degraded slopes; extensive tomentose climber as compact mats on thickets.

Fl. & Fr.: July-October.

Methodology of dose consumption :

Extract of root is given to animal to treat snake-bite and dog bite as an antidote.

5.2.78 *Cissus quadrangular* (plate 14)

**Family :-** Vitaceae

**Local name :-** Hadjore

**Locality:** Aravali hills
A succulent twiner, rambling shrub, stem 4 angular, glabrous, winged or margined, contracted at the nodes; leaves simple, caduceus; cymes umbellate; flowers 7 cm across, greenish yellow, red-tipped; berry globose, apiculate; seed smooth. In scrub jungles and wetlands upto 500 m on thickets.

Fl. & Fr.: Throughout the year.

Methodology of dose consumption:

Whole plant of Cissus quadrangular (200 g) is grind ed with 50 g bark of Wrightia tinctoria, 50 g leaves of Vitex negundo, 50 g powder of Piper nigrum seeds and 50 g Allium sativum bulbs and given to the animal to treat foot and mouth disease. Paste of about three nodes is given to the animal with water through drenching tube once in a day for 8 to 10 days for early healing of fractured bone. Paste of stem is applied locally to treat sprain and swelling.

5.2.79 Cissus repanda

Family :- Vitaceae

Local name :- Panivala

Locality: Aravali hills

Large, woody climber with fissured, corky bark and vinaceous-purple stem and branches; tendrils with flattened disc; leaves pubescent above, silky tomentose beneath; flowers in umbel-like clusters, pedicelled pink; berries tipped by mucronate style, 1-seeded. Occasional, in deciduous forests, particularly in the east of Aravalli.

Fl. & Fr.: May-August.

Methodology of dose consumption:

Root powder acts as lactagogue and is given to animal with fodder to increase milk secretion. Infusion of the climber is given orally to teat boils.

5.2.80 Cistanche tubulosa

Family :- Orobanchaceae

Local name :- Lauki-mula

Locality: Aravali hills
Purplish-yellow, leafless root-parasites, having solitary or fascicled from the ground, upto 60 cm high; scapes furrowed, fleshy, pubescent, terminating into 2-4 cm long spikes; capsules 20-25 by 8-10 mm, ovoid-oblong, laterally compressed, beaked by seeds numerous, reticulately pitted.

Fl. & Fr.: October –March.

Methodology of dose consumption:

Paste of whole plant is applied for the treatment of Bovine viral mammaitis (BVM). It acts as anti-allergic.

5.2.81 *Citrullus colocynthis* (plate 14)

**Family:** Cucurbitaceae

**Local name:** Gartumba, Tumba

**Locality:** Churu

Perennial trailing herb, branchlets hirsute; leaves alternate, simple, petiolate, ovate or narrowly triangular, deeply trilobed, lobes pinnatifid, triangular, chartaceous, rigid; tendril simple, slender, petiole upto 3 cm; male flower 1 cm across, yellow; in female flower, ovary ovoid; fruit globose, striped green and white when young, yellow when ripe. Common in sandy habitats, particularly in the desertic zones.

Fl. & Fr.: Almost throughout the year.

Methodology of dose consumption:

Decoction of fruits is given to the animal twice a day to treat constipation. A mixture of 20 g honey, 20 g extract of roots of *Citrullus colocynthis*, 20 g mustard oil is applied internally to reduce the pain during delivery, pulp of roasted fruits mixed with flour of *Pennisetum typhoides* and salt is fed to the animal to treat impaction with fever. Roasted fruits and decoction of roots is given to the domestic animal to treat constipation, digestive disorders and gastritis.

5.2.82 *Citrus medica* (plate 14)

**Family:** Rutaceae

**Local name:** Bijora
**Locality:** Fatehpur

An evergreen armed shrub with straggling thorny branches and smooth yellowish brown bark; leaves oblong or elliptic, coriaceous, pellucid – punctuate; flower in axillary cymes; fruit large berries, oblong or globose, fleshy, rind thick, rough, irregular or warted. Commonly cultivated for its fruits.

Fl. & Fr.: Summer and winter.

**Methodology of dose consumption:**

Fruit powder is given to the animal to dissolve the iron piece engulfed by the animal accidentally. Juice of 10 lemons is given with 750g sugar to induce lactation.

**5.2.83 Cleome gynandra** (plate 10)

**Family:** Cleomaceae

**Local name:** Karelia, Safed-bagra

**Locality:** Mandrella

Glandular hairy herbs; leaves 3- to 5 foliolate; flowers in terminal racemes; capsules linear- cylindric. Common weed in wastelands during rainy season.

Fl. & Fr.: July –December.

**Methodology of dose consumption:**

Paste of leaves of Cleome gynandra is applied locally twice a day to treat eczema.

**5.2.84 Cleome viscosa**

**Family:** Cleomaceae

**Local name:** Singali, Bagra

**Locality:** Piprali

Pubescent, annual, woody at base; 3- to 5 – foliolate leaves; flowers in leafy racemes; capsule cylindric, beaked. Common in cultivated fields during rainy season.

Fl. & Fr.: July- November.
Methodology of dose consumption:

Paste of about 50 gm seeds of Cleome viscose is given with water through drenching tube, thrice a day to treat diarrhoea and fever.

Paste is prepared by mixing equal amount of leaves of this plant with leaves of Azadirachta indica, and applied externally on the skin of animal for killing ectoparasites e.g. lices and ticks. Decoction of mixture of roots and leaves is used to give water bath to animal to treat body swelling and bodyache.

Extract prepared from the flowers of Madhuca indica and Clerodendrum viscosum is given orally to the animal early in the morning for 15 days to 3 months to treat arthritis and rheumatism.

5.2.85 Clerodendrum phlomidis

Family: Verbenaceae
Local name: Arni, Anni

Locality: Malsisar

Shrub, 1-3 m tall; stem and branches whitish pubescent; leaves petiolate, rhomboid-ovate, flowers fragrant, in axillary and terminal panicles; fruit drupes 0.5-1.25 cm long with persistent calyx. Common throughout the plains.

Fl. Fr.: August-March.

Methodology of dose consumption:

Paste prepared by mixing equal amount of leaves of this plant with leaves of Azadirachta indica is applied externally on the skin of animal for killing ectoparasites e.g. lices and ticks. Decoction of mixture of roots and leaves is used to give bath to animal to treat body swelling and bodyache.

5.2.86 Clitoria ternatea

Family: Fabaceae
Local name: Gokarni

Locality: Fatehpur

Handsome twining perennial herb with terete stem and branches; leaves compound, imparipinnate, flower solitary, axillary or in fascicles; pods sharply
beaked; seeds reniform. Common garden plant; occurs in hedges all over the tropical regions.

Fl. & Fr.: Most part of the year.

Methodology of dose consumption:

Seeds of Clitoria ternatea are given with jiggery or chapatti to treat constipation. Dose depends on body weight of the animal.

5.2.87 *Coccinia grandis*
Family: - Cucurbitaceae
Local name: -Tindori

Locality: Fatehpur

Perennial, much branched, handsome tendril climber; roots tuberous; leaves deltoid or subrotund, palmately 5- nerved; flowers unisexual; fruits ovoid or oblong or ellipsoid berries. Semi wild; common in thickets and wastelands.

Fl. & Fr.: Throughout the year.

Methodology of dose consumption:

Leaves are grinded with piper betel and paste is rubbed on the body to treat allergy. Extract of the leaves grinded with ghee is dropped into nostrils to treat epistaxis. Extract of leaves is drooped in eyes to treat opacity of cornea.

5.2.88 *Cocculus hirsultus*
Family: - Menispermaceae
Local name: -Bajar-bel, Van-Veela, Baar

Locality: Udaipurwati

Scandent herb; bark, corky, young parts densely hairy; leaves petiolate; lamina base cordate to cuneate, surface pubescent, Restricted to hilly tracts, usually occurs in association with Euphorbia neriifolia and Lycium barbarum.

Fl. Fr.: Almost round the year.
Leaves (10 g) of Cocculus hirsutus are fed to the animal once in a day for three days to treat dog-bite. Leaf extract is rubbed on the body and after one hour, bath is given to the animal for complete removal of external parasites.

5.2.89 *Cocculus pendulus* (plate 19)

**Family:**- Menispermaceae  
**Local name:**-Pilwani, Khangro

**Locality:** Udaipurwati

Twiner; bark blackish-brown; leaves petiolate, 1 cm long; lamina base cuneate to cordate, ovate-oblong to ovate-lanceolate, 1-9 by 0.2- 4.5 cm, emarginated to mucronulate at apex. Common on sandy plains.

Fl. & Fr.: October-December.

Methodology of dose consumption :

Mixture of 100 gm wood ash of this plant and 100 gm cow’s milk fat is given to the animal to treat mastitis.

5.2.90 *Commelina forsskalaei*

**Family:**- Commelinaceae  
**Local name:**-Mirja

**Locality:** Fatehpur

Much-branched, diffuse, annual herbs; leaves linear or narrowly oblong-elliptic, often undulate;  
cymes axillary, branched, 3 to 5-flow-ered; cleistogamous flowers usually solitary in a spathe, bisexual, reduced, with usually 1-seeded capsule. Common in cultivated fields, in marshy places and often in the forests.

Fl. & Fr.: August-November.

Methodology of dose consumption :

About 250 ml extract of whole plant is given to the animal twice in a day for 15 days to treat rheumatism and body swelling. The extract also massaged for the same.
5.2.91 *Commiphora wightii* (plate 11)

**Family** :- Burseraceae  
**Local name** :-Gugal  
**Locality** : Arawali hills  
Handsome deciduous tree with papery bark and greenish soft wood; leaves alternate, imparipinnate, leaflets opposite; flowers small in fascicles; fruits ovoid or subglobose, fleshy drupes as big as pea. Rare, on the open dry hills and other rocky habitats.

Fl. & Fr.: February-June.

Methodology of dose consumption :

Chopped stem and leaves mixed with buttermilk is kept in earthen pot given to animal to treat rheumatism.

5.2.92 *Corallocarpus epigaeus* (plate 15)

**Family** :- Cucurbitaceae  
**Local name** :-Marsiakand, Kadwi-nai, Mirch bel, Kadvi bel  
**Locality**: Bhimsar  
Perennial, climbing herb; roots napiform; stem slender, glabrous, angular-sulcate; leaves variable in size and shape, broadly suborbicular, tendrils simple, subfiliform, glabrous; fruits ovoid, base attenuate, red, 5 to 8 seeded. Found in sandy to gravelly habitats; not common.

Fl. & Fr.: August-November.

Methodology of dose consumption :

About 250 gm of paste prepared from one tuber of *Corallocarpus epigaeus* and whole plant of *Tinospora cordifolia* is fed to the animal twice in a day for 3 days to treat tonsillitis.

5.2.93 *Corchorus depressus* (plate 11)

**Family** :- Tilliaceae  
**Local name** :- Baphuli, Kagler, Chamaks


**Locality:** Piprali

Prostrate, much branched, woody perennial; leaves up to 2.5-1.2 cm, elliptic, crenate-serrate, plicate in bud; flowers in leaf- opposed cymes; capsules oblong-cylindric; beak short straight or curved. Common in open gravelly places, abundant particularly in desert zone.

**Fl. & Fr.:** August-March.

**Methodology of dose consumption:**

Leaves are fed to camel to treat stomachache. Whole plant crushed with water is given to animal to increase the secretion of milk.

**5.2.94 Cordia dichotoma**

**Family:** - Ehretiaceae

**Local name:** - Lasora, Gunda, Lesuwa

**Locality:** Parrsumpura

Medium-sized tree with a short trunk; leaves simple, elliptic-lanceolate; flowers small in lax terminal or axillary cymes; fruits drupe. In warmer regions; wild and cultivated.

**Fl. & Fr.:** February-June.

**Methodology of dose consumption:**

Paste of leaves of Cordia dichotoma is given to the animal with water to treat diarrhoea. Leaves and fruits of Cordia dichotoma are given as a fodder to the animal to treat leucorrhoea. Extract of Cordia dichotoma leaves is mixed with honey and applied on the mouth of the animal to treat swelling of foot and mouth disease.

**5.2.95 Coriandrum sativum**

**Family:** - Apiaceae

**Local name:** - Dhania

**Locality:** Bhomopura
Glabrous, annual herb; flowers pale to bright rose or nearly white; fruits subglobose, prominently ribbed. Cultivated as a winter season crop.

Fl. & Fr.: Throughout the year.

Methodology of dose consumption:

Powder of about 100 gm fruits is given with sugar to female animal after mating for 3-4 times in a day to avoid vomiting of conception.

5.2.96 *Cosmostigma racemosa*  
Family: - Asclepiadaceae  
Local name: - Raidodi

Locality: Sakambari

A shrubby twiner; leaves deciduous, ovate, acute, acuminate, glabrous, base cordate; flowers in axillary or sublateral cyme; follicles ovoid-oblong, bluntly pointed, smooth. Endemic to India.

Fl. & Fr.: June-August.

Methodology of dose consumption:

Powder of pods is mixed with curd and given orally twice in a day to sheep and goat to treat gastroenteritis.

5.2.97 *Costus specious* (plate 15)  
Family: - Costaceae  
Local name: - Mahalakri

Locality: Aravali hills

Succulent perennial herb with long leafy spirally twisted stems; 2-3 m high and horizontal rhizomes; leaves simple, spirally arranged, obovate or oblong, glabrous above, silky pubescent beneath with broad leaf sheaths; flowers white large, scented, in large terminal spikes, bracts bright red; fruits fleshy/ovoid capsules; seeds obovoid or semiglobose. Rare, in dense protected forest of Southern Aravalli hills.
Fl. & Fr.: August-December.

Methodology of dose consumption:

Pieces of rhizome are fed to the animals to treat rheumatism.

5.2.98 *Crinum asiaticum*

**Family:** Amaryllidaceae

**Local name:** Jahari kanda

**Locality:** Khandella

A bulbous herb; bulb with a fusiform stoloniferous base, neck cylindric; leaves erect, 60-100 by 1.8 – 2.5 cm, linear, concave; scapes 45-60 cm long, stout, umbels 6 to 15 flowered. Plant of swampy river bank; wild.

Fl. & Fr.: Mainly in winter.

Methodology of dose consumption:

Tuber paste of *Crinum asiaticum* is applied on the skin for treatment of carbuncles. Extract of bulb mixed with curb is given orally to animal to treat flatulence. The poultice of tuber is tied to treat various skin diseases like abscesses, warts etc.

5.2.99 *Crotalaria burhia* (plate 11)

**Family:** Fabaceae

**Local name:** Kharsana, Jhunda

**Locality:** Bisau

Low undershrub; branches numerous, stiff erectopatent, clothed with fine pale momentum; leaves simple, scattered, subsessile, rigid, pale green, 6- to 12-flowered, pedicels short; florets yellow, small; pods oblong, 3- to 4- seeded. Characteristic wild desert plant of sand dunes

Fl. & Fr.: March-August.

Methodology of dose consumption:
Decoction of whole plant is given to animal to treat urinary problems and also for disposal of placenta after delivery. Extract of whole plant is given to treat constipation.

5.2.100 *Crotalaria juncea* (plate 11)

**Family:** Fabaceae  
**Local name:** - Sann, Sanai  
**Locality:** Gudha  

Shrub; leaves elliptic-lanceolate flowers yellow; fruits turgid, oblong; Cultivated during rainy season as a green manure crop and for fibres obtained from the stem.  
**Fl. & Fr.:** September- February.  

Methodology of dose consumption:

200 g boiled seeds are fed to animal to treat debility.

5.2.101 *Cucumis callosus* (plate 12)

**Family:** Cucurbitaceae  
**Local name:** - Kachra, Kachrio  
**Locality:** Ladusar  

Perennial, trailing herb; leaves ovate-oblong or obovate; tendrils simple; flowers yellow; fruits obovoid, longitudinally variegated. Common in desertic zones.  
**Fl. & Fr.:** August-December.  

Methodology of dose consumption:

Fruits are crushed and given to the animal with sugar, oil and water to treat diarrhoea.  
Fresh fruits are fed with fodder for disposal of placenta after delivery.

5.2.102 *Curculigo orchioides* (plate 15)

**Family:** Hypoxidaceae  
**Local name:** - Kali musli, Goeirari-dawai, Khajuri  
**Locality:** Fatehpur
Herbaceous plant, rootstock tuberous or elongated; leaves lanceolate, plicate, glabrous; scape 2.5 cm, clavate, flattened, hidden by leaf-sheath; flowers subsessile, lowest bisexual, rest male. Subtropical plant; wild.

Fl. & Fr.: May-August.

Methodology of dose consumption:

Paste of 10 gm tuberous roots of Curculigo orchioides is given orally along with water as an antidote to treat snake bite, scorpion bite, etc. Dried tubers of Curculigo orchioides are ground with stem of Cissus quadrangularis and given orally to treat impaction. Paste of root is fed to the animal with wheat bread to treat foot and mouth disease.

5.2.103 Curcuma amada (plate 20)

Family: Zingiberaceae

Local name: Jangli haldi, Ambahaldi

Locality: Aravalii hills

Herb; rootstock ovoid, sessile tubers thick, pale yellow inside; leafy tuft, 60-90 cm high, petiole as long as lamina, leaf blade pale green, tapering at the base and apex, scape from the center of the leafy tuft; spikes 7.5-15.0 cm by 3.7 cm, bracts pale green. Rare in the forest, so far reported only from the south-eastern parts of the state.

Fl. & Fr.: August-September.

Methodology of dose consumption:

50 gm dried rhizomes of Curcuma amada, 2 to 3 bulbs of Allium cepa and 500 gm jiggery are mixed well and fed to the animal to treat indigestion and flatulence. Paste of 250 gm of fresh rhizomes is given only once to treat fever.

About 100 gm of dried rhizome powder of Curcuma amada is mixed with 100 gm of rock salt, 100 gm of alum, 100 gm of Piper longum, 100 gm of seeds of Trachyspermum ammi, 250 gm jiggery and 100 gm milk fat. This mixture is divided in 3 parts. One part is given once in a day for 3 days to treat gynecological problem after delivery, especially disposal of placenta after delivery.

5.2.104 Curcuma longa
Family: Zingiberaceae
Local name: Haldi, Haldu, Halad

Locality: Udaipurwati

Rhizomes large, yielding turmeric; leaves oblong-elliptic; flowers pale-yellow. Cultivated for its edible rhizomes.

Fl. & Fr.: October-February.

Methodology of dose consumption:

Paste of rhizome powder is applied with salt to treat sprains, swelling and mastitis.

5.2.105 Curcuma aromatic

Family: Zingiberaceae
Local name: Haldi

Locality: Udaipurwati

Erect, Perennial herb, leaves elliptic or lanceolate-oblong. In moist and shady places in the forests.

Fl. & Fr.: July–November.

Methodology of dose consumption:

Decoction prepared from the mixture of Alum (10gm), powder of rhizomes of Curcuma longa (50 gm) and jiggery (2 kg) is given to animal for treatment of fractured bone. Extract of tuber is given to domestic animals orally through drenching tube in food poisoning. A mixture of seed oil of Brassica campestirs, 5 gm rhizome of Curcuma longa and 2 gm potash alum is given to the animal orally through a drenching tube to treat internal wound.

5.2.106 Cuscuta reflexa (plate 15)

Family: Cuscutaceae
Local name: Amar bel, Akash bel
Locality: Dhatarwala

A yellow, leafless, fleshy, twining parasite, branches stout, fleshy, forming dense yellow mass on shrubs and low trees; racemes lax, 2.5-10.0 cm long, clustered or subspicate. Common throughout the state, usually parasitizing on Adhatoda zeylanica, Acacia nilotica, Ziziphus nummularia and Ziziphus mauritiana.

Fl. & Fr.: October-January.

Methodology of dose consumption:

1 Kg whole plant of Cuscuta reflexa, 1 kg leaves of Datura innoxia are boiled in one litre of mustard oil. Massage of this oil is given to the animal to treat lumbago and rheumatic pain. About 400-500 gm of fresh stem is mixed with animal feed to treat haematuria.

5.2.107 Cyamopsis tetragonoloba
Family: Fabaceae
Local name: -Gawar

Locality: Churu

Erect, robust annual, 30-60 cm high, clothed with appressed graying hairs, stem grooved, leaves trifoliate, flowers small, purplish in axillary racemes, fruits thick fleshy pods, in clusters, subtetragonal, more or less hairy; seeds 5-12 in each pod, compressed to some extent. Commonly cultivate during rainy season for its edible pods and as a fodder crop.

Fl. & Fr.: July-November.

Methodology of dose consumption:

Fruits and seeds of this plant are given with fodder to the animal to treat diarrhoea. 100 gm of this mixture is also given to the animal with pearl millet grains for disposal fo the placenta after the delivery.

5.2.108 Cymbopogon martinii (plate 16)
Family: Poaceae
Local name: -Rhodo, Chant

Locality: Abusar
Perennial, sweet-scented grass, 1.5-2.5 m high; leaves linear-lanceolate, subcordate, amplexicual and finely cordate; flowers in panicked spikelets, turning reddish brown when mature, glumes channeled corresponding to a midrib on the inner side, awned. Prefers drier soils.

Fl. & Fr.: August-December.

Methodology of dose consumption:

Fumigation of whole plant is given to the animal to treat fever.

5.2.109 Dalbergia sissoo

Family: Fabaceae

Local name: Sisham, Talli

Locality: Kali-pahari

Deciduous tree, with 3-5 acuminate leaflets; flowers yellowish in axillary panicles; pods oblong or strap shaped, flat narrowed at the base. Common in wastelands, along the roads, boundaries of field and gardens.

Fl. & Fr.: March-August.

Methodology of dose consumption:

Paste of about 250 gm leaves of Dalbergia sissoo is given to the animal with drenching tube to treat diarrhoea. Oil is extracted through traditional method by heating bark of Dalbergia sissoo mixed with hard coconut shell and applied in small quantity to treat eczema, abscess or septic wound. Large amount causes burning sensation. Infusion of 2 kg leaves is given to camel to treat sunstroke. Leaves of Dalbergia sissoo are soaked overnight in water and given in the morning orally to the camel to treat dysuria.

5.2.110 Datura innoxia

Family: Solanaceae

Local name: Dhatura

Locality: Nalwa

Stout shrub, upto 1 m high, clothed with grey pubescence; leaves ovate, sinuate-toothed; flowers axillary, solitary; pedicels 2-3 cm long, recurved in fruit;
capsules 3.5-5.5 cm in diameter, globose, densely pubescent and armed with weak, 1.0-1.8 cm long spines. Common in wasteland, especially in the east of Aravalli.

Fl. & Fr.: Most part of the year.

Methodology of dose consumption:

The paste of whole plant is applied locally to treat mastitis whereas powder of seeds is given to animal to treat oestrus induction.

5.2.111 *Datura metel*

*Family:* Solanaceae

*Local name:* Dhatura, Kala-dhatura

*Locality:* Nalwa

Herb; leaves triangular, ovate; flowers axillary, solitary; capsule subglobose, deflexed, clothed with blunt tubercles. Naturalized in wastelands and open forests.

Fl. & Fr.: Most part of the year.

Methodology of dose consumption:

Extract of fresh leaves is given to the animal twice a day for 3 days to treat tonsillitis.

5.2.112 *Delonix elata*

*Family:* Caesalpinaceae

*Local name:* Sandeshra

*Locality:* Ardawata

Tall, erect, deciduous tree; leaves 4-15 cm long; pinnae 4-6 pairs; flowers in terminal racemes; pods linear-oblanceolate, reticulate, beaked, glabrous, dark brown. Common in wastelands; also planted along the roadsides.

Fl. & Fr.: November – June.

Methodology of dose consumption:
Decoction of 100 gm crushed stem bark is given to animal to treat dysentery and diarrhoea.

5.2.113 *Dendrocalamus strictus*

**Family :- Poaceae**

**Local name :-** Bans. Vanhedo

**Locality:** Mansa mata

Densely tufted, arborescent bamboos, upto 10 m tall, with swollen nodes; lower stem- sheaths covered on the back with golden-brown stiff hairs; internodes upto 50 cm long; ligules narrow, serrate; inflorescence a panicle of dense, globular heads; caryopsis subglobose, brown. Fairly common in dry deciduous forests on the top of hills forming distant patches.

FI. & Fr.: At the interval of many years.

Methodology of dose consumption:

Infusion of tender stem is given to animal once in a day upto three days to treat fractured bone. One tender culm (About 25-30 cm in length) is crushed and given to the animal orally two to three times to remove the intestinal worms. Decoction of stem is given to the animal for disposal of placenta after delivery.

5.2.114 *Dendrophthoe falcate* (plate 16)

**Family :- Loranthaceae**

**Local name :-** Kavlate ke bel, Salar-bel, Banda

**Locality:** Lohagal

Dichotomously branched, partial stem-parasite; with ellipticoblong, obovate or ovate-lanceolate leaves; flowers red, orange or yellowish-red in unilateral spikes; berries ovoid. A common stem parasite on the branches of Boswellia serrata and Commophora wightii in hilly tracts.

FI. & Fr.: August-February.

Methodology of dose consumption:
Extract of whole plant is applied locally on uterus to treat vulvo-vaginal-uterine-prolapse.

5.2.115 *Desmostachya bipinnata* (plate 12)

**Family:** Poaceae  
**Local name:** Dabb, Dabra  
**Locality:** Dabri

Tufted, stout, erect, rhizomatous perennial, up to 1.25 m tall; with creeping root-stocks; leaves acuminate, sheaths glabrous, densely flagellate; inflorescence 25-50 cm long, spikes 1.5-3.5 cm long, cluster bearing 20-30 spikelets, spikelets 2.5-3.5 mm long, linear, oblong, glumes unequal, lemmas 2.5 mm long, straw coloured. Commonly found near moist places particularly in sandy and clayey soils.

**Fl. & Fr.**: July – November.

Methodology of dose consumption:

Whole plant is fed to the animal to treat dysentery.

5.2.116 *Dichrostachys cinerea*

**Family:** Mimosaceae  
**Local name:** Ameena, Goya-Khair  
**Locality:** Tigias

Polygamous shrub; branchlets usually ending in spines, pubescent; leaves 2-pinnate, up to 6.5 cm long, with stalk, stipiform glands at the insertion of pinnae; spikes axillary or extra axillary; pods 4-7 by 0.60 -1.0 cm compressed, pubescent, dark brown. Common in open forests on rocky and sandy – loam soil.

**Fl. & Fr.**: July-November.

Methodology of dose consumption:

Seeds are boiled and given to the animal to treat hypogalactia.

5.2.117 *Digitaria adscendens*

**Family:** Poaceae  
**Local name:** Ghass
**Locali**ty: Sainipura

Erect or geniculately ascending annuals, often rooting at the lower nodes; leaves linear lanceolate; racemes 3-9, subsessile, subdigitate, 5-20 cm long; spikelets 2-nate. Fairly common throughout the state as forest undergrowth, in wastelands and neglected places.

Fl. & Fr.: August-October.

Methodology of dose consumption:

Mixture of seeds of Digitaria adscendens, Tribulus terrestris, Cucumis melo, Pedalium murex

And Citrullus lanatus is given to the animal to treat constipation.

**5.2.118 Dioscorea alata**

**Family:** Dioscoreaceae

**Local name:** Kada-Kanda, Ratalu

**Locality:** Khetari

Climbing or twining herbs, with large tuberous roots; stem 4-angled; leaves cordate–ovate to Cordate-obl ong; male flowers green, in panicles; female flowers in simple spikes; capsules leathery, elliptic, 3-winged. Mostly cultivated for its edible tubers.

Fl. & Fr.: August-December.

Methodology of dose consumption:

For treating all kind of abscesses in the animals, tubers of Dioscorea alata are fed to the animal.

**5.2.119 Dioscorea bulbifera** (plate 16)

**Family:** Dioscoreaceae

**Local name:** Vahrikand, Jangli aritha, Modi, Ratha Sankriyo, Raalar

**Locality:** Khetari
Twining, dioecious, glabrous herb with globose or pyriform tubers; bulbils common in leaf-axils; leaves alternate, broadly ovate-cordate to suorbicular, acute to acuminate, entire, 7 to 13 nerved at the base; male flowers closely arranged in long, pendulous simple or paniculate spikes; female flowers subtended by minute bracts in axillary, solitary or fascicled, pendulous spikes; seeds winged on the basal side only. Common in wastelands and open forests among bushes and shrubs and along hedges.

Fl. & Fr.: August-December.

Methodology of dose consumption:

Paste of 25-30 gm tuber is given to the animal once in a day to treat mastitis. Larger quantity is poisonous. Tuberous roots are fed to the animal to treat sterility.

5.2.120 *Diospyros melanoxylon*

**Family**: Ebenaceae

**Local name**: Tendu, Timru, Tendu-patta

**Locality**: Lohagal

Deciduous tree, bark exfoliating in 4-angular scales; leaves 5.17 by 4-12 cm, ovate-elliptic or oblong, coriaceous, pubescent; male flowers in subsessile, drooping cymes, female flowers solitary; fruits 2-4 cm in diameter; seeds obovate oblong, blackish. Fairly common in the forest and wastelands.

Fl. & Fr.: April-November.

Methodology of dose consumption:

Crushed fruits are given to the animal to treat dysentery.

5.2.121 *Echinops echinatus* *(plate 12)*

**Family**: Asteraceae

**Local name**: Modokanto, Oontkantalo, Oont-Kanti, Utkali.

**Locality**: Abusar
White cottony herbs; with pinnatifid, spinescent leaves; heads white, blue or yellow, 1- flowered, clustered in spinous gobose compound heads. Common on sandy plains and dunes, rarely on hard gravel soils.

Fl. & Fr.: October-June.

Methodology of dose consumption:

Infusion of roots is given to animal to treat flatulence whereas extract of roots is applied locally on the uterus to treat vulvo-vaginal-uterine-prolapse. About 100 gm of root powder of Echinops echinatus and 100 gm bark powder of Acacia Senegal are mixed in 1 kg curd and applied twice in a day on the body of animal to remove lice and ticks.

5.2.122 Elettaria cardamomum
Family: Zingiberaceae
Local name: Elaichi

Locality: Ardawata college

A tall herbaceous perennial with subterranean branching rootstock, 1.5 to 5 m in height; leaves subsessile, elliptic or lanceolate with sheathing base; flower in panicles; fruits trilocular, subglobose capsule, marked with many vertical ribs; seeds 15-20 per pod. Cultivated plant.

Fl. & Fr.: September-January.

Methodology of dose consumption:

Dry seed powder is mixed with clove and fed to the animal for disposal of placenta after delivery.

5.2.123 Eleusine coracana
Family: Poaceae
Local name: Maal

Locality: Singhana
Tall, erect, stout annuals; leaves distichous, flat, linear, acute; ligule a hairy membrane; spike digitate; rachis flattened; caryopsis smooth and rugose. Mostly cultivated in the eastern Rajasthan for its edible grains.

Fl. & Fr.: August-November.

Methodology of dose consumption:

Bread made up to Eleusine coracana flour is fed to the animal once in a day to treat diarrhoea and twice a day to treat mastitis locally called as “thanella”.

5.2.124 *Elytraria acaulis*

Family: - Acantaceae

Local name: - Kala gathia, Galobi, Dasmul

Locality: Lohagal

Herb, up to 20 cm high, with fibrous roots; leaves obovate to oblanceolate, rounded or obtuse, crenate, base cuneate, glabrous, scapes up to 22 cm long, many flowers in simple or branched spikes; fruit white; capsule 0.5 – 0.75 by 0.25-0.35 cm, ovoid, acute, glabrous, brownish; seeds many, more or less ovoid, minute, flattened, papillose brown. Common in moist and shady places viz. rock-crevices, along the streams and other rocky gravelly habitats.

Fl. & Fr.: April-October.

Methodology of dose consumption:

Decoction of 50 g of dried roots is given to the animal twice in a day for 7 days to treat nematoid infection. Extract of whole plant is given to animal to treat dysentery.

5.2.125 *Enicostema axillare* (plate 13)

Family: - Gentianaceae

Local name: - Naame, Naama, Kadava, Nahli

Locality: Bagar
Perennial herb, with quadrangular branches from the base; leaves sessile, 1-7 by 0.6-1.3 cm, linear to linear lanceolate, obtuse, amplexicaule; flowers subsessile, many in axillary, capitates, opposite fascicles, white; capsule 3-5 mm long, ellipsoid-oblong, glabrous, septicidally 2-valved; seeds many, minute. Common in open plains, forests, grassland and in cultivated field.

Fl. & Fr.: September-January.

Methodology of dose consumption:

About 50 g leaves are given with fodder to the young animal upto five days to treat fever. Root extract is given orally and also applied locally on uterus of animal to treat vulvo-vaginal-uterine-prolapse.

5.2.126 *Ephedra ciliate* (plate 13)

**Family:** Gnetaceae

**Local name:** Oont phog

**Locality:** Mandrella

Dioecious, much-branched, climbing or scandent shrubs; leaves 2-4 at each node, upto 25 by 1.5 mm long; fruits 8 by 7 mm, white, semi-transparent; seeds 2, brown. Generally found in desert on sandy to gravelly or even on rocky plains.

Fl. & Fr.: January-April.

Methodology of dose consumption:

Decoction of about 5 kg plant is given to the animal to treat constipation.

5.2.127 *Euphorbia caducifolia* (plate 13)

**Family:** Euphorbiaceae

**Local name:** Thor

**Locality:** Malsisar

Glabrous, perennial, fleshy shrub; stem armed with spines; leaves deciduous; cyathia in triads, red; styles bifid. Abundant in rocky habitats of Aravalli.

Fl. & Fr.: January-April.
Methodology of dose consumption:

The latex of the plant is applied on uterus of animal to treat vulvo-vaginal – uterine-prolapse.

5.2.128 *Euphorbia fusiformis*

**Family** :- Euphorbiaceae

**Local name** :-Jangli palak, Pahadi mooli

**Locality:** Surajgarh

Dwarf, glabrous her; stem reduced to a long, stout, underground cylindric rootstock; leaves subsessile, ovate or oblanceolate; cyme from the crown of the rootstock, dichotomously branched, 3- to many flowered, appearing after the leaves have fallen; capsules 8 mm. in diameter, cocci compressed. Rare, in wastelands, particularly in the Southern parts of Rajasthan.

**Fl. & Fr.**; April-June.

Methodology of dose consumption:

150 g tuber is crushed and given orally to the animal to treat sunstroke. Root powder is given orally to treat dysentery and fever.

5.2.129 *Euphorbia heyneana*

**Family** :- Euphorbiaceae

**Local name** :-Choti dudhee

**Locality:** Pilani

Prostrate, dischotomously branched, glabrous herb, with ribbed internodes; leaves opposite, obliquely oblong or obovate-oblong; cyathia reddish green; involucres stalked, axillary, campanulate, glabrous; capsule obtusely keeled glabrous. Common on rock crevices and marshy places.

**Fl. & Fr.**; October-March.

Methodology of dose consumption:
Whole plant is crushed and given to the animal along with fodder to stop excessive bleeding after delivery.

5.2.130 *Euphorbia hirta*

**Family:** Euphorbiaceae  
**Local name:** Dudhi  
**Locality:** Dingli  

Procumbent, ascending or erect, annual, hairy herbs; leaves opposite, variable in size, obliquely lanceolate, ovate or rhomboid oblong, stipules subulate; cyathia many, crowded in axillary and terminal, shortly pedunculate cymes; capsules globose trigonously, appressedly hairy; seeds ovoid. Common throughout the state of Rajasthan, preferably in sandy habitats.  
**FI. & Fr.:** Almost throughout the year.  

**Methodology of dose consumption:**  

Paste of about 25 gm whole plant of *Euphorbia hirta* is given to the animal with water through drenching tube once only to treat diarrhoea. Paste of leaves of this plant and *Cynodon dactylon* is also given to the animal with milk to treat diarrhoea.

5.2.131 *Euphorbia neriifolia*

**Family:** Euphorbiaceae  
**Local name:** Danda-thor, Thuar  
**Locality:** Sardar sahar  

Erect, deciduous shrub or small trees; leaves obovate-oblong, crowded at the stem; stem subfleshy; involucres 3-nate; glands without petaloid limb. Common in rocky habitats in plains or on naked hillocks.  
**FI. & Fr.:** March –July.  

**Methodology of dose consumption:**
Two to three drops of the fresh latex of the plant is dropped over the injured portion as an antiseptic. Roots are fed to the cattle with fodder for oestrus induction and also disposal of placenta after delivery. Small quantity (4-5 drops) of latex is used as purgative to treat constipation.

5.2.132 *Euphorbia tirucalli*

**Family** :- *Euphorbiaceae*

**Local name** :-Anguli thor

**Locality**: Sardarpura

Shrub or small tree; branches smooth, spreading, terete, rush like, almost leafless. Cultivated as hedge plant.

Fl. & Fr.: September-December.

Methodology of dose consumption :

Latex is applied locally to treat skin diseases like dermatitis, eczema, etc.

5.2.133 *Fagonia indica*

**Family** :- *Zygophyllaceae*

**Local name** :- Dhamasa

**Locality**: Sikar

Profusely branched, glandular herbs, with terete internodes and spines not exceeding the unifoliolate leaves; flowers pinkish-purple. Common in sandy to gravelly soils in desertic zones.

Fl. & Fr.: September-March.

Methodology of dose consumption :

About 200 g of whole plant is boiled in 10 litre water till it reduces to 1 litre and given to camel to treat cough. Plant is boiled after adding 200 g tobacco leaves powder, filtered and applied externally to kill the lices.

5.2.134 *Ferula asafetida*
Family: Apiaceae

Local name: Hing

Locality: Fatehpur

Perennial herbs, up to 2 m high; lower leaves ovate, cauline sheath large; umbels terminal, large, compound. Vittae broad, as long as the carpels; seeds dorsally much compressed. Cultivated for resinous exudates of the root.

Fl. & Fr.: January-December.

Methodology of dose consumption:

10 gm Asafoetida is given to the animal three times to treat infection of nematode in intestines. Resin powder is given with milk to treat flatulence. A pinch of resin of Ferula asafetida mixed with 500 ml of Brassica campestris seed oil is given to buffalo for quick relief from flatulence.

5.2.135 Ficus benghalensis

Family: Moraceae

Local name: Badd, Bargag, Vad, Vadlo, Badla

Locality: Pilani

Large evergreen tree, with prop roots and grey to grayish brown, rough bark; leaves alternate, ovate-obleng, ovate-orbicular or elliptic, coriaceous; receptacles axillary, geminate, depressed-globose, silky-pubescent, bright red when ripe. Common in wastelands, walls of old buildings and on other trees, also planted as an avenue tree along roads and near the temples.

Fl. & Fr.: Almost throughout the year.

Methodology of dose consumption:

Paste of bark and root is applied to treat the fractured bone.

5.2.136 Ficus carica

Family: Moraceae
**Local name:** Anjir

**Locality:** Mandrella

Tall tree, without aerial roots; leaves broadly ovate, entire or lobed, softly pubescent beneath; receptacles axillary, obovoid oblong, thinly pubescent. Cultivated for its sweet, edible figs used as dry fruits.

Fl. & Fr.: Throughout the year.

Methodology of dose consumption:

Latex of ficus carica is applied on the skin to treat eczema and carbuncles.

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**5.2.137  Ficus racemosa**

**Family:** Moraceae

**Local name:** Gular, Umar, Umbio, Kusumati

**Locality:** Ranoli

Tall evergreen tree, with short aerial roots; leaves ovate-oblong or elliptic-lanceolate; receptacles on short, warty, tuberculate, leafless branchlets, ovoid; achenes reddish-brown. Found in the forests along water courses.

Fl. & Fr.: Almost throughout the year.

Methodology of dose consumption:

Latex of Ficus racemosa is applied on the skin to treat carbuncles. Paste of bark of Ficus racemosa is applied on the injury caused by snake-bite. Few drops of latex of the plant is applied. Locally on skin as an antiseptic.

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**5.2.138  Ficus religiosa**

**Family:** Moraceae

**Local name:** Pipal, Peepli

**Locality:** Chirawa
Large, deciduous, glabrous tree, with grey or grayish black bark; leaves ovate-suborbicular; receptacles in axillary pairs, spherical, reddish purple when ripe. Common in wastelands, on the walls of old buildings, on large trees and usually planed near temples all over the area.

Fl. & Fr.: Almost throughout the year.

Methodology of dose consumption:

Extract of about 5 kg leaves of this plant is given orally to the buffalo after giving bath to treat dysuria and haematuria. Decoction of bark is given to the animal for disposal of placenta after delivery. 250 gm crushed fruits are given to the animal to conceive.

5.2.139 Gardenia turgid
Family: Rutaceae
Local name: Padairi, Padatatu

Locality: Fatehpur

Small, deciduous tree; branches armed with straight thorns; leaves elliptic to obovate, entire, glabrous; flowers from the young leafless shoots, white, unisexual, male fascicled, female solitary. Occasional in the forests.

Fl. & Fr.: April-June.

Methodology of dose consumption:

Leaf decoction is applied locally to treat the wound.

5.2.140 Garuga pinnata
Family: Burseraceae
Local name: Kankad, Vanagra

Locality: Jhunjhunu

Tall deciduous tree 7-15 m high; leaves crowded at the end of branches, 20-36 cm long; terminal panicles, creamy white; drupes subpyriform, fleshy, smooth, glabrous. Rare, in dry deciduous forest.

Fl. & Fr.: January –May.
Methodology of dose consumption:

Decoction of bark is used to treat the infection in hooves.

5.2.141 *Gossypium herbacum*

*Family:* Malvaceae  
*Local name:* kapas  
*Locality:* Dhatarwala

A small shrub; stem rigid sparsely pilose and branched; leaves simple, alternate, cleft up to half into 3-7 lobes; flowers yellow with purple centre; fruits rounded beaked capsules, 3-4 locular, seeds usually with two coats of hairs, white grey or reddish brown in colour. Cultivated as a rainy season crop in many parts of the state.

*Fl. & Fr.:* August – November.

Methodology of dose consumption:

Decoction of unripe fruits and roots is given to the animal for the disposal of placenta after delivery.

5.2.142 *Gloriosa superb* (plate 13)

*Family:* Liliaceae  
*Local name:* Kalihari  
*Locality:* Aravalii hills

Perennial herb; 1.5-4.0 m high; leaves sessile, alternate, opposite or in whorls, ovate- lanceolate, acuminate, ending in a tendril; flowers axillary, solitary, often forming terminal corymbose, yellow, tinged with red in upper half, at length completely scarlet; capsule oblong speticidal. Common among the clumps of trees and shrubs in the forests of Aravalii hills.

*Fl. & Fr.:* August-November.

Methodology of dose consumption:
Paste of about 250 gm tubes of Gloriosa superb is mixed with water and applied on hooves of the animal to treat from foot and mouth disease. The extract of tuber is also applied on uterus of animals to treat vulvo-vaginal uterine-prolapse.

5.2.143 *Grewia admine*

**Family :- Tiliaceae**

**Local name :-** Gangestri

**Locality:** Harshnath

Shrub, young parts tomentose; leaves ovate-oblong; flowers in axillary, umbellate cymes. Rare, in wastelands and open forests.

**Fl. & Fr.:** January-October.

**Methodology of dose consumption :**

About 50 gm roots are crushed and given with water, twice in a day upto three days to treat fractured bone. The extract of leaves, 4 to 5 eggs of hen and milk of cow is mixed and given to the animal daily with the help of either a tumbler or drenching tube upto 10 days to treat fractured bone.

5.2.144 *Grewia orientalis*

**Family :- Tiliaceae**

**Local name :-** Gangchi

**Locality:** Fatehpur

Large shrub or small tree; leaves elliptic-oblong to sub-orbicular; flowers in axillary cymes; drupes 8-10 mm in diameter, subglobose, 2 to 4 – lobed, hairy when young. Rare, in scrub forests.

**Fl. & Fr.:** September- October.

**Methodology of dose consumption :**

About 50 gm leaves are fed to the animal with fodder to treat impaction. 50 gm root powder is mixed with 500 ml water and given with cold water to treat
stomach disorder. Root extract of Grewia orientalis is given orally to treat fractured bone.

5.2.145 *Grewia tenax*

**Family :-** Tiliaceae  
**Local name :-** Gangir, Kankera  
**Locality:** Jhunjhunu

Shrub, bark ash-coloured and lenticelled; leaves ovate-cordate or ovate-oblong, crenate, glabrous above, hairy beneath; flowers in pedunculate, umbellate cyme; drupes 1.0-1.5 cm in diam., 2 to 4- lobed, glabrous, orange coloured when ripe; stones 1-4, 1 to 2 celled. Common in the forests, on the hill slopes, wastelands and on the boundaries of fields and gardens.  
**Fl. & Fr.:** August-October.

Methodology of dose consumption :  
Root powder is given to the animal to treat fractured bone.

5.2.146 *Guizotia oleifera*

**Family :-** Asteraceae  
**Local name :-** Kali teeli  
**Locality:** Ghardana

A stout, erect, smooth or scabrid, leafy herb; leaves sessile, half- amplexicaul, linear or lanceolate- oblong, obtuse, serrate; head 1.2- 2.5 cm in diam; peduncle naked. Grows as a weed in cultivated fields.  
**Fl. & Fr.:** September-December.

Methodology of dose consumption :  
Poultice of leaves is tied locally (on the swollen portion of animal body) to get rid of swelling with pain.

5.2.147 *Helicteres isora* (plate 14)
Family: Sterculiaceae

Local name: Mororpphalli, Hateri

Locality: Aravali hills

Shrub or small tree; leaves bifarious, broadly ovate to orbicular; flowers solitary or in few – flowered axillary cymes. Common in forests, particularly on hilly slopes.

F1. & Fr.: August – November.

Methodology of dose consumption:

Powder of 100 gm pods is given orally to animal to treat dysentery. About 100 gm paste either of bark or dried seeds of bloody dysentery and diarrhoea.

5.2.148 Hemidesmus indicus

Family: Periplocaceae

Local name: Dudhli, Garmali, Anantmul, Koorvi

Locality: Aravali hills

Scandent undershrub, with woody rootstock, leaves opposite, elliptic – oblong to linear – lanceolate, acute at the apex; flowers in axillary, succssesile cyme; follicles tapering to a joint, slightly falcate, glabrous; seeds ovate oblong, compressed, black. Common in forest in south-east of Aravalli.

F1. & Fr.: Almost throughout the year.

Methodology of dose consumption:

Root decoction is applied locally to treat skin diseases.

5.2.149 Heteropogon contortus

Family: Poaceae

Local name: Suva ghass, Lapida, Lapia, Pallio, Lapadioo
Locality: Birmi

Erect, tufted perennial; leaves, linear, acuminate, sheaths compressed, keeled, glabrous; ligule a ciliate, scarious rim; racemes solitary; spikelets closely imbricate; lower glumes of sessile spikelets long, elliptic – oblong, hispidulous awn long, hirtellous. Fairly common in south-eastern Rajasthan in open wastelands, fallow fields, along roadsides etc.

F1. & Fr.: August – November.

Methodology of dose consumption:

The whole plant is crushed and given orally to animal to treat constipation.

5.2.150 *Hibiscus rosa-sinensis*

Family: Malavceae

Local name: Gurhal

Locality: Ardawata

Evergreen shrubs; flowers axillary, pink, red or rose-coloured; stamina tube exceeding the corolla.

F1. & Fr.: Throughout the year.

Methodology of dose consumption:

About 500 gm leaves of *Hidiscus rosa – sinensis* are fed to the animal with fodder to treat haematuria and leucorrhoea.

5.2.151 *Holarrhena pubescens*

Family: Apocynaceae

Local name: Kadi, Kodaya, Hadadiyo, Kadwa

Locality: Lohagal
Ahrub or small tree; leaves ovate – elliptic abruptly acuminate; flowers white in corymbose cymes, follicles cylindric, lenticelled; seed linear – oblong compressed, comose. Common in the forest in hilly tracts.

F1. & Fr.: May – September.

Methodology of dose consumption:

Extract of stem bark is given orally to the animal to treat dysentery and anthrax. Stem bark paste is applied locally to treat wound.

5.2.152 *Holoptelea integrifolia*

**Family:** Ulmaceae

**Local name:** Bander bati, Churil

**Locality:** Lohagal

Large, spreading, almost glabrous, deciduous tree; leaves ovate to abruptly acuminate; flowers greenish – yellow; fruits broadly oblong or orbicular, deeply notched at the apex, flat, winged. Common in the dry deciduous forests, wastelands etc.

F1. & Fr.: December – May.

Methodology of dose consumption:

Paste of leaves of Holoptelea integrifolia is applied to treat eczema.

5.2.153 *Hygrophila auriculata*

**Family:** Acanthaceae

**Local name:** Hiene

**Locality:** Sahva

Hispid annual, herb with thickened nodes; leaves sessile, oblong or lanceolate, hispid in verticels of six at node; spines axillary; flowers in each axillary
whorl; capsule liner – oblong, 4 – 8 seeded. Abundant in swampy habitats, waste places along ditches and canals in association with grasses and sedges.

F1. & Fr.: August – February.

Methodology of dose consumption:

Decoction of 100 gm leaves is given orally to animal to treat foot and mouth disease.

5.2.154 *Imperata cylindrica*

**Family:** Poaceae

**Local name:** Siru

**Locality:** Narodara

Erect, rhizomatous perennial, with bearded nodes; leaves tapering at both ends, villous at the base; panicles spiciform, cylindrical, silky white hairy, spikelets in pairs, one sessile and other pedicelled, arranged in racemose panicles. Fairly common in moist and marshy habitats.

F1. & Fr.: May – August.

5.2.155 *Indigofera linifolia*

**Family:** Fabaceae

**Local name:** Jaljamni

**Locality:** Dhamora

Erect of prostrate, annual or perennial herb; leaves apiculatatem appressed hairy; flowers in axillary racemes; pods globosem, apiculate silky hairs. Widely distributed in the forests, wastelands, parks, lawns and other similar habitats.

F1. Fr.: July – December.

Methodology of dose consumption:
Paste of whole plant is applied locally to treat wound and sore.

5.2.156 *Jatropha curcas* (plate 16)

**Family :- Euphorbiaceae**

**Local name :-** Ratanjot

**Locality:** Fatehpur

Soft wooded, deciduous shrub; leaves cordate – ovate to nearly orbicular, palmately 3 to 5 angled or lobed, glabrous, 5- to 7- nerved at the base; flowers in 6-8 cm long, terminal or extra-axillary corymbose cymes; capsule globose or broadly ovoid, yellow and smooth; seeds oblong. Commonly grown around the fields for fencing, also naturalized in wastelands.

F1. Fr.: Mostly throughout the year.

**Methodology of dose consumption :**

Three doses of 10 gm crushed roots are given to the animal once on alternative day to treat broken joint / bone. Paste of roots is given only once to the animal as a purgative. Dose for goat, cow and buffalo is 125gm, 250 gm and 500 gm respectively. Few drops of latex is poured in the eyes of animal suffering from eye disease. Dried root powder is given orally to treat bronchial disease.

5.2.157 *Jatropha gossypifolia*  (plate 16)

**Family :- Euphorbiaceae**

**Local name :-** Ratanjot

**Locality:** Fatehpur

Tall, erect, glandular hairy shrub, with deep reddish – purple branches; leaves orbicular to obovate, palmately 3 to 5 – lobed; flowers in terminal, trichotomous cymes. Naturalized in wastelands near habitations, also cultivate in the gardens and on the edges of fields.
F1. & Fr.: Almost throughout the year.

Methodology of dose consumption:

About 30 – 40 seeds of *Jatropha gossypifolia* are given to animal to treat constipation. Extract of stem is given orally to the animal to treat fractured bone. The decoction of roots is given to domestic animals through drenching tube to treat uterus diseases.

**5.2.158 Kalanchoe pinnata (plate 17)**

**Family :- Crassulaceae**

**Local name :-** Patharchata

**Locality:** Lohagal

Erect, glabrous herb, up to 1 m high; stem obtusely 4 – angled, purple spotted; lower and uppermost leaves simple; middle ones pinnately 3- to 5- foliolate; flowers pendulous in lax panicles. Grow wild in shaded places and along water courses; usually cultivated for ornamental purpose.

F1. & Fr.: December – June.

Methodology of dose consumption:

Leaf paste is applied locally on body to treat skin diseases.

**5.2.159 Lagenaria siceraria**

**Family :- cucurbitaceae**

**Local name :-** Dhodka, thumbo, Thumba

**Locality:** Udaipurwati

Climbing herb; leaves angular or shortly 3- lobed leaves; flowers white; fruits bottle shaped. Cultivated for the fruits cooked as vegetable.

F1. & Fr.: November – March.
Methodology of dose consumption:

Fruit pulp is given orally to the animals to increase the secretion of milk.

5.2.160 *Lawsonia inermis*

**Family:** Lythraceae

**Local name:** Mahendi

**Locality:** Jhunjhunu

Much branched shrub; leaves broadly lanceolate; flowers creamish, fragrant; capsules globose. Cultivated as a hedge plant in the gardens and lawns.

F1. & Fr.: August – December.

Methodology of dose consumption:

Paste of leaves is applied on skin to treat burns. Fresh leaf paste is applied to treat fractured bones and also applied locally to treat foot and mouth disease.

5.2.161 *Leea macrophylla*

**Family:** Leeaceae

**Local name:** Dalvad, Lal patti

**Locality:** Aravali hills

Erect herb; with simple, broadly ovate to subcordate leaves; flowers small white; fruits of the size of a small cherry, black, succulent. Rare, in the forest of Southern part of the state.

F1. & Fr.: August – November.

Methodology of dose consumption:

Decoction of 2.5 cm tuber is given to animal through drenching tube to treat food poisoning. Root powder is given orally to treat dysentery. Leaf paste is applied locally to treat fractured bone.
5.2.162 *Leptadenia pyrotechnica*

**Family:** Asclepiadaceae

**Local name:** Kheep

**Locality:** Churu

Bushy shrub; with caduceus, linear – lanceolate leaves; greenish yellow flowers; follicles terete, tapering to a slender beak. Abundantly found on sand dunes. Frequently throughout in sandy plains.

F1. & Fr.: August – January.

Methodology of dose consumption:

Infusion of stem is given to the camel to treat flatulence. Tender shoots are cut into small pieces and mixed with fodder for oestrus induction.

5.2.163 *Leptadenia reticulate*

**Family:** Asclepiadaceae

**Local name:** Jhunka

**Locality:** Khudana

Twining shrub; leaves broadly ovate – lanceolate; flowers in lateral, many – flowered umbellate cyme; follicles broadly lanceolate, with thick curved beak. Common in wastelands and open forests and on the edges of fields and gardens.

F1. Fr.: Throughout the year.

Methodology of dose consumption:

Decoction of whole plant is given to animal once in a day upto four to four days to increases the secretion of milk.

5.2.164 *Leucas aspera*

**Family:** Lamiaceae
Local name :- Piyari, Kaddiyo

Locality: Sakambari

Densely hairy herb; linear – oblong leaves; flowers sessile or so, in terminal and axillary whorls reaching 2.5 cm in diameter; bracts linear, acute, bristle – shaped; nutlets oblong, smooth, brown. Common form plains to hills throughout the state.

F1. & Fr.: Almost throughout the year.

Methodology of dose consumption:

Bolus prepared form mixture of 10gm piper longum (Choti pipli) and 20gm whole plant of *Leucas aspera* is given to the animal to treat fever.

5.2.165 *Leucas cephalotes*

Family :- Lamiaceae

Local name :- Kubi

Locality: Ringus

Erect, annual, hispid herb; leaves ovate, subacute, membranous;

Flowers sessile, in dense, globose, terminal whorls; nutlets abovoidoblong, rounded at apex, smooth, brown. Common weed in wastelands and cultivated fields.

F1. & Fr.: August – February.

Methodology of dose consumption:

Whole plant is fed to sheep for overall improvement in health.

5.2.166 *Lindernia crustacean*

Family :- Scrophulariaceae

Local name :- Chotibui
**Locality:** Aravali hills

Diffusely branched, annual herbs, with 4 - angled stem hairy on the angles; leaves ovate; flowers axillary, solitary and subracemose; capsule long, obavate, speculate. Common from plains to the hills in wet habitats, particularly in the east of Aravalli.

F1. & Fr.: August – February.

Methodology of dose consumption:

Paste of 5-10 gm leaves of *Lindernia crustacean* is applied twice in a day to treat eczema.

5.2.167 *Luffa acutangula*

**Family :- Cucurbitaceae**

**Local name :-** Jangli raroie

**Locality: **Palsana

Extensive, scabrous climber; leaves 10-20 by 10-20 cm, palamately 5- to 7-angled or lobbed; flowers yellow to pale yellow; fruits 15-30 by 5- 10 cm, not warty; seeds 10-20 by 6-8 mm, ovate, compressed, black. Naturalized in wastelands, outskirts of forest, on the boundaries of gardens and field among hedges.

F1. & Fr.: July – October.

Methodology of dose consumption:

Decoction prepared from the mixture of fruits of *Luffa acutangula*, seeds of *Trachyspermum ammi* and black salt is given to the animal by drenching tube to treat flatulence. The powder of whole plant is mixed with curd and given orally up to three days to treat the disease locally known as ‘IPannichera’ (diarrhoea and dysentery) and ‘Mottichera’ (vomiting).

5.2.168 *Luffa echinata*
Family :- *cucurbitaceae*

**Local name** :- Jangli turi, Kakora

**Locality**: Budania

Climber; tendrils bifid; leaves reniform – orbicular, flowers white; fruits ovoid, bristly. Common on the outskirts of forests and along the fences of gardens and fields.

F1. Fr.: August – October.

Methodology of dose consumption:

Fruit of *Luffa echinata* is crushed and mixed in mustard oil. This mixture is given to domestic animal to treat stomach disorder.

5.2.169 *Lyceum barbarum*

**Family** :- *Solanceae*

**Local name** :- Mureli, Arak – mehendi

**Locality**: Bidasar

Spinous shrubs, with solitary or fascicled, oblong-lanceolate leaves. Flowers creamish – white. Fruits red when ripe. Common in scrub forests, particularly in desertic zones.

F1. & Fr.: September – February.

Methodology of dose consumption:

Decoction of root is given orally for disposal of placenta after delivery. A snuff of powdered root is given in nose of horse to treat in respiratory diseases.

5.2.170 *Madhuca indica*

**Family** :- *Sapotaceae*

**Local name** :- Mahua, Mahuwa, Mauo.
**Locality:** Kotputali

Large deciduous tree; leaves elliptic – obovate; flowers in axillary fascicles; berries ovoid. Common in wastelands and on the fringes of forest in South and South eastern parts of the state.

F1. & Fr.: March – June.

Methodology of dose consumption:

The electuary prepared from flowers is given to animals orally to facilitate easy disposal of placenta after delivery.

5.2.171 *Mallotus philippensis*

**Family:** Euphorbiaceae

**Local name:** Sindhur

**Locality:** Aravali hills

Small, much branched, dioecious, evergreen tree, with thin dark grey bark; leaves alternate, ovate to ovate lanceolate, acuminate, entire to slightly toothed, subcoriaceous, puberulous and glandular beneath; male flowers in terminal spikes, female solitary in short spike; seeds globose, smooth, black. Common in the dry deciduous forests in the east of the Aravalli.

F1. Fr.: December – March.

Methodology of dose consumption:

Red powder extracted from the capsule of this plant is poured on cotton and tied on the broken horns of animals to stop bleeding and for early healing.

5.2.172 *Mangifera indica*

**Family:** Anacardiaceae

**Local name:** Amba, Amboo, Aam
Locality: Maharampur

Evergreen tree; leaves oblong – lanceloate; followers polygamous in panicles; drupes yellow when ripe. Indigenous in south-east Rajasthan; also planted in the orchards.

F1. Fr.: December – july.

Methodology of dose consumption:

Decoction of 50 gm bark is given to the animal by drenching tube to treat diarrhoea. 200 gm bark is crushed and boiled with 1 kg barley and 1 kg jiggery and after cooling given orally two times in a day in morning and evening to increase the secretion of milk. About 100 g bark is crushed and few with jiggery to bulls to increase sexual power.

5.2.173 *Manilkara hexandra*

Family: Sapotaceae

Local name: Chotta runkadi

Locality: Ringus

Evergreen tree, with deeply furrowed bark; leaves elliptic obovate or oblong; flower in axillary fascicles of 2 – 6; berries ovoid, 1 – seeded.

F1. & Fr.: October – April.

Methodology of dose consumption:

Paste of stem bark powder is applied in the throat of animal to treat tonsillitis.

5.2.174 *Martynia annua* (plate 17)

Family: Martyniaceae

Local name: Kagala, Bichhu – kanto

Locality: Sithal
Glandular pubescent herb; stem fistular; leaves ovate cordate, drooping; fruits woody, beetle-shaped, hooked at the tip. Naturalized along roads, railway lines and fringes of forests.

F1. & Fr.: August-October.

Methodology of dose consumption:

Decoction of whole plant is applied locally on the wound of animal as an antiseptic. Paste of stem bark is applied locally to treat bone fracture.

5.2.175 *Melia axedarach*

**Family:** Meliaceae

**Local name:** Bakain, Desi – neem

**Locality:** Bakhatarpura

Tree; leaves 1 to 3 – pinnate; flowers in axillary panicles; drupes ellipsoid – oblong, 4 to 5–seeded. Rarely found in wastelands; usually planted along the roads.

F1. & Fr.: Nearly throughout the year.

Methodology of dose consumption:

About 25 -30 gm leaves of *Melia azedarach* is given to the animal once in a day upto 3 days for removal of internal parasites. Excess quantity is poisonous.

5.2.176 *Menthe spicata*

**Family:** Lamiaceae

**Local name:** Pudina

**Locality:** Bhompura

Aromatic, creeping or ascending herb; leaves ovate to ovate elliptic; flowers purplish. Commonly grown in areas with plenty of water, in gardens.

F1. & Fr.: Most part of the year.
Methodology of dose consumption:

The decoction of leaves with salt and sugar is given orally to animals for disposal of placenta after delivery.

5.2.177 *Mimosa hamata*

**Family:** Mimosaceae

**Local name:** Amado

**Locality:** Fatehpur

Prickly shrub; with 3 – 6 pairs of pinnae and 5 – 14 pairs of leaflets; flowers in axillary head; pods falcate and twisted. Common in scrub and deciduous forests.

F1. & Fr.: December – March.

Methodology of dose consumption:

Powder of seeds is given as tonic after delivery.

5.2.178 *Mimosa pudica*

**Family:** Mimosaceae

**Local name:** Chuimuai

**Locality:** Khetari

Much branched, prickly herb; pinnae sensitive, 2-4 pairs; flowers in globose heads; pods flat, slightly curved. Often found as an escape in the gardens; usually cultivated.

F1. & Fr.: September – November.

Methodology of dose consumption:

Root extract is given to animal especially oxen suffering from neck tumour due to continuous yoke ploughing. After giving extract for three days, rest is given for about six days to ox for complete recovery.
5.2.179 *Mirabilis jalapa*

**Family:** Moringaceae  

**Local name:** Gulabbas  

**Locality:** Sultana

Erect, glabrescent to pubescent herb, with tuberous roots; leaves ovate, acuminate or acute subentire, glabrescent, under surace with raphides; flowers subsessile, in fascicles, scarlet, showy; nut subglobose. Naturalized as a weed in cultivate fields.

F1. & Fr.: Almost throughout the year.

Methodology of dose consumption:  

Root decoction is applied locally to treat wound.

5.2.180 *Moringa oleifera*

**Family:** Moringaceae  

**Local name:** Sainja  

**Locality:** Mandrella

Small tree, bark corky, wood soft; with 3- pinnate leaves, pinnae and pinnules opposite, deciduous; flowers in spreading axillary panicles; pods long, 9- ribbed; 3-angled, the angles winged. Planted in gardens.

F1. & Fr.: Throughout the year.

Methodology of dose consumption:  

Paste of leaves and stem bark is given with sugar to increase lactation. Decoction of leaves is given orally to treat swelling, boils and anthrax.

5.2.181 *Momordica dioica* (plate 17)

**Family:** Cucurbitaceae
Local name :- Jangli karela,, Kikora

Locality: Bajawa

Perennial climber, with tuberous roots; leaves ovate, muconate, entire or 3 to 5 – lobed; flowers yellow ellipsoid or void, beaked, densely echinate, with soft spines. Common on the hedges of cultivated fields, gardens and outskirts of forest.

F1. & Fr.: August – October.

Methodology of dose consumption:

Extract of tuber is applied externally on skin of animal to kill extoparasites.

5.2.182 Mucuna pruriens

Family :- Fabaceae

Local name :- Kamach, Konch

Locality: Beed of jhunjhunu

Twining, hirsute, annual herb; leaves trifoliate; flowers 2-3 cm long in dropping, 6-30 flowered raceme; pods slightly curved at both end in opposite directions, densely bristly. Common in wastelands and open forests among the clumps of trees and shrubs.

F1. & Fr.: August – April.

Methodology of dose consumption:

One or two pods of Mucuna pruriens are mixed with jiggery (Saccharum officinarum) or wheat bread and fed to the female animal twice a day for five days for oestrus induction.

5.2.183 Musa paradisiaca

Family :- Musaceae

Local name :- Kela, kell
Locality: Narhar

Tree like stoloniferous herbs; leaves spirally arranged oblong; flowers yellow, lower female, upper male in dropping spathaceous spikes; fruits 3- gonous oblong. Cultivated in the orchards for edible fruits.

F1. & Fr.: Throughout the year.

Methodology of dose consumption:

Fresh leaves are fed to the cow after delivery for disposal of placenta. Fruits mixed with are fed to animal to treat swelling of under and mastitis.

5.2.184 Nerium oleander

Family :- Apocynaceae

Local name :- Kaner

Locality: Chirawa

Evergreen shrub; leaves linear – elliptic; flowers white or red in cymes. Cultivated for ornamental purposes.

F1. & Fr.: Throughout the year.

Methodology of dose consumption:

Root paste is applied on infected part of body to treat eczema.

5.2.185 Nicotiana tabacum

Family :- Solanaceae

Local name :- Tambakhu

Locality: Dhararwala

Glandular – pubescent herbs, with pinkish flowers and ovate capsules. Cultivated in the garden.
F1. & Fr.: Most part of the year.

Methodology of dose consumption:

Leaf paste is applied locally to treat foot diseases. Mixture of 10 g dried leaves of tobacco; 50 gm Sodium carbonate and 500 ml mustard oil is given to the animal to treat flatulence.

5.2.186 *Nyctanthes* (plate 17)

**Family:** Oleaceae

**Local name:** Har-singar

**Locality:** Ardawata

Large shrub, 4 – angled branches; leaves opposite, ovate or ovatelanceolate; flowers white to orange, fragrant, sessile, 3- to 5- together on axillary, solitary or fascicled peduncles; capsule orbicular, compressed. Abundant in the forests; also cultivated in the gardens for ornamental purpose.

F1. Fr.: August - November.

Methodology of dose consumption:

About 50 ml extract of leaves is mixed with water and given to animal through drenching tube in a day to treat colic.

5.2.187 *Nymphaea nauchali*

**Family:** Nymphaeaceae

**Local name:** Kamal

**Locality:** Ajit sagar dam

Perennial, aquatic herb; leaves 8-20 cm in diameter, orbicular or elliptic – sagittate, when young peltate; flowers solitary; fruits globose; seeds longitudinally striate. Common in ponds, ditches and tanks.
F1. & Fr.: August – February.

Methodology of dose consumption:

About 100 ml rhizome extract is mixed with curd and given orally four – five times in a day to treat diarrhoea.

5.2.188 *Ocimum americanum*

**Family: Lamiaceae**

**Local name:** Tulsi, Ban – tulsi, Jangli tulsi

**Locality:** Bola ki dhani

Annual herb; ovate – lanceolate to ovate – oblong leaves; flower whorls in long racemes, white; nutlets ovoid. Common weed in open wastelands; sometimes cultivated.

F1. & Fr.: Almost throughout the year.

Methodology of dose consumption:

Paste of 50 gm fruits of Amygalus communis, 50 gm ‘lac’, 10 gm seeds of Foeniculum vulagare, 10 gm whole plant of Ocimum americanum is given to the animal with fodder to treat leucorrhoea. 200 gm seed powder is mixed with 250 gm milk fat, 500 gm thus prepared are given orally once in a day for one month to treat tuberculosis or asthmatic attack in animals.

5.2.189 *Ocimum tenuiflorum*  (plate 18)

**Family: Lamiaceae**

**Local name:** Tulsi

**Locality:** Mandrella

Perennial herb or undershrub; with ovate-lanceolate or ovate-oblong leaves; flowers white, whorled in long raceme; nutlets ovoid. Common in wastelands; also cultivate.
Methodology of dose consumption:

Mixture of paste of 20 leaves of Ocimum Tenuiflorum, 20 ml honey and 50 ml urine of calf is given to the animal orally to treat cancer. This treatment results in weight gain and good health of animal. Paste of about 10 gm leaves of Ocimum indicum is applied on the skin to treat scabies.

5.2.190 Ougeinia oojeinensis

Family: Fabaceae

Local name: Sandan, Tanas

Locality: Bisau

Deciduous tree; leaves 3-foliolate; flowers in short, fascicled racemes arising from the nodes of old branches, white; pods flat. Rare, in the wasteland.

Methodology of dose consumption:

Decoction of bark is poured on hooves of the animal to treat painful infections. The bark decoction is also given to treat dysentery.

5.2.191 Pandanus fascicularis (plate 18)

Family: Pandanaceae

Local name: Kewra

Locality: Aravali hills

Much branched, thick bush or small tree, with aerial roots; leaves drooping, spirally arranged ensiform, with recurved marginal spines; spathe very sweet scented; drupes pyramidal woody. Rare, along the streams in the forests.

Methodology of dose consumption:

Decoction of bark is poured on hooves of the animal to treat painful infections. The bark decoction is also given to treat dysentery.
Methodology of dose consumption:

About 250 ml of root extract is given with water to bulls, oxes and bullocks to increases sexual power. Root extract is given orally to treat prolapsed of uteru.

5.2.192 *Panicum miliaceum*

**Family :- Poaceae**

**Local name :-** Hamali

**Locality:** Chirana

Tufted, tall annual, 50 – 150 cm height, leaves linear – lanceolate, often covered with tubercle – based hairs; ligule a narrow ciliate rim; panicle long lax. Often found as a weed in irrigated fields.

F1. & Fr.: August – October.

Methodology of dose consumption:

Either grains or whole plant is given to the animal to increase secretion of milk.

5.2.193 *Parkinsonia aculeate*

**Family :- Caesalpiniaceae**

**Local name :-** Parkinsonia

**Locality:** Bola krishi farm

Large shrubs or small trees, armed, glabrous; leaves bipinnate; rachis short and ending into a spine; leaflets 25-30 pairs, 0.4-0.5 cm long, ovate-oblong; flowers sub-axillary racemes, bright yellow; pods linear, constricted between the seeds, glabrous; seeds oblong, smooth, mottled. Naturalized in wastelands, also cultivated for ornamental purposes.

F1. & Fr.: March – June.
Methodology of dose consumption:

Paste of leaves is given orally to goat to treat constipation.

5.2.194 *Pedaliwm murex*

**Family:** Pedaliaceae

**Local name:** Dakhni-gokhru

**Locality:** Bibasar

Glandular pubeaseent annual herb; stems and branches often slightly rough with scaly glands; leaves obovate – oblong, repanddentale; flowers axillary, solitary, pale-yellow; fruits narrowed at the base, pyramidal – ovoid above the spines, bluntly 4 – angled, with stout sharp conical horizontal spines from the angles. Frequently occur on sandy hard soil in wasteplaces and along road sides.

F1. & Fr.: August – December.

Methodology of dose consumption:

Whole plants is fed to the animal as it cools body in summers. The plant Is dipped in water for sometime and this water is given to the animal to treat dysentery and diarrhoea.

5.2.195 *Pennisteum typhoides*

**Family:** Poaceae

**Local name:** Bajaro

**Locality:** Churu

Tall, robust annuals, with terminal long panicles withvillous or woolly rachis; each involucres with two to many spikelets; lemmas pubescent on the margins; anther – cells bearded. A very common rainy season crop cultivated for grains and fodder.

F1. & Fr.: September – December.
Methodology of dose consumption:

Boiled grains mixed with jiggery are given to the animal to induce labour pain.

5.2.196 *Pergularia daemia*

*Family* :- *Asclepiadaceae*

*Local name* :-Mandabheti

*Locality:* Fatehpur

Hispid twining undershrub; leaves ovate, acuminate; flowers in drooping lateral corymbose cymes. Common among bushes on the edges of fields, gardens, fringes of forests and wasteland.

F1. & Fr.: March – December.

Methodology of dose consumption:

Crushed pods are given to the animal for oestrus induction and to treat foot and mouth disease.

5.2.197 *Phaseolus mungo*

*Family* :- *Fabaceae*

*Local name* :-Urad

*Locality:* Churu

Training, hispid herb, with 3 – foliolate leaves and yellow flowers; pods linear, turgid. Cultivated as a rainy season pulse crop.

F1. & Fr.: August – October.

Methodology of dose consumption:

The animal is fed with bread made up of Phaseolus mungo flour mixed with seed oil of *Sesamum indicum* to treat foot and mouth disease.
5.2.198 *Phoenix sylvestirs*

**Family :-** Arecaceae

**Local name :-** Khajoor, Tar, Teri, Khajoori

**Locality:** Fatehpur

Tall unbaranched, monoecious, graceful palm, with straight or crooked trunk; leaves pinnate; inflorescence a spadix; spathes woody, scurfy, separating into boat – shaped values; drupes scattered; seeds rounded at both ends, deeply grooved on one side. Common in wastelands; abundant in low lying area.

F1. & Fr.: February – August.

Methodology of dose consumption :

Fruits are given to the animal daily for oestrus induction.

5.2.199 *Phyllanthus fraternus*

**Family :-** Euphorbiaceae

**Local name :-** Bhui – amla

**Locality:** Chirawa

Glabrous herb; with closely distichous, leaves oblong, resembling a compound leaf; flowers yellowish – green, hidden under the leaves; disc of female flowers irregularly cup – shaped with 6 – 9 segments. Weed in cultivated fields and gardens.

F1. & Fr.: August – December.

Methodology of dose consumption :

About 10 gm leaves are fed to the animal with fodder once in a day up to two – three days to treat fever. Ash of 250 gm leaves is mixed with 100 ml oil of *Pongamia pinnata* and applied locally to treat septicemia.
5.2.200 *Phyllanthus virgtus*

**Family :- Euphorbiaceae**

**Local name :-** Bbui – amla, Dudhi

**Locality:** Chirawa

Erect to decumbent – ascending, annual – perennial herb; with woody base; leaves elliptic – lanceolate to oblong; flowers pedicelled, axillary, solitary, unisexual. Weed in cultivated fields, grasslands and gardens.

F1. & Fr.: August – December.

Methodology of dose consumption :

About 10 gm leaves are given to the animal with fodder once in a day for two – three days to treat fever.

5.2.201 *Piper betel*

**Family :- Piperraceae**

**Local name :-** Nagarbel, Pan

**Locality:** Jhunjhunu

Perennial climber; leaves cordate; flowers in catkin inflorescence. This species is not found wild, often cultivated in Rajasthan at very low scale.

F1. & Fr.: September – April.

Methodology of dose consumption :

About 20 leaves are fed to the animal with fodder to treat flatulence. Leaf decoction is given orally in fever.

5.2.202 *Pithecellobium dulce*

**Family :- Mimosaceae**
Local name: Jangal jalebi, Kikar

Locality: Churu

Medium – sized tree, armed with spines; pinnae and leaflets one pair each; flower heads dirty white, pods circinate or twisted. Planted on the edges of gardens.

F1. & Fr.: March – August.

Methodology of dose consumption:

Paste of stem bark is applied locally to treat swelling.

5.2.203 *Peperomia pellucid* (plate 18)

Family: Peperomiacae

Local name: Pipramul

Locality: Aravali hills

Perennial climber; leaves cordate; flowers white in catkin inflorescence. Rare, found in moist of hilly forests.

F1. & Fr.: September – April.

Methodology of dose consumption:

About 150 gm seeds of *Piper nigrum* are mixed with 280 gm milk fat and given daily up to 3 days to treat mastitis. During this treatment oily and acidic foodstuffs are not given to the animal.

5.2.204 *Plumbago zeylanica* (plate 19)

Family: Plumbaginaceae

Local name: Chitrak, Chitraval

Locality: Khetari
Erect or straggling undershrub; leaves ovate – lanceolate or ablong, acute, contracted at the base into a petiole; flowers white, in axillary and terminal, 5-30 cm long racemes combined into leafy panicles; capsule furrowed, enclosed within the persistent calyx. Common in wastelands and open forests among bushes.

F1. & Fr.: Most part of the year.

Methodology of dose consumption:

Decoction of two to four leaves of *Plumbago zeylanica* and 250 g seeds of *rachyspermum ammi* (‘Ajwain’) is given to the animal to treat indigestion and flatulence.

5.2.205 *Polygonum plebeium*

**Family:** Polygonaceae

**Local name:** Lalbuti

**Locality:** Mansa Mata

Diffusely branched, prostrate herb; leaves oblong or oblanceolateralinear; flowers sessile, almost concealed by stipules; nutlets rhomboidtrigonicous. Abundant in drying ponds along the roads, bank of rivers and tanks.

F1. & Fr.: July – November.

Methodology of dose consumption:

About 50 gm decoction of whole plant is given orally up to five days for secretion of more milk. Plant ash with mustard oil is applied locally to treat eczema.

5.2.206 *Pongamia pinnata*

**Family:** Fabaceae

**Local name:** Karanj, Kavja Safed chitrak

**Locality:** Ringus
Tree, 7-10 m high with grayish bark; leaves imparipinnate; leaflets 5-9, elliptic or ovate – oblong; flowers in fascicles of 2-4 on the rachis of axillary racemes; pods obliquely oblong, woody, glabrous, not winged. Common in wastelands, along roads.

F1. & Fr.: March – June.

Methodology of dose consumption:

Seed oil is used to treat skin disease of domestic animals. Seed oil with leaf paste of *Adharoda Zeylanica* is applied as balm on hump sore of cows and buffaloes. Extract, of the bark is given to buffalo-calves when they drink too much milk.

5.2.207 *Portulaca oleracea*

**Family** :- Protulacaceae

**Local name** :-Kungan

**Locality**: Khandela

Prostrate or diffuse herb; leaves succulent, obovate-spathulate; flowers yellow; capsules obovoid. Common weed in fields, gardens and other moist grounds, like river bed.

F1. & Fr.: August – December.

Methodology of dose consumption:

Decoction of whole plant is given orally in fever.

5.2.208 *Prosopis cineraria*

**Family**: - Mimosaceae

**Local name**: -Khejri, Sangri, Khejda, Janti.

**Locality**: Jhunjhunu
Medium sized tree; bark grey, rough with deep fissures or cracks; leaves 2-pinnate, flowers; pods pendulous slender, pointed at the apex; seeds oblong to suborbicular. Abundantly found throughout the Shekhawati region but rare in hilly terrain.

F1. & Fr.: March – July; rarely in November – December.

Methodology of dose consumption:

Leaf is fed with fodder to treat mouth ulcer.

5.2.209 *Prosopis julifora*

**Family:** Mimosaceae

**Local name:** Kikar, Zeri-bavar

**Locality:** Fatehpur

Small trees or shrubs, armed with axillary spines; pinnae 1-2 pairs, leaflets 15-25 pairs; spikes pale-yellow, pendulous; pods subfalcate, subcompressed. Common in wastelands.

F1. & Fr.: Most part of the year.

Methodology of dose consumption:

Crushed leaves are applied on wounds.

5.2.210 *Pterocarpus marsupium*

**Family:** Fabaceae

**Local name:** Bijasal

**Locality:** Sikar

Deciduous tree, with crooked stem and spreading branches; leaves elliptic or ovate; flowers pale yellow in fusco-paniculate racemes; pods suborbicular, winged, glabrous. Rare in mixed deciduous forests.

F1. & Fr.: April – June.

Methodology of dose consumption:
200 g decoction of stem bark is given orally to treat dysentery.

5.2.211 *Pueraria tuberose*

**Family:** fabaceae  
**Local name:** Vidarikand  
**Locality:** Fatehpur  
Woody twiner; with 3 leaflets; flowers bluish, in axillary racemes; pods bristlesly, constricted between the seeds. Rare, in wastelands among the clumps of trees and shrubs.  
**Fl. & Fr.:** July-October.

**Methodology of dose consumption:**  
Boiled tubers are fed to the animal after delivery for providing nutritious diet.

5.2.212 *Pupalia atropurpurea*

**Family:** Amaranthaceae  
**Local name:** Sihitti  
**Locality:** Aravali hills  
Annual or biennial herb; leaves, ovate or elliptic-lanceolate, acuminate, mucronate, suddenly contracted at the base; flowers in lax pedunculate terminal spikes; utricles ovoid, memeranous; seeds oblong-ellipsoid, with subtruncate ends. Common in gravelly to rocky habitats in wastelands, open forests, edges of field etc. among bushes.  
**Fl. & Fr.:** Most part of the year.

**Methodology of dose consumption:**  
Paste of 30 gm roots is given orally, twice in a day only for one day to treat infection in anus as well as on tail.

5.2.213 *Rhus mysurenis*

**Family:** Anacardiaceae  
**Local name:** Dansaria  
**Locality:** Aravali hills
Armed shrub or small tree; with 3-foliolate, coarsely serrate leaves; flowers polygamous in panicles; drupes subglobose. Common in scrub forests on the Aravalli.

Fl. & Fr.: July – October.

Methodology of dose consumption:

Leaf paste of Rhus mysurensis is applied on the body to treat allergy/rashes/eczema.

5.2.214 *Ricinus Communis*

*Family*: Euphorbiaceae

*Local name*: Arandi

*Locality*: Rampura

Large, erect shrub with fistular stem and gauccous-grey or reddish, smooth bark; leaves 10-30 cm in diameter, palmately 5 to 10 lobed; flowers in pyramidal panicle; capsule globose, spiny of 3 cocci; seeds oblong-ovoid, smooth, shining, mottled, caruncled. Naturalized in wastelands near habitation.

Fl. & Fr.: almost throughout the year.

Methodology of dose consumption:

About 200 ml seed oil is given orally to the animal to treat indigestion, fever and flatulence. About 100 ml seed-oil is also given orally one or two times in a day to treat constipation.

5.2.215 *Saccharum officinarum*

*Family*: Poaceae

*Local name*: Ganna, Hantha

*Locality*: Khandela

Tall, perennial, rhizomatous plant, with juicy culms; leaves wide and laminated right to the base; spikelets awnless, glumes glabrous. Cultivated mainly in south and south-eastern parts of Rajasthan for culm-juice which is used for making jiggery.

Fl. & Fr.: January onwards.
Methodology of dose consumption:

Jaggery (Saccharum officinarum) and human fallen hairs are wrapped over an iron rod warmed and applied on the wound to stop bleeding instantly. About seven to eight kg sugarcane is fed to the animal for disposal of placenta after delivery.

5.2.216 *Salvadora oleoides*

*Family:* Salvadoraceae  
*Local name:* Jaal, Pilu  
*Locality:* Jhunjhunu beed

Evergreen small tree with soft whitish yellow wood; twisted trunk and drooping branches, trunk bark blackish-grey; leaves linear-lanceolate; flowers sessile, greenish-white; fruits drupe, globose, yellow when ripe. Common in saline and sandy habitat.

*FI.* & *Fr.*: December-March.

Methodology of dose consumption:

The paste prepared with ash of whole plant with milk is applied locally to treat scabies of camel. Leaf extract is applied locally to treat wound and mastitis.

5.2.217 *Salvia aegyptiaca*

*Family:* Lamiaceae  
*Local name:* Hingot  
*Locality:* Laxmangarh

Much-branched, straggling under-shrub; branches divaricate rigid, hairy; leaves subsessile, linear-lanceolate, acute, crenate, much wrinkled, nerves prominent; flowers-whorls 2 to 4 flowered, borne in long raceme; nutlets oblong-ellipsoid, smooth, bluish – black. Common in moist places, along road-sides, borders of cultivated fields and in scrub forests.

*FI.* & *Fr.*: December-March.

Methodology of dose consumption:

Powder of dried seeds is given orally with drenching tube to treat diarrhoea.
5.2.218  *Sarcostemma viminale*  (plate 19)

**Family:** Asclepiadaceae  
**Local name:** -Khir, Khimp  

**Locality:** Rajgarh

Branched, leafless, succulent, straggling shrub; stem pubescent when young; flowers greenish white, in sessile terminal umbel; follicles solitary, tapering at both ends. Common on rocky habitat in the hilly tract.  

**Fl. & Fr.:** August-November.  

**Methodology of dose consumption:**

Decoction of whole plant is given to the animal through drenching tube twice in a day upto 7 days to treat rheumatism. Extract of whole plant is given to the animal to treat digestive disorders. Infusion of whole plant is applied by the rural people on wound of dog and snake bite.

5.2.219  *Sesamum indicum*

**Family:** Pedaliaceae  
**Local name:** -Kala-til  

**Locality:** Malsisar

Erect, glandular-pubescent annual with angular, sulcate stem; leaves elliptic-lanceolate, upper entire, lower 2 to 3- segmented; flowers axillary, solitary; capsule oblong-quadrangular; seeds black or white. Truly naturalized wild from plains to the hills.  

**Fl. & Fr.:** August-November.  

**Methodology of dose consumption:**

200 gm seed oil is given orally to the animal to treat foot and mouth disease. Leaf extract is given to cows and goats to treat disease locally known as ‘Matoti’. Seed oil (250 gm) is given orally to domestic animals to treat foot and mouth disease.

5.2.220  *Sesbania aculeate*
Family: Fabaceae  
Local name: Solehut  

Locality: Kotputali

Erect, weak-stemmed, annual herbs or undershrubs, 1.0-2.5 m high; leaflets 12-50 pairs. 0.5-1.5 by 0.2-0.5 cm, linear-oblong, mucronate, glabrous, stipellate; flowers in axillary, 3 to flowered recems, yellow; pods 20-30 cm long, linear, subterete, tomentose, beaked, glabrous. Common in rice fields and other swampy places.

Fl. & Fr.: August-October.

Methodology of dose consumption:

Seeds are given with fodder to bring the animal in heat. About 50 ml root extract is given orally to the animal to treat intestinal worms.

5.2.221 Shorea robusta  
Family: Dipterocarpaceae  
Local name: Sal  

Locality: Renwal

Trees usually large, bark gray to dark reddish brown, fissured, flaky; stipules fugacious, lanceolate, small; petiole 2-2.5 cm, buff scabrous-pubescent; leaf blade 10-40 by 5-24 cm, ovate to oblong, thinly leathery; flowers subsessile, on panicles; fruit sepals unequal, spatulate, sparsely pubescent. Cultivated mainly for its wood.

Fl. & Fr.: February-July.

Methodology of dose consumption:

About 250 gm leaves are given to the animal with fodder to treat nematodal infection. Decoction of roots is given to treat typhoid and fever.

5.2.222 Sida ovate  
Family: Malvaceae  
Local name: Khariti, Barath, Dabe, Bal  

Locality: Jejusar
Stellately hispid, 170 cm high, under shrub; leaves ststipulate, linear, 4 mm long, tomentose; petioles 1.1 cm long; lamina base truncate, 4.2 by 4.0 cm, palmately 5-veined, stellately-tomentose, obtuse; axillary, solitary flowers; mericarps 7-8, 2 awned. Common in plains and rare in hilly tracts.

Fl. & Fr.: November-January.

Methodology of dose consumption:

Whole plant is fed to animal with fodder to treat bodyache. Smoke of burning seeds is employed to remove the worms of teeth.

5.2.223 Solanum virginianum
Family: Solanaceae
Local name: Ringni Bhor-rigani
Locality: Angasar

Sparsely pubescent, divaricately branched herb; with ovate-oblong leaves; flowers white globose; yellow red or purple fruits. Common weed in cultivated field during winters.

Fl. & Fr.: November-March.

Methodology of dose consumption:

Smoke of burning seeds is employed to remove the worms of teeth. Seed and leaf extract is applied to treat sores and wounds of animal.

5.2.224 Sorghum halepense
Family: Poaceae
Local name: Baru
Locality: Dabri

Stout, erect perennial; with creeping, stoloniferous root-stock; leaves broadly linear-lanceolate, acuminate, base rounded or sub-amplexicaul; panicles lax, open; spikelets 2-nate in pairs. Common in wastelands and in fallow fields.

Fl. & Fr.: September-December.

Methodology of dose consumption:
Chapatii made from seed flour of Sorghum halepense is given to the animal upto 3 to 5 days to treat diarrhoea and weakness.

5.2.225  *Sorghum vulgare*

Family :- Poaceae  
Local name :- Jawar

Locality: Dhatarwala

Tall robust annual grass; Leaves broad with prominent midrib; inflorescence decompounds panicle; spikelets large, broad, hairy, two type of spikelets, sessile and stalked spikelet neuter; sessile spikelet hermaphrodite; fruit caryopsis oblong-globose, white. Cultivated plant.

Fl. & Fr.: September-December.

Methodology of dose consumption:

1 kg alum (KAl(SO₄)₂.12.H₂O), one kg. salt and 100 gm grain of Sorghum vulgare are mixed and given to the animal for disposal of placenta after delivery.

5.2.226  *Soymida febrifuga*

Family :- Meliaceae  
Local name :- Rohina

Locality: Aravali hills

Tree; leaves entire, crowded at the end of branches; flower in axillary and terminal panicles; capsules ovoid. Occasionally found in the mixed deciduous forests on the hilly slopes.

Fl. & Fr.: February-June.

Methodology of dose consumption:

About 100 gm bark of Butea monosperma and Soymida febrifuga is crushed with 500 ml of butter milk and given to the animal thrice in a day to treat diarrhoea. Paste prepared by crushing 20 gm of stem bark and 10 gm roots of Calotropis gigantean are crushed and the paste is applied on eye and bandaged to treat opacity of cornea.

5.2.227  *Spermacoce stricta*
Family :- Rubiaceae
Local name :- Agio

Locality: Aravali hills

Annual herb; stems 4-angled, hispid; leaves opposite or verticillate. Linear-lanceolate, acute, revolute-margined; stipules connate with leaf-bases forming a truncate-fimbriate tube; flowers in axillary and terminal; seeds ellipsoid, brown, smooth, with a ventral groove. Abundant in the forests and often in wastelands, particularly in the hilly tracts.

Fl & Fr.: August-December.

Methodology of dose consumption:

Decoction of the plant is given to the animal to treat vulvo-vaginal-uterine prolapse.

5.2.228 Syzygium cumini
Family :- Myrtaceae
Local name :- Jamun

Locality: Solana

Large trees; leaves 10-14 by 3-6 cm, chartaceous, ovate-lanceolate, obtuse-acuminate; cymes panicked, usually solitary; flowers fragrant, sessile, in short compact or laxly paniculate axillary cymes, palegeenish-white; corolla calyprate; berries globose or oblong, purple. Commonly planted as an avenue tree and for its edible fruits; often found in the forests.

Fl. & Fr: February-September.

Methodology of dose consumption:

Paste of 100 gm bark is mixed with 500 ml curd or butter milk and this mixture given through drenching tube to the animal to treat diarrhoea.

5.2.229 Tamarindus indica
Family :- Caesalpiniaeae
Local name :- Aamli, Imail, Katara, Amlyaum
**Locality:** Indali

Evergreen tree; leaflets 6-12 pairs, linear-oblong, subcoriaceous, glabrous; flowers in lax racemes; pods falcate, linear-oblong, with rough, fibrous, grey epicarp Naturalized in waste places and often in the forests. Also planted in the gardens and along the roads.

Fl. & Fr.: November-March.

Methodology of dose consumption:

Pods and leaves mixed with water are fed to animal to treat the stomach pain after eating castor.

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**5.2.230  *Tecomella undulate***

**Family:** Bignoniaceae

**Local name:** Rohida

**Locality:** Churu

A glaucescent shrub or small tree; stem and branches minutely stellately hairy when young; branches drooping and leaves simple; flowers yellow-orange in terminal racemes or panicles; capsules linear, curved; seeds winged at apex. Commonly found in sandy plains and dunes but very rarely occur on gravelly, clayey, hard soil.

Fl. & Fr.: January-May.

Methodology of dose consumption:

Oil is applied locally to treat rashes on skin.

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**5.2.231  *Tectona grandis***

**Family:** Verbenaceae

**Local name:** Sagwan, Hagwan, Sag

**Locality:** Ardawata

Deciduous tree; with broadly elliptic large leaves; flowers terminal long cymes; dures subglobose, stellately tomentose. A chief component of deciduous forests, dominating in Southern parts of the state.
Methodology of dose consumption:

Paste of leaves is applied twice in a day on the skin to treat eczema and other skin diseases.

5.2.232 *Tephrosia purpurea*

*Family:* Fabaceae

*Local name:* Dhamaso

*Locality:* Aravali hills

Perennial woody herb, with 11-21 leaflets; reddish-purple or bright pink to white flowers in leaf-opposed racemes; pods linear. Gregariously occur on hard clayey or gravelly soils in association with Capparis deciduas, Calotropis procera, Crotalaria burhia, Tephrosia apollinia, Indiagofera Linnaei, Tribulus terrestris etc.

Fl. & Fr.: July-November.

Methodology of dose consumption:

Roots are fed to animal to treat swelling and rheumatism. Paste prepared by grinding few chillies and red gram (Cicer arientinum) to treat constipation.

5.2.233 *Terminalia arjuna*

*Family:* combretaceae

*Local name:* Arjun, Kaduaa, Kohda

*Locality:* Aravali hills

Trees, with smooth bark; leaves elliptic oblong to suborbicular in axillary spike or terminal panicles; Drupes ovoid to obovoid-oblong. Common in the forests.

Fl. & Fr.: March-November.

Methodology of dose consumption:

About 300 ml. decoction of bark is given thrice a day for three days to treat body weakness.

5.2.234 *Terminalia bellirica*

*Family:* Combretaceae
**Local name :-** Bahera, Veda

**Locality:** Khetari

Deciduous tree, 10-30 m high, bark grey, longitudinally fissured; leaves broadly obovate, cuneate, glabrous, coriaceous; flowers in axillary spike; drupes ovoid or ellipsoid, 5-ridged, grey-velvety. Common in mixed deciduous forests.

Fl. & Fr.: February-August.

Methodology of dose consumption:

Pulp of about 750 gm fresh fruits or about 500 gm powder of dried fruits is given orally twice in a day upto 7 days to treat diarrhoea.

**5.2.235 Terminalia chebula**

**Family :-** Combretaceae

**Local name :-** Harad

**Locality:** Aravali hills

Large, deciduous trees, 8-20 m high; bark dark brownish-grey, fissured; young parts tomentose. Leaves alternate, long petioloate, 7.5-12.0 by 4.0-10.5 cm, elliptic-oblong or ovate-oblong, rounded at both ends, at length glabrous. Flowers in terminal, panicled spikes, white or pale yellow. Fruits 2.5-4.0 by 1.5-2.5 cm, ovoid, ellipsoid or ellipsoid-obovate, glabrous. Rare, found in dry deciduous forests and wastelands.

Fl. & Fr.: March-November.

Methodology of dose consumption:

About 50 gm fruits of Terminalia chebula, 50 gm rock salt, 50 gm seeds of Trachyspermum ammi, 25 gm seeds of Cuminum cyminum, 25 gm Elytraria cardamomum (Chhoti ilayachi) 50 gm sodium bicarbonate and 500 gm jiggery are mixed and bolus of 150 gm of this mixture is given orally for three days to treat gastro-intestinal disorders.

**5.2.236 Themeda quadrivalvis**

**Family :-** Poaceae

**Local name :-** Godi ghass
**Locality:** Aravali hills

Tall, erect, geniculately branched perennial grass; leaves linear, acute; ligule long, membranous; panicle dense. Common along the bank of rivers, streams, at the foot of hills and in open grassy plains.

Fl. & Fr.: September-November.

Methodology of dose consumption:

Small fishes with whole plant of Themeda quadrivalvis are fed to the animal to treat flatulence.

**5.2.237 Tinospora cordifolia** (plate 20)

**Family:** Menispermaceae

**Local name:** Giloy, Neem-Giloi

**Locality:** Chirawa

Succulent glabrous, deciduous climber, with corky and lenticelled bark; leaves ovate-cordate; flowers in axillary raceme; fruits globose. Common among hedges, particularly in hilly area.

Fl. & Fr.: December-June.

Methodology of dose consumption:

Decoction of 50 gm Tinospora Cordifolia (whole plant) and a spoonful of powder of dried rhizome of Curcuma longa is given orally twice in a day upto three days to treat tonsillitis as well as foot and mouth disease. Paste of about 100 gm roots is given once in a day upto five days to increases the secretion of milk. Paste of about 150 g stem is given twice in a day upto five days to the animal to treat haematuria. Extract of whole plant is given to the animal to treat general weakness. Extract of whole plant is given to bulls to increase the sexual power.

**5.2.238 Trachyspermum ammi**

**Family:** Apiaceae

**Local name:** Ajwain

**Locality:** Sikar
Annual herb; flowers whitish or pinkish; fruits muricate, sub-hispid. Widely cultivated for the fruits which are used as condiment.

Fl. & Fr.: November-March.

Methodology of dose consumption:

About 80 to 100 gm seeds are powdered and given with jiggery upto two days in oestrus induction.

5.2.239 Trianthema portulacastrum
Family: Aizoaceae
Local name: Kala –Satta

Locality: Bola ki dhani

Succulent, prostrate herb; leaves spatulate; flowers white or pink, solitary; stamens ten. Common inwaste places and cultivated fields.

Fl. & Fr.: September-November.

Methodology of dose consumption:

Paste of 250 gm leaves of Trianthema portulacastrum and 10 gm seeds of Piper nigrum (Pepper) is given orally to treat diarrhoea.

5.2.240 Tribulus terrestris (plate18)
Family: Zygophyllaceae
Local name: Gokhru, Pili-Kante

Locality: Malsisar

Prostrate to procumbent annual, hairy herb; leaves pinnate; flowers yellow; mericarps dorsally tuberculate; spines 4. Abundant in open wastelands in sandy and gravelly soils.

Fl. & Fr.: August-December.

Methodology of dose consumption:

About 250 gm shoots of this plant are given with fodder for two days for removal of internal parasites. Paste of about 25 gm roots and 25 gm leaves of
Azadirachta indica (Neem) is applied locally to remove external parasites. Fruits are given to the animal with fodder to treat diarrhoea.

5.2.241 *Trichodesma indica*

*Family:* Boraginaceae
*Local name:* Sial Kanto

*Locality:* Lohagal

Erect or diffused herb; stem sparsely covered by trichomes; leaves distant, chartaceous, glabrous beneath, with tubercle-based trichomes above. Common in open wastelands.

*Fl. & Fr.:* July-November.

Methodology of dose consumption:

Leaf extract is given to treat fever and bodyache.

5.2.242 *Trichosanthes anguina*

*Family:* Cucurbitaceae
*Local name:* Charchenda

*Locality:* Khetari

Annual climbers. Leaves 8-14 by 10-16 cm, broadly ovate-cordate or orbicular-reniform, denticulate, 3 to 5 angled or lobed, scabrid on both the surface; tendrils 2 to 3 fid; flowers white, bracts minute, entire; fruits 25-80 cm long, often coiled, smooth with 7-8 white stripes along the length; seeds 15 by 8 mm, oblong, finely rugulose, undulate. Occasionally found in wastelands, particularly on the boundaries of fields and gardens.

*Fl. & Fr.:* July-October.

Methodology of dose consumption:

100 gm root, 100 gm onion, 250 gm curd and 150 gm salt is given orally thrice in a day to treat gastritis.

5.2.243 *Trichosanthes braceata*

*Family:* Cucurbitaceae
*Local name:* Kakighado
Locality: Jhunjhunun beed

Extensive climber; leaves membranous, broadly ovate-cordate, 3- to 5-angled; tendril robust, sulcate; flowers white, villose-hirsute; fruit bright red; seeds peculiar, transversely broad. Belted at the middle, belt with raised margins. Rare, in wastelands and open forests.

Fl. & fr.: July-October.

Methodology of dose consumption:

Root extract is given to animals through drenching tube to treat flatulence.

5.2.244 Trichosanthes cucumerina
Family: Cucurbitaceae
Local name: Indrani, Jangli-Chichindra, Kechan

Locality: Aravali hills

Annual climber; leaves broadly ovate or orbicular-reniform, denticulate, deeply 5 to 7-lobed; tendril slender, 2- to 3-fid; flower white; fruits 8-10 seeded; seeds ovate-oblong, compressed, undulate, truncate, base attenuate. Common in the east 5 of Aravalli; particularly in wastelands.

Fl. & Fr.: August-October.

Methodology of dose consumption:

Decoction of 50 gm roots is given orally once in a day up to two days to treat vulvo-vaginal uterine prolapse. Fruit juice is given to the animal through drenching tube to treat urinary disease.

5.2.245 Tridax procumbens

Family: Asteraceae

Local name: Tokariyo, Pebula ka mocha, Kala

Locality: Udaipurwati
Straggling herb; leaves ovate – lanceolate; heads yellow, termination long peduncels; achenes silky. Common among bushes in wasteland.

F1. Fr.: Most part of the year.

Methodology of dose consumption:

Infusion of 100 gm dried leaves is given orally to treat diarrhoea. Fresh leaf extract or paste is applied on the wounds and cuts of animal to treat bleeding.

5.2.246 Trogonella foenum – gracecum

Family :- Fabaceae

Local name :- Methi.

Locality: Beri

Herb; leaves 3 – folioate; pale yellow flowers; pods straight, turgid beaked. Cultivated for the seeds used as condiment and leaves as vegetable.

F1. Fr.: November – March.

Methodology of dose consumption:

Infusion of 1 kg dried flour is given to the animal daily up to three days to treat haematuria. Fresh leaves and seeds mixed with fodder are fed to the animal to treat rheumatism. Seeds mixed with jiggery are fed to the cows and buffaloes to enhance location.

5.2.247 Triticum aestivum

Family :- Poaceae

Local name :- Gehu

Locality: Sainipura

Medium – Sized annuals, with flat leaves; inflorescence a terminal, distichous spike; spikelets solitary, awned. Widely grown for its grains and straw.
F1. Fr.: November – March.

Methodology of dose consumption:

About 500 gm sprouted seeds to *Triticum aestvum* mixed with jiggery (*Saccharum officinarum*) and seed oil of *Brassica compestris* are given to the animal upto to ten days for oestrus induction. Paste of roasted seeds is mixed with fodder and fed to goats to treat gastric problem.

5.2.248 *Typha angustata* (plate 20)

**Family :- Typhaceae**

**Local name :-** Era, Pota, Patera

**Locality:** Mansa Mata

Erect rhizomatous herb; leaves linear, spongy, flat above and convex beneath; spike cylindrical, male flowers above, female below and upto 3 mm long gap in between. Common in marshy and aquatic habitats throughout the state.

F1. Fr.: August – June

Methodology of dose consumption:

Poultice of inflorescence is tied on the broken horn of animal to stop bleeding. Poultice of inflorescence is also tied on the wound for its early healing.

5.2.249 *Urena lobata*

**Family :- Malvaceae**

**Local name :-** Roolru

**Locality:** Jhunjhunu beed

Erect, perennial herb; leaves broadly ovate – suborbucular; flowers solitary or in clusters of 2-3, in the axils of uppermost leaves; mericarps densely clothed with hooked hairs. Common along roads in waste places and forest edges.
F1. Fr.: September – January.

Methodology of dose consumption:

Leaf extract is used to treat wounds. Decoction of roots is given orally to animal to treat diarrhoea.

5.2.250 *Urginea indica* (plate 21)

**Family:** Liliaceae

**Local name:** Jangli – kanda, Koli-kanda, Jangli – piaz

**Locality:** Makhar

Scapigerous, perennial herb; with ovoid, tunicated bulbs; leaves radical, flat, linear; flowers few, born on long scapes; capsule triquetrous. Common in gravelly and rocky habitats.

F1. Fr.: February – May.

Methodology of dose consumption:

Bulbs are fed to the animal upto seven to eight days with fodder to treat mastitis (Thanella).

5.2.251 *Vanda tessellate* (plate 21)

**Family:** Orchidaceae

**Local name:** Va – Hankal, Akashvel, Hawai

**Locality:** Sakambari

Epiphytic; stem sheathed; leaves patent, recurved, coriaceous, linear – oblong, strap – shaped, unequally 2 – 3 dented at the apex, flowers in racemes; capsule oblong, winged. Common epiphytic, mostly on trees in dry deciduous forest. It is also seen on semi evergreen forest.

F1. Fr.: May - June.
Methodology of dose consumption:

Decoction of whole plant is given to the animal to treat hysteria.

5.2.252 Vernonia cinerea

Family: Asteraceae

Local name: Kali jeeri

Locality: Mansa Mata

Erect or decumbent, annual – perennial herbs, 5-100 cm high; stems ribbed; leaves 0.5-0.8 by 0.3-3.5 cm variable in shape from ovate to obovate. Common in variable habitats.

F1. & Fr.: Most part of the year.

Methodology of dose consumption:

Seeds are given to the animal to treat food-poisoning. Infusion of seeds is given to the animal up to three days to treat fever.

5.2.253 Vernonia anthelmintica

Family: Asteraceae

Local name: Kalijiri

Locality: Mansa Mata

Erect, aromatic, gland punctulate or glandular hairy, annual herbs. Leaves sessile, 4-6 by 2.0-2.5 cm, elliptic- obovate or ovate. Common in wet and shaded habitats in wastelands and forests.

F1. & Fr.: January – March.

Methodology of dose consumption:

About 250 gm seeds of Trachyspermum ammi (‘Ajwain’), 250 gm dried rhizomes of Curcuma longa (Haldi), 100 g seeds of Vernonia anthelmintica (Kalijiri)
and 2 kg jaggry are mixed properly and bolus of about 150 gm are prepared and fed to the animal to treat fever.

5.2.254  *Vigna aconitifolia*

**Family :- Fabaceae**

**Local name :-** Moth

**Locality:** Talchapar

Erect of diffuse, glabrous herb; lvaves 3-foliolate, leaflets palmatipartite, 3.5-6.0 cm long; flowers in axillary, yellow; seeds oblong, smooth, brown. Common in open wastelands and grassland.

F1. & Fr.: August- January.

Methodology of dose consumption :

About 250 gm seed flour is mixed with salt and butter milk and fed to the animal to treat diarrhoea.

5.2.255  *Vitis vitiginea*

**Family :- Vitaceae**

**Local name :-** Jangli – angoor

**Locality:** Jhunjhunu beed

Weak climber; simple cordate leaves; flowers in umbellate compound cymes; fruits pale – purple. Rare, outskirts of forests and boundaries of field.

F1. & Fr.: August – November

Methodology of dose consumption :

Extract of aerial part is given orally to animals through drenching tube in bronchitis. The root decoction is applied to treat boils.

5.2.256  *Vitex negundo  * (plate 21)
Family :- Verbenaceae

Local name :- Nagad, Nirgundi

Locality: Katli river

Evergreen shrub; tender part whitish grey, pubescent; leaves 3- to 5 foliolate; flowers violet or blue in terminal, long panicles; drupes ovoid, 4 – celled, each cell with one seed, enclosed by persistant calyx. Very common along the streams and riverbeds.

F1. & Fr.: Almost throughout the year.

Methodology of dose consumption:

Paste of 50 gm tender leaves of vitex negundo with 5 gm seed powder of *Piper nigrum* and four to five bulbs of *Allium sativaum* is given to treat ephemeral fever and impaction. Paste of leavesw is applied locally as an ointment to treat skin disease. It is also applied on the eyes to treat conjunctivitis.

5.2.257 *Withania somnifera*

Family :- Solanaceae

Local name :- Padalsi, Ashgandh.

Locality: Jhunjhunu

Much branched under shrub, clothed with greenish – white hairs; leaves ovate or ovate – oblong; flowers clustered in axillary, subessile, umbellate cymes; berries globose, orange – red, enclosed in 5 - angled, pubescent, apiculate, membranous over of inflated calys. Common in dry eastelands, preferably in fertile soil.

F1. & Fr.: Most part of the year.

Methodology of dose consumption:
Paste of root or stem of *Withania somnifera* is applied on the skin to treat bacterial infection. Decoction of 1 kg roots and 2 liters sesame oil is given to the animal to treat lumbago.

5.2.258 *Woodfordia fruticosa* (plate 21)

**Family :-** Lythraceae

**Local name :-** Ban- mahendi, Dhavdi

**Locality:** Jhunjhunu beed

Straggling deciduous shrub; leaves sessile, broadly lanceolatae, hoary-tomentose, nigro-punctate beneath; flowers axillary or extra axillary, in fascicled cymes; capsule oblong, shining brown; seeds minute, narrowly obconical-trigono-cuneate at base. Common in the forests, on the walls of old buildings and in wastelands.

F1. & Fr.: January – june

Methodology of dose consumption:

Decoction of flowers is used to treat wound. 50 gm extract is given orally up to 10-15 days to treat rheumatism.

5.2.259 *Wrightia tinctoria*

**Family :-** Apocynaceae

**Local name :-** Kheer, Khani, Khirni

**Locality:** Aravali hills

Deciduous tree; bark fissured, grayish-black; leaves elliptic lanceolate or oblong, glabrous or pubescent; flowers in trichotomous cymes; fruits paired, cohering at apex. Common in deciduous forests, particularly in hilly tracts.

F1. & Fr.: March – October.

Methodology of dose consumption:
Decoction of 100 gm bark is given orally to treat diarrhoea

5.2.260  *Xanthium strumarium*

**Family :- Asteraceae**

**Local name :-** Jhadugar, Bichhu- butti

**Locality:** Budana

Erect, annual, uptp 120 cm high, foetid – smelling unarmed herb; leaves ovate – suborbicular; head in terminal and axillary racemes. Found very commonly in waste places, near ditches, ponds etc.

F1. & Fr.: October – December.

Methodology of dose consumption :

Paste of leaf is applied on the wound to kill the maggots.

5.2.261  *Zea mays*

**Family :- Poaceae**

**Local name :-** Makki, Makka

**Locality:** Bola krishi farm

Monoecious annual; male spikelets usually in terminal racemes; female inflorescence consists of many spikelets seated on a spongy axis. Cultivated during rainy season for its grains.

F1. & Fr.: November – February

Methodology of dose consumption :

Decoction of 100 gm roots is given orally uptp five/seven days to cure weakness after delivery.

5.2.262  *Zingiber officinale*
**Family :- Zingiberaceae**

**Local name :-** Arrak, Ada

**Locality:** Udaipurwati

Erect, perennial herb; with creeping ruberous rhizomes; leaves subsessile; flowers in long spikes. Cultivated for its edible rhizomes.

F1. & Fr.: November - March.

Methodology of dose consumption:

Decoction prepared by mixing 250 gm milk fat, 10 gm dried ginger and 10 gm black pepper is given to the animal to treat stomachache. Bolus prepared from the powder of dried *Zingiber officinale*, *Allium sativum* and one egg of hen is given to the animal to treat pneumonia and paralysis.

5.2.263 *Ziziphus mauritiana*

**Family :- Rhamnaceae**

**Local name :-** Bor

**Locality:** Solana

Erect small tree or shrub; leaves ovate – elliptic to suborbicular; flowers in axillary clusters; drupes fleshy. Common in wastelands and ourstrike of forests.

F1. & Fr.: September – February.

Methodology of dose consumption:

Seeds are grinded and fed to buffalo to treat vulvo-vaginal uterine prolapsed. About 2 liter sesame-oil, ½ kg roots of *Ziziphus mauritiana*, 100 g Ammonium chloride, 2 kg sugar and 100 gm clay is mixed with wheat husk and water is added and kept in an earthen pot upto three days and 750 ml of this mixture is given orally to the animal once in a year to induce lactation. Mixture of 50gm 'lac' of theis plant,
10 gm seeds of *Foeniculum vulgare*, 10 gm seeds of *Ocimum americanum* is given with fodder to treat leucorrhoea and heat – stroke.

5.2.264 *Ziziphus nummularia*

**Family**: Rhamnaceae

**Local name**: Jhar – bor, Chania – bor

**Locality**: Ranoli

Much branched, prickly shrub; leaves orbicular – ovate; flowers in axillary cymes; drupes globose, red when ripe, common in wastelands especially in desertic zones.


Methodology of dose consumption:

Decoction of two to three years old thorns of *Ziziphus nummularia* is given to the animal for disposal of placenta after delivery. Decoction of roots is given orally to induce labour pain. Whole plant is fed with fodder to increase secretion of milk after delivery.

5.2.265 *Ziziphus xylopyra*

**Family**: Rhamnaceae

**Local name**: Gatori, Ghat borr

**Locality**: Mandrella

Erect tree or straggling shrub; leaves elliptic oblong, stipular prickles paired; flower greenish, covered with dense, grey tomentum. Occasionally found in mixed deciduous forests at low altitude and in wastelands.

Methodology of dose consumption:

About 250 gm bark is crushed with water and given orally to the animal once in a day four to five days to treat bronchial diseases.
5.3 ETHNOVETERINARY REMEDIES: ANIMAL AND ANIMAL PRODUCTS

Since time immemorial extensive use of plants, animal and minerals has been made in traditional medicine. A lot of efforts have gone into documentation, use, identification and validation of plant based traditional medicines but studies on most of the animal based medicine are sporadic, despite the fact that traditionally many animal based drugs are administered all over the world (Pushpangadan, 1990; Neto, 1999). In Unani and Ayurvedic system of medicine there are descriptions of many animal based medications (Shukla, 1950; Ali & Mahdi hassan, 1961; Wahid & Siddiqui, 1961; Puri, 1970; Vohra & Khan, 1979). It has been documented that in Unani system of medicines about 200 drugs of animal origin are described which are claimed to be beneficial for the treatment of various ailments (Sharma, 1996). Similarly in Ayurveda also there is description of use of several animal based drugs particularly from cow, buffalo, elephant, camel, ass, goat and sheet (Pandey, 1996). Entire organism or their flesh, fat, excretions, bones, teeth, feathers, hair, horns and shells are used as medicine and for other purposes. These are used either singly or in compound formulations and prepared in a variety of forms i.e. powder, ash, soups, syrup, ointments, liniments, etc.

During the ethnoveterinary survey of the study area, about 29 animal species have been documented which are used in the preparation of ethnoveterinary remedies. In the following account, animals are arranged alphabetically by zoological names followed by their English name in paranthesis, local name itallics & mode of administration.

5.4 ENUMERATION OF ANIMAL/ANIMAL PRODUCT BASED REMEDIES

5.4.1 Acrida exitata (Locust) Tiddi

Two to three grasshoppers along with chapatti (bread) or fodder are fed to the animal for oestrus induction. The animal will be in heat within 15 days.

5.4.2 Bos Bubalus (Buffalo) Bhains
Skull of a dead buffalo is boiled in water and the water is given to the camel to treat flatulence and lumbago.

5.4.3 Bos indicus (Cow) Gay

The dried dung is burnt and ash is applied externally to treat urticaria. Butter milk is given orally as well as applied locally to treat eczema and scabies. Milk fat of cow milk is applied externally on teats to treat mastitis.

5.4.4 Camelus dromedaries (Camel) Oont

Skull of dead camel is burnt to ash. About 100 g of this ash is mixed with 400 g oil of Papaver somniferum and given orally to cow through drenching tube once in a day upto six days to trat lumbago. Skull of a dead camel is boiled in water and the water is given to the buffalo to treat flatulence and lumbago. The dried dung is burnt and ash is applied externally on stomach to treat constipation. Blood is applied externally to treat arthritis. Old bones of dead camel are burnt and ash is mixed with water and given to the animal for treating rheumatoid arthritis.

5.4.5 Capra Capra (Goat) Bakari

Paste prepared by mixing excreta of goat with the leaves of Cassia auriculata is applied to treat wound.

5.4.6 Capra indicus (Goat) Bakra

Blood of Capra indicus is massaged externally to treat fractured bone.

5.4.7 Canis aureus (Jackal) Shiyad

Blood is massaged externally for treating arthritis of goats.

5.4.8 Canis familiaris (Dog) Kutro

Excreta is applied externally for treating to treat wounds.

5.4.9 Cervus unicolor (Sambhar) Sabar/Harnu

Powder of antler is applied on eyes to treat eye ailments.
5.4.10 Columbo livia (Pigeon) Kabutar

Paste is prepared by mixing a 12 cm root piece of Pandanus odoratissimus, 1 kg dried excreta of pigeon, seeds of Sesamum indicum and 500 g jaggery. About 500 gm of this paste is given once in a day for 5 days for oestrus induction. Bolus prepared from dried excreta of pigeon with jaggery is fed to the animal once in a day for oestrus induction. The blood is massaged externally to treat paralysis.

5.4.11 Coracias benghalenisis (Indian roller/Blue jay) Neelkanth

Four to five feathers along with fresh Cynodon dactylon are fed to animal for disposal of placenta after delivery.

5.4.12 Corvus splendens (Crow) Kagla

One crow is hunted, boiled and fed to the animal to treat flatulence. Roasted or boiled flesh is given to treat whooping cough.

5.4.13 Cyanopterus sphinx (Bat) ‘Chamachidiu’

Raw flesh having blood is rubbed to treat external injuries and also fed to the animal to treat whooping cough.

5.4.14 Equus hemionuskhur (Indian wildass) Ghudkhar

Blood of Equus hemionuskhur is massaged externally to treat arthritis.

5.4.15 Gallus domesticus (Hen) Murgi

Shell of four to five eggs of hen are fed to buffalo once in a day up to one week for oestrus induction. Blood is externally massaged on the aching parts of body. Blood is applied externally for treating arthritis and fractured bone. Eggs of hen are given orally to animal upto 8 days for the treatment of fractured bone.

5.4.16 Hemidactylus flaviviridis (Lizard) Chhipkali

One lizard is hunted and fed to the animal to treat lumbago.

5.4.17 Hystrix indica (Porcupine) Sehi
About 5 gm ash of hairs is given orally to treat asthma. Smoke of burning hairs is given to the animal to treat foot and mouth disease. Spines of hedgehog are collected and animals are exposed to the smoke of these spines to treat foot and mouth disease.

5.4.18 Microtermes obesiholmgren (White ant, termite) Dimak

Soil of termite mounds is rubbed thoroughly up to five to ten minutes on the jaw of the animal and repeated frequently up to three days to treat poisoning caused due to feeding of immature Sorghum to the animal.

5.4.19 Hippocampus cuda (Sea horse, Hippopotamus) Ghoda machchhi

Dried animal is powdered and fed to the animal with fodder to treat stomachache of horses.

5.4.20 Hyaena Hyaena (Hyena) Zarakh

Fat is applied externally to treat arthritis; blood is applied on cloth and smoke of this burning cloth is used to treat asthama.

5.4.21 Lepus nigricollis ruficodatum (Rufous-tailed hare) Sasla

Blood is applied externally to treat swelling; the ash of tail is mixed with oil and is applied to treat burning sensation.

5.4.22 Lissemys punctatus (Indian flap, Shell turtle, Tortoise) Kachbo

Carapace is burnt and ash is used for healing of internal injuries, pruritus and cough; and for treating superficial blunt injuries of animal.

5.4.23 Palamneaus sp. (Scorpion) Bichchhoo

A black scorpion is caught and dipped in a bottle full of mustard oil. After some time this oil is applied locally to treat scorpion bite.

5.4.24 Paraechinus microlapus (Shero) Pale hedge hog

Smoke of burning skin is used to treat mouth diseases of animal.
5.4.24 Passer domesticus (House sparrow) Charkali

Ash of excreta is used to treat asthma in calves.

5.4.25 Pavo Cristatus (Peafowl) Mor

Legs of peafowl are boiled in oil, and used to treat the earache.

5.4.26 Pseudibis papillosa (Black ibis Blood) Ran Kagdo

Blood is massaged for treating burning sensation, nervous disorder, paralysis and inherent body heat.

5.4.27 Vespa orientalis (Wasp) Tatia

Some Vespa orientalis are caught and boiled with water. Steam treatment this water is given to the mammary glands of animal to treat mastitis. Paste of soil of hive is applied locally to treat swelling and mastitis.

5.4.28 Quis aries (Sheep) Bhed

Milk of sheep is massaged in the animal to treat dislocation and deformities of bones. Sheep milk is poured in the animal eye to treat conjunctivitis.

5.5 ETHNOVETERINARY REMEDIES: MINERALS

During the ethnoveterinary survey, the authors also noted that besides the plants, animals and products of animal origin, the tribals also use minerals to treat the disease of their animals. Most of these minerals are easily available at home. Following are such minerals arranged alphabetically followed by their local name in italics.

5.5.1 Alum/Alumen Fitkari

Characters: Colourless, transparent, crystals with acid, sweetish astringent taste.

Mode of administration: It is astringent, caustic, haemostatic, antispasmodic and antiseptic. Alum of potassium is given to animal to treat leucorrhoea,
haematuira, haemoptysis, menorrhagia, gastric and intestinal catarrh/diarrhoea and other haemorrhages. It is applied externally on the skin of animal to treat skin inflammation. 1 kg. gum of Cyamopsis tetragonoloba, 1 kg. alum (KAl(SO$_4$)$_2$.12.H$_2$O) and 0.5 kg. common salt are mixed and heated with cow urine and about 100 ml of this solution is given to animal empty stomach to treat placental disorder. A mixture of seed oil or Brassica campestris, 5 gm rhizome of Curcuma longa and 2 gm potash alum is given to the animal orally through a drenching tube to treat internal wound. About 100 gm of dried rhizome powder of Curcuma amada is mixed with 100 gm of rock salt (Nacl), 100 gm of alum, 100 gm of Piper longum, 100 gm milk fat. This mixture is divided in 3 parts. One part is given once in a day for 3 days to treat gynaecological problems after delivery, especially disposal of placenta after delivery.

5.5.2 Ammonium chloride (Ammoni chloridum) Navasra, Chulika lavana, Navasadara

Characters: White granular powder or lumps

Mode of administration: It is diuretic, relieves hepatic congestion and expectorant. Ammonium chloride is given to animal to treat hepatitis, pneumonia, fever and liver diseases. Sodium chloride is added in the seed oil of Sesamum indicum and used for massage to treat eczema. About 2 litre sesamum-oil, ½ kg roots of Ziziphus mauritiana, 100 gm Ammonium chloride, 2 kg sugar and 100 gm clay is mixed with wheat husk and water is added and kept in an earthen pot upto three days and 750 ml of this mixture is given orally to the animal once in a day to induce lactation.

Calcium Carbonate (Calcii carbonas) Chalk, Vilati chuna

Characters: Chalk occurs in irregular, white, amorphous pieces, sometime as a powder.

Mode of administration: It is antacid-absorbent, desiccant and internally neutralizes the free acid of the gastric juice. Calcium carbonate is used to treat dyspepsia and checks sour eructation in animals. To treat burns in the animal the application of a mixture of chalk and linseed or olive oil is used. To treat discharges
from ulcers, in combination with burn coconut shell is useful. Internally it is used to treat irritant diarrhea. It coats and soothes the intestinal mucous membrane.

5.5.3 Calcium hydroxide (Lime) slaked lime churna, Churna

**Characters:** Calcium hydroxide occurs in irregular, white, amorphous pieces/powder.

**Mode of administration:** It is astringent and antacid. Paste of lime is applied externally to treat tumours and warts in animal. Lime water is used to treat inflammatory swellings, in pruritis and distressing irritation of the genital organs, leucorrhoea and other vaginal discharges, syphilis ulcers. Lime water given internally forms a good antacid. Used in pruritus irritation of the genital organs. To treat burns and scalds lime liniment called Carron oil, composed of equal part of lime water and a bland oil or olive or sesame oil is applied.

5.5.4 Calcium sulphate (Calcii Sulphas) Plaster of paris, Sufed Phathar

**Characters:** Dirty white amorphous powder.

**Mode of administration:** It is diuretic, relieves hepatic congestion and expectorant. Ammonium chloride is given to animal to treat hepatitis, pneumonia, fever and liver diseases. Sodium chloride is added in the seed oil of Sesamum indicum and used for massage to treat eczema. About 2 litre sesame-oil, ½ kg roots of Ziziphus mauritiana, 100 gm Ammonium chloride, 2 kg sugar and 100 gm clay is mixed with wheat husk and water is added and kept in a an earthen pot upto three days and 750 ml of this mixture is given orally to the animal once in a day to induce lactation.

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application of a mixture of chalk and linseed or olive oil is used. To treat discharges from ulcers, in combination with burnt coconut shell is useful. Internally it is used to treat irritant diarrhoea. It coats and soothes the intestinal mucous membrane.

5.5.6 Calcium hydroxide (Lime) Slaked lime churna, Churna

Characters: Calcium hydroxide occurs in irregular, white, amorphous pieces/powders.

Mode of administration: It is astringent and antacid. Paste of Lime is applied externally to treat tumours and warts in animal. Lime water is used to treat inflammatory swellings, in pruritis and distressing irritation of the genital organs, leucorrhoea and other vaginal discharges, syphilitic ulcers. Lime water given internally forms a good antacid. Used in pruritus irritation of the genital organs. To treat burns and scalds lime liniment called Carron oil, composed of equal part of lime water and a bland oil or olive or sesamum oil is applied.

5.5.7 Calcium sulphate (Calcii Sulphas) Plaster of Paris, Sufed Phathar

Characters: Dirty white amorphous powder.

Mode of administration: Plaster of Paris is cooling, antacid and astringent. Useful to treat menorrhagia, inflammation around the ear and ottohroea in animals. Plaster of Paris is used as plaster to treat bone fracture.

5.5.8 Charcoal (Carbo ligni) Lakrika-Koyala

Characters: Black moderately soft lumps. Powder charcoal is black amorphous powder.

Mode of administration: Deodorized, corrects bad odour, dry charcoal has the power of condensing oxygen within its pores which then becomes a powerful deodorant, rapidly destroying organic substances. Charcoal is used to treat foul smelling diarrhoea in animals.

5.5.9 Copper sulphate Nilatutia

Character: Occurs as blue crystalline masses.
Mode of administration: Powder of copper sulphate is used to treat epistaxis, chronic diarrhoea, dysentery and in various form of bleeding from mucus membrane. Its mild lotion is used as nasal douche in respiratory diseases.

5.5.10 Ferrous sulphate (Iron rust) Hara tutia

Characters: Pale bluish green rhombic prism like crystals.

Mode of administration: It is haemostatic, tonic and astringent. Mild lotion of ferrous sulphate is used to treat, epistaxis, and in various forms of bleeding from mucus membrane in animals.

5.5.11 Hydrochloric acid (HCL) Tejaab, Namak ka tejaab

Characters: Yellow liquid.

Mode of administration: Mixture of 50 ml hydrochloric acid (HCL). 50 ml latex of Calotropis procer and 50 ml latex of Mangifera indica is prepared and used as an antidote to scorpion bite.

5.5.12 Kaolin, Kaolinum Gairika

Characters: Occurs in irregular, white, amorphous pieces/powders.

Mode of administration: Kaolin is used to treat chronic diarrhoea, dysentery, epistaxis, and in various forms of bleeding from intestinal mucous membrane.

5.5.13 Potassium nitrate Yavakshar

Characters: Occurs in irregular, white, amorphous pieces/powder.

Mode of administration: Potassium nitrate is given to animal to treat dysurea, dropsy, acute rheumatism, bleeding from lungs and other internal organs and fever.

5.5.14 Silicate of magnesia Shankh jiram

Characters: Occurs in irregular, white, amorphous pieces/thick masses. It forms a smooth powder, unctuous to touch, yielding a smooth slippery powder.
Mode of administration: It is powerful astringent, desiccant and styptic. Silicate of magnesia is used to treat diarrhoea, dysentery, menorrhagia, and leucorrhoea in animals. Its ointment is applied externally to treat wounds while paste on burns and scalds of the animals.

5.5.15 Sodium borate (Borax) Sohaga

Characters: It is composed of boric acid and soda. It exists as crystalline tough masses or in the form of translucent irregular masses. The colour is grayish-white, on exposure it becomes opaque or dirty white. It has a faintly balsamic odour and tastes like ‘papada khar’.

Mode of administration: It is antacid. Borax is given to the animal to treat all sorts of phlegmatic complaints from common catarrh to bronchitis and pneumonia even attended with discharges from the ears and the nose. Externally borax is used to treat allay itching in urticaria, psoriasis, purulent wound and ulcers in animals. To treat sore nipples and other skin eruptions in animals, a solution of borax (1:8) is applied. It may also be employed in form of ointment in (1:8) ghee.

5.5.16 Sodium bicarbonate Khane ka soda, Khavano Soda

Characters: White amorphous powder.

Mode of administration: sodium bicarbonate is used to treat dyspepsia, tympani, diarrhoea, flatulence and urinary diseases. Used to treat rheumatism and ephemeral fever. Externally applied with water to relieve urticarial irruption and honey bee stings. About 50 gm fruits of Terminalia chebula, 50 gm rock salt, 50 gm seeds of Trachyspermum ammi, 25 gm seeds of Cuminum cyminum, 25 gm Elytaria cardamomum (Chhoti ilaychi), 50 gm sodium bicarbonate and 500 gm jaggery is mixed and bolus of 150 gm of this mixture is given orally for three days to treat gastro intestinal disorders.

5.5.17 Sodium chloride (Common salt) Lavan, Namak, Lun

Characters: Transparent cubes or colourless crystalline grains and saline taste. Depending on the origin, salt is classified into the following types:
**Ocean salt:** Contains some iodine

**5.5.18 Rock salt:** Sindhaloon

This type of salt is obtained from earth mines as lumps of rocks or granular masses and is used as common salt. The big lumps are kept as animal licks on the manager.

**5.5.19 Black salt:** Kala loon

This type of salt is obtained from earth mines as lumps of rocks especially from Punjab and is used as saline sulphur and carminative and as condiment. It is also mixed in animal licks.

**Mode of administration:** It is antiseptic, deodorant, controls blood fluidity and body water. Isotonic, hyper and hypotonic solutions are used in different treatments. Mixed with magnesium chloride as saline purgative. Externally its saturated solution is used to treat boils.

**5.5.20 Sulphur** Gandha and amlasar gandhaka

**Characters:** Occurs in semi-transparent crystals.

**Mode of administration:** Bitter astringent taste with a peculiar strong smell. Acts as a laxative and alterative, diuretic and insecticide small doses, absorbed and may be detected in the sweat, stimulant to the membranes, specific action on the rectum and increases the haemorrhodial secretions. Sulphur is used to treat diseases like haemorrhoids, in chronic skin diseases etc. it is used both internally and externally. Internally it is given with milk. Applied externally in skin diseases, in 1:8 ointment. Sulphur is mixed with oil of Brassica campestris and applied on the body of animal to all kinds of skin diseases.

**5.5.21 Zinc oxide** Putty

**Characters:** White sticky amorphous powder.

**Mode of administration:** It is astringent and antiseptic, soothing, desiccant. As a powder dusted over eczema, impetigo, excoriations, bed sores and cracked
nipples; as ointment applied to wounds, burns, vesicular eczema, chronic skin diseases internally act as nervine tonic, sedative, antispasmodic and astringent.