

**AHS-8****Animal Husbandry and Veterinary Practices in Vedic Period**

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**Abstract**

Keeping and rearing of animals is as old as our civilization itself. There are documentary evidences to suggest that domestication of the animals started even before the beginning of the written history. So far as keeping of animals in the Vedic Age is concerned, ample information is available in the Vedic Literature. The oldest literature of Vedic period is embodied in four Vedas i.e. *Rigveda*, *Yajurveda*, *Samveda* and *Atharveda*. In *Rig Veda*, which is the oldest book of Aryans, importance of the animals as wealth is described in several ways, such as "May these auspicious ploughs bring us wealth in cows, sheep, chariots and well nourished and strong women". Aryans maintained their cattle on pastures, which were near to their dwellings. They cleaned the jungles for grazing their cattle over there. The cows were milked thrice a day. Castration of males was practiced and oxen were used for farm transport. It appears that Aryans were accustomed only to cows. Buffalo was not a usual animal for them. They kept dogs for guarding their houses. Sheep were kept mostly for wool and goat for milk. Oxen were used for the purpose of ploughing and irrigation. In the *Rigveda*, the cow has been described as 'Aghanya' i.e. 'not to be killed', indicating the high sanctity of the cow in Vedic period. In *Yajurveda*, cow has been given the status of mother, in the verse "Go Matra Na Vidyati" i.e. 'mother cow is beyond comparison'. In *Atharveda* also the cow has been described as 'the mine of properties (Dhenuh Sadanam Rayinam)'. In *Rig Veda*, it has also been mentioned that barley, sugarcane, leftovers of sesame, after extraction of oil, were used for the feeding of animals. References have also been made of surgical interventions for the treatment of the animals in the Vedic literature. Use of splinters made of bamboo for fractured limbs in animals has been mentioned in *Atharveda*. Use of herbal medicines for treatment of different ailments of animals has also been described in these books. Beside Vedas, texts like *Upnishads* and *Puranas* also provide information regarding the importance of animals and animal husbandry practices during Vedic era.

In *Purans*, there is reference of treating the case of dystocia in cow by Lord Indra. It has been stated that he grasped the calf by the back and pulled it out. Ashwani kumars, the twin sons of Lord Surya, have been described as Masters in *Pashu Ayurveda*. Ashwini Kumars have been reported to provide an iron leg to a mare "Vispala" which was broken in a race. Salhotra the 'Father of Veterinary Science' also hailed from "Vedic era". He composed three textbooks viz. *Haya Aurveda*, *Asvaprashashan* and *Asvalakshansastrum*. *Haya-Ayurveda* deals with the keeping of horses, their breeds, behavior, management, ailments and cure.

Another legendary Veterinarian of Vedic period is *Palkapya*. He is regarded as an ultimate authority on elephant





medicine and surgery. His work on *Hasti-Ayurveda*, also referred as *Gaj Ayurveda*, gives detailed description on various aspects of keeping of elephants, including their treatment and surgery. *Sushruta Samhita* (620 B.C.) is one of the earliest recorded works dealing with surgery of man and animals. It has chapters on anatomy, physiology, pharmacology, nutrition and obstetrics.

In later *Vedic* period (1000-600 B.C., the age of Iron and painted Grey Ware), which includes the two epics i.e. *Mahabharat* (900 B.C.) and *Ramayana* (200 B.C.), reference has been made of many domestic animals. These include cattle, sheep, goats, dogs, elephants and horses. Beside the other uses of animals, cow dung was used as manure.

There are many other names and their works from *Vedic* era and post *Vedic* era, which have made great contributions to Veterinary Science and Animal Husbandry. To name a few, *Nakul*, *Sahdeva*, *Nal*, *Mrigsarma*, *Ved Vyasa* are the most famous. *Nakul* is considered as an expert on horses. His contributions, *Aswachikitsa* and *Nakul Samhita*, contain knowledge on various aspects of animal husbandry. His brother *Sahdeva* was a cattle expert. The works of many other experts are said to be available in possession of individuals, libraries, temples etc. But a large amount of the work seems to have been either remain unrecorded or got perished or destroyed with the continuous invasions by from abroad.

Keeping and rearing of animals in our country is as old as our civilization. There are ample evidences that our common animals were domesticated even before the written history.

### Animal Husbandry in Early Vedic Period

According to Gening (1977) archaeological evidences indicate that a high level of animal husbandry existed in the 3<sup>rd</sup> millennium B.C. in *Sintashta* region, which is said to be the place of origin of *Aryans*. Information on the animal husbandry practices in the *Vedic* period (1500-1000 B.C.) can be traced in the *Vedas*, which are said to be the oldest scriptures of the world. Among the four *Vedas*, *Rigveda* is said to be the oldest scripture. According to Max Muller (Randhawa, 1980), hymns of *Rigveda* were composed during 1500-1200 B.C., and they were handed over orally from one generation to the next generation. These *Vedas* provide us a great deal of information on various aspects of human life including their way of living. They also have a good amount of information about various kinds of domestic animals kept by the *Aryans* in those periods.

### Common Domestic Animals of Vedic Period

In the *Vedic* literature reference has been made of many domesticated species of animals such as cattle, buffalo (?), sheep, goat, camel, dogs etc. Beside *Vedas*, *Upanishads*, which are considered as pinnacle of *vedic* thought, have detailed information about different aspects of the animals. In one of the *Upanishad* '*Brahmana*', the importance of animals and animal husbandry practices during *vedic* era have been described in great details.

#### Cattle:

In *Rigveda*, the cow has been called '*aghanya*' i.e. not to be killed. In *Yajurveda*, the cow has been given the status

of mother in the words "*Go Matra Na Vidyati*" i.e. mother cow is beyond comparison. The importance of cows as an asset has also been cited in *Atharveda* in the words '*Dhenuh Sadanam Rayinam*' i.e. cow is the mine of wealth. Garg (2003) has reported that there are a number of hymns in the *Vedas*, addressed to Lord *Indra* for gifts of cattle.

"May we escape poverty by means of cattle" (R., X. 4.2.10).

"Grant to us *Indra* wealth of barley and cattle" (R., X.3.13.7).

"Shedder or rain, set open these clouds, set open the cow pastures, send us kine liberally" (R., I.3.3.7, 8).

"Givers of horses, cows and garments" (R., V.3.10, 8).

"Lord of wealth (*Indra*) visit us as of old to give us cows, horses and chariots" (R., VIII. 6.4.10).

The 6<sup>th</sup> *Anuvaka* of the 8<sup>th</sup> *Mandala* of the *Rig-Veda* relates wholly to the liberal gifts in cows, mares, camels and horses, one of which is characteristic, viz. "I have received sixty thousand horses and tens of thousands- a score of hundreds of camels, a thousand brown mares, and ten times ten thousand cows with red patches". The singers were rewarded with cows.

The cows were milked thrice a day. Cows which gave abundant milk and which could be milked with ease are prayed for, thus: "These white kine giving milk like wells" (R., VIII. 7.10.3). "I invoke the milch cow that is easily milked, that the handy milker may milk her" (R. I. 22.8.26).

There is reference of some cows, which let down their milk merely on the sight of their calf; "As a cow having a copious stream of milk yields, it coming into the presence of the calf" (R., IX. 4.2.1) (Aiyer, 1949).

Churning of milk was done with a wooden beater, turned with a rope. As cows were principal wealth of the *Aryans*, they were often stolen, and expeditions were organized for their recovery with prayers to *Indra*. "Recover Thou our cattle, *Indra*; bring them back; the drum sounds repeatedly as a signal; our leaders mounted on their steeds, assemble; may our warriors be victorious".

Vocabulary of herd was very strong. There were specific and separate words for 'a cow with a strange calf' 'a cow barren after calving' 'a three year old ox' and so on. Cows with different colours like red, black, dappled and light coloured has been mentioned. Cows were usually identified by distinctive cuts in the ears. Castration of males was practiced and oxen were used for farm transport.

#### Buffaloes:

It appears that *Aryans* were accustomed only to cows. Buffalo was not a usual animal for them. There is mention of words like *Gauri* or *Govala*, extension term of *Go* (cow), which probably refers to buffaloes (Sharma, 1977a).

**Dogs:** Dogs were used for guarding houses and for boar-hunting.

#### Sheep and goats:

Sheep were kept mostly for wool, beside probably for flesh (?). Wool was woven to make carpets and fabrics for garments (Piggott, 1950). Goats were kept mainly for milk.

### Importance and Uses of Cows During Vedic Period

The importance of the animals as wealth has been described in the hymns of the *Atharveda* in the following





words "May these auspicious ploughs bring us wealth in cows, sheep, chariots and well nourished and strong women" (Atharveda, 88.1.7). Animals were used for different useful purposes like ploughing, irrigation, milk, ghee etc.

#### Ploughing practices:

There are at least 21 references of ploughing in the *Rig Veda* (Sharma, 1977a), most of which are in Books I and X. Ploughs were drawn by teams of 2-8 bullocks. When there were 8 oxen, ploughing was done whole day. If oxen number was 6, then ploughing would not be done for more than  $\frac{3}{4}$ th of the day, if number was 4, then not more than  $\frac{1}{2}$  day and if number was 2, then only for  $\frac{1}{4}$ th of the day.

The man who yoked 8 oxen was considered as a pious man, one who yoked with 6 was just a businessman, those who used 4 were cruel and user of 2 oxen were called beef-eaters. However, using such a large number of bullocks at a time indicate that these breeds were probably weak from today's animals or ploughs were very heavy made completely of wood (no iron), so more power was required.

There are many hymns addressed to Shuna, Sita (Earth Goddess) and Shunashira. One hymn narrates "Our auspicious ploughs with their ornamental handles, and their sharp pointed shares, cleave the ground to the happiness of the cows, sheep and well grown maidens" "May the ploughmen plough round and round, happy with the prospects of heavy crops- may the rain god grant us plenty with milk and honey" "May the low-lying lands so ploughed and rich with milk, and wet with honey and ghee come back to us much fertilized" (Y., 189. 20).

#### Irrigation

Beside farm transport, oxen were used for the purpose of irrigation too. There is a reference "Tie the ropes tight to the waterpots, let us draw water from this unfailing well. Set up the cattle trough; bind the straps to it; let us pour out the water from the well, which is not easily exhausted". These *kuccha* wells were probably a source of danger for unwary cattle and man. For this there is a prayer "Let not, our cattle (*Pashun*) perish, let them not be injured, let them not be hurt by falling into a well" (R., VI. 5.5.7).

#### Food

Milk formed a considerable part of the food, being taken in its natural state or mixed with grains. Ghee or clarified butter was much used for frying of food or for *Yagna*. Eating of animal flesh (sheep, goat and horse) has also been reported (?). But the cow has been defined as *Aghnya* i.e. not to be killed, indicating the high sanctity of the cow in *Vedic* period.

The other literature of *Vedic* era, having valuable information on Animal Husbandry and Veterinary Practices followed in ancient India are *Purans*. Singh and Singh (2003) have stated that among the 18 *Purans*, particularly *Vishnu*, *Vayu*, *Agni*, *Varah*, *Matsya* and *Brahmanand Purans* have good amount of knowledge about keeping of animals. In *Brahmanand Puran*, *Rishi Vyas* says "all cows are the embodiment of Lord *Vishnu* and *Keshav* resides in their limbs. *Garuda Puran* consists detailed information about *Ayurvedic* medicines used against different ailments of the animals, particularly for horses and elephants. Treatment of various diseases

of animals by using *Ayurvedic* medicines has also been described in *Agni* and *Matasya Purans*.

#### Later Vedic period (1000-600 B.C.)

This period is also referred as the age of Iron and painted Grey Ware. Information of the animal husbandry practices during this period can be obtained from the two epics i.e. *Mahabharat* (900 B.C.) and *Ramayana* (200 B.C.) (Sharma, 1977b).

Domestic animals kept by the later *Aryans* can also be ascertained from the remains of the bones found in *Haryana*. These include bones of cattle, sheep, goats, dogs and horses. Keeping of tamed elephants and riding horses has also been referred during this period. Available evidences indicate that cattle at the upper levels (northern part of the country) were comparatively weak and small sized but at lower levels (middle and southern part of the country) they were mostly of massive size. The main breed of cattle in North India was probably very similar to today's *Haryana* breed. The animals were maintained mainly on pastures. Beside the other uses of animals, cow dung (*Sakrt*) was used as manure. Dried cow dung (*Karisha*) was suggested to be better manure. Eminent Veterinarians and Veterinary literature of *Vedic* period

As per mythology, the first Veterinarian was probably Lord *Indra*, who treated a cow for dystokia. Later on this knowledge was passed on to mankind by the Physician *Asvins*. The other eminent veterinarians of *Vedic* period are *Salihotra*, *Palkapya*, *Nal*, Lord *Krishna*, *Nakul* and *Sahdev* etc.

#### Salihotra

The first authentic work on veterinary science appears to be that of *Salihotra*. He was greatest Veterinarian of the ancient times and is called as 'Father of Veterinary Sciences'. He was an equine expert and equine medicine was his favorite subject. He had composed three books namely, *Haya-Ayurveda*, *Asvaprashasana* and *Asvalakshansastrum*. These books were written in *Devbhasha* i.e. *Sanskrit*. Amongst these three works, *Haya-Ayurveda*, which is also known as *Turgarnasastra* or *Salihotra Samhita* is the most famous. This book deals about husbandry and medicines of equines in quite detail. *Haya-Ayurveda* has 12000 verses divided into 8 parts. Each part deals with different aspect of the subject.

**I<sup>st</sup> Part-** deals with type of horses, their pedigree, selection methods, behaviour genes, name, characteristics and examination of different body parts, and management of unruly horses.

**II<sup>nd</sup> Part-** deals with various ailments like lameness, fever, diarrhea, dysentery, prolapse of rectum, asthma, jaundice, hemorrhage of internal organs etc. and their treatment. Symptoms of snake bite, toxicity and its treatment are also included in this chapter.

**III<sup>rd</sup> Part.** It is about the embryological aspects, development of foetus, reproductive disorders, parturition problems and retention of urine etc.

**IV<sup>th</sup> Part-** deals with various diseases of digestive tract and their treatment.

**V<sup>th</sup> & VI<sup>th</sup> Parts** are about the effects of various planets and stars on the behaviour of horses. It also has information on fever, skin diseases and bone fractures.





**VII<sup>th</sup> Part** describes various deficiency diseases and complications due to use of tubular enema instruments.

**VIII<sup>th</sup> Part** deals with the significance of lines on the body of the horses, their life span, and composition and preparation of various medications. In this part several herbs have been described having medicinal value. It also describes the training aspects of race-horses, carrying capacity and yoking methods for chariot.

The works of *Salihotra* has been translated in many other languages like *Persean*, *Arabic*, *Tibetan* and *English* (Jaggi, 1966).

#### **Palkapya:**

The next era of *Vedic* period belongs to *Ramayana* and *Mahabharata*. These two epics have enormous description of various kinds of animals kept during that period for different purposes. Saint *Palkapya* belongs to the of king *Dashratha*. He was an expert on elephant. He has compiled a voluminous work known as *Hasti Ayurveda* or *Gaj-Ayurveda* or *Palkapya Samhita*. This book too was written in *Devbhāṣa Sanskrit*. Harbola (2003) has reported that it has 4 parts, 152 chapters and about 10,000 verses, containing detailed information on anatomy, physiology, management, diets, diseases and surgical and medicinal treatments of elephants.

#### **Part I: Maha Rogasthana or Major diseases**

It has 18 chapters covering several major diseases. Among the major diseases included are (i) *Pakala*, a fever to which elephants are peculiarly susceptible (ii) *Cachexia* (*Skanda*) (iii) *Jaundice* (*Pandu Roga*) (iv) *Constipation* (*Anaha*) (v) *Ailments of the feet* (*Pada Roga*) (vi) *Senselessness* (*Murcha*) (vii) *Diseases of head* (*Sir Roga*) (viii) *Diseases due to natural calamities or misfortunes* (*Vipada Roga*) (ix) *Swelling and itching of the skin* (*Sopha*) (x) *Eye diseases* (*Netra Roga*).

Except *Murcha* and *Sir Rogas* other diseases have been further divided into different types of diseases ranging from 3 to 30 with further subdivisions of a few of them.

#### **Part II: Kshudra Rogasthana or Minor diseases**

It has 72 chapters covering various minor diseases. The diseases have been divided into 60 types, depending on the nature and symptoms. This part also contains information on treatment for vomiting, diarrhea and swooning caused by the use of the *Madana* plant (*Randiaduma*). It describes wasting caused by excessive eating of unwholesome food. It also describes the signs and symptoms and treatment of toxemia and how elephants should be protected from poisoning by enemies. It has description on snakebite, boils, influence of planets, mental disorders, retention of urine and faeces. Information on bloody urine, wounds on the feet, swellings in the throat, insanity and possession of supernatural powers, hysteria, epilepsy, rheumatism, chronic inflammation of lungs, inflammation of scrotum and foot, disease of digestive tract, care of young elephants, periparturient fever, diseases of teeth, colic, difficulties in drinking fluid, ringworm etc. has also been compiled. Diseases caused by mud eating, dysentery, intestinal worms, inflammation of chest and abdomen, tumours and diseases of ear and heart have also been described.

#### **Part III: Shalyasthana or Surgery**

It deals with surgery and contains 34 chapters. *Shalya Rogas* have been classified in to three types with further subdivision of a few types, depending upon the nature of surgical intervention required. It describes several kinds of wounds, abscess and ulcers and their treatment by six kinds of surgical procedures. It also has description of pregnancy and development of foetus.

#### **Part IV: Materia medica-diet with hygiene**

It includes oleaginous medicines, enemas, snuffe, collyrium, salts, wine, *lac*, *guggul*, *garlic*, *peeper* and *ginger*. It has description for constructing elephant stables, on the bathing of elephants and their being massaged with oil and about preparation of their teeth for war.

#### **Nal**

King *Nal* was ancestor of *Pandavas*. He is also known as *Asvateet*, i.e. who knows every thing about horses. According to some scholars King *Nal* wrote a book on equine medicines and its manuscript is said to be available in one of the library of Bombay Presidency (Sharma, 2003).

#### **Lord Krishna**

Lord *Krishna* is also called '*Gopal*' i.e. Keeper of cows. He grazed cows. *Gokul* and *Govardhana* were the work places of Lord *Krishna*. Large herds of cows were kept at these places for specific purposes. He was also an expert of horses as he treated and cured the horses of *Arjuna* during the war.

#### **Nakul and Sahdeva**

During *Mahabharata* period we had two great veterinarians *Nakul* and *Sehdev*. *Nakul* was a horse expert. These two *Pandava* brothers were expert in equine and cattle, respectively. It is believed that *Aswini* brothers trained *Nakul* and *Sehdeva*. *Nakul* has summarized his experiences on horses in a book known as *Asvachikitsa*. This book too is in *Sanskrit*. The book contain detailed information on equine husbandry and therapeutics. There is another book *Nakul Samhita*, where works of *Nakul* on various Animal Husbandry practices have been compiled.

#### **Feeding and Diet of Animals**

There are many references in the *Vedas* and other *Vedic* literature, which gives an insight about the feed ingredients used, and feeding practices followed during that period. *Aryans* maintained their cattle on pastures. They cut the jungles and grazed cattle there. Pastures were near to their dwellings. They often traveled for long distances in search of pastures, but ultimately returned to their home along with their cattle. Normally one man would take all the cattle of the village to the pasture ground in the morning and bring them back in the evening (*Anguttaranikaya*. I. 205; *Rig Veda*, X.10 ef). This practice can be seen in many parts of the country even today.

Barley has been reported to be used for feeding of cows. "As a husband man repeatedly ploughs the earth for barley" (R.I.5.6.15) "The cattle feed upon barley" (R.X.2.11.8). The other crop described in *Rig Veda* is sugarcane. Leftovers of *Sesame* after extraction of oil were also used as feed, when animals were confined to home. "I offer you dried sugarcane, white sesamum, reeds and bamboos" (A., 475, 53 and 54). There ap-





pears to be no mention of wheat, cotton and rice or their products for the feeding of animals.

#### Classification of ailments:

Like *Ayurvedic* literature, the *Hasti-Ayurveda* classifies the ailments of elephant in to two broad classes, physical (*Adhyatmika*) and accidental or incidental (*Agantuka*). The physical classes of ailments are of two types i.e. *manasa* (caused by mental disorders) and *dosaja* (caused by the disorders of the bodily humors-wind (*vata*), bile (*pitta*) and phlegm (*kapha*). The *agantuka* ailments have also been divided in to two categories (i) *adhibhautika* (caused by external injury and wrath of God) and (ii) *adhidevika* (caused by ecological changes). According to another classification, the diseases have been grouped in to three types i.e. (i) curable (*sadhya*), (ii) incurable (*asadhya*) and (iii) curable with difficulty (*Kriccrasadhya*).

#### Treatment

According to *Atharveda*, there were two systems of medicine, the first magico religious medicines and second was the system of drugs. Several hymns in *Atharveda* indicate that *Aryans* have knowledge of using certain herbs as medicine for the treatment of their animals. For instance use of *Aparmarga* (*Achyranthes aspera*) for digestive disorder and *Kushte* (*Costus speciosus arabicus*) for fever has been mentioned. *Munja* grass was prescribed in dysenteric ailments. Plant *Arundhati* has been referred to have wound healing properties.

The *Ayurvedic* system of medicine is divided into eight sections each called *anga*. *Hasti-Ayurveda* mentions application of three different types of medicines in different kind of diseases in elephant, which include (i) herbal (ii) animal and (iii) earthy.

The herbal medicines consists of roots, stalks, shoots, pith, barks, leaves, flowers, fruits, thorns, juices, exudation, milk, oils, ashes etc. of the trees and creepers. Among the plants and creepers used as medicines are *pippall*, *vilva*, *sriparni*, *vetasa*, *trikatuka*, *brimhah*, *tila*, *sali*, *mahanpanchamula*, *tribut*, *amartaka*, *adhaki*, *satvan*, *prishiparni*, *chitrak*, *tulsi*, *ashoka* etc.

The animal origin medicines include flesh, extract, marrow, fat, milk, urine, blood, brain and skin of animals like fish, pig, hog, buffalo, goat, dog, cow, river dolphin, turtle, snakes, horse, camel, parrot, deer, tiger, sheep, scorpion and others.

The earthy types of medicine include various salts, minerals, suitable soil, mud and water. The medicines have been administered to the elephant in at least eight different forms (i) ointment (*Varti*) (ii) decoction (*Kasva*) (iii) paste (*Kalka*) (iv) ghee (*Ghruta*) (v) vil (*Tails*) (vi) juice (*Rasa*) (vii) powder (*Churana*) (viii) incense (*Dhupa*). The medicines are applied in 20 different ways.

The principal methods of application of medicines were (i) *Sastrakarman*-applied with the help of surgical instrument, (ii) *Ksarkarman*-used as caustics and (iii) *Agnikarman*-applied as cauterization.

i. *Sastrakarman*: At least 10 different kinds of surgical instruments have been mentioned for carrying out surgical operations. According to their shape, they are known as *brithipatram*, *brihimukham*, *mandalagram*, *utpalpatram*, *kushapatram*, *kutharakriti*, *batsdantam*, *suchi*, *salaka* and *rampaka*.

ii. *Ksarkarman*: Wounds, injuries, sores, bruises, boils, ulcers etc. are some of the diseases where caustics have been used. These are prepared from the ashes of trees like *muskaka*, *palasa*, *timisa*, *sarja*, *karanja*, *vilva* etc. The ashes are mixed with urine of goat, cow, buffalo, horse, ass and camel. The mixture has to be filtered seven times and the filtrate is called an alkali or caustics. The filtrate should be boiled in iron utensil and powders of *suvarcika*, *yavaksara*, *sudhacurna*, *viva*, *kasisa*, *sankhucuma* and *saurastrika* should be mixed with the boiled filtrate.

iii. *Agnikarman*: *Agnikarman* is a process wherein the cauterization or burning of the part has been prescribed particularly in cases in which pus oozes out from several points such as, *sapitaka* (ulcers), *krimidusta* (affected by worms) and for deeply torn or damaged muscles.

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