



Common Plant Poisoning in Animals

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Animals graze in open fields and hills. At this time, they unknowingly get poisonous plants in their food. So there is a possibility of poisoning at times. Keeping this in mind, identification of poisonous plants and knowledge about poisoning caused by them is essential.

Datura stramonium: dhotra

It is a wild plant and belongs to poisonous class. White, bluish black and Ran dhotras can be seen here.

White and black dhota are used in Panchang medicines.

Each part of the plant and especially the seeds of all Dhatura species contain many alkaloids, some of the most toxic are hyoscyamine, hyoscine (scopolamine) and atropine. The principal effect of these alkaloids is on the autonomic nervous system.

Dhotra plant is used in Ayurveda. Dhotra leaf extract soothes asthma and stops the pain of sinusitis.

Symptoms

- Consumption of all components of the Datura especially the leaves and seeds can cause poisoning.
- Poisoning by this plant is seen in almost all domestic animals. Affected cattle will stop eating, bloating may occur, and in severe cases respiratory and heart irregularities may develop. Horses and pigs are more susceptible; horses will develop decreased intestinal motility, gaseous colic and heart irregularity with as little as 500 seeds/kg of grain. Poultry are even

more susceptible to jimson seed poisoning. It is very important to regularly clean out feed bunks because the seed can accumulate in the bottom of the bunk and result in poisoning.

- Animals may also die due to respiratory failure.

Carrot grass (Parthenium Grass)

Parthenium hysterophorus is commonly known as congress grass or carrot grass. It belongs to Asteraceae family. It is an invasive plant species that disturbs cultivated areas, roadside vegetation, gardens etc. *P. hysterophorus* is considered as one of the worst weeds responsible for causing health problems in animals and human.

The main substance responsible is parthenin, which is dangerously toxic. Contact with this plant cause dermatitis and respiratory malfunction in humans, dermatitis in cattle and domestic animals due to the presence of toxin parthenin.

Symptoms

Carrot grass pollen causes various allergies in humans as well as animals.

Cold, sneezing, body itching, asthma, respiratory problems, skin disorders are some of the common symptoms observed in Carrot grass poisoning.

It also is responsible for bitter milk disease in livestock when their fodder is polluted with Parthenium leaves.

Apart from parthenium glucoside, some alkaloids are found in the plant which gives a bitter and specific foul smell. Due to this, animals do not eat this grass.

If carrot grass is ingested by animals, the symptoms are scaly in various parts of the body, loss of hair and white skin on the neck and shoulders, itching around the eyelids and facial muscles, diarrhea, followed by swelling of the skin appear. If not treated on time, the animal may die.

Sorghum

Sorghum is one of the major cultivatable fodder in India mainly for livestock feeding. The young seeds of sorghum contain a toxic substance called dhurin.

Cyanide is very toxic to mammals and its effects may be noticed within 5-15 minutes after the consumption of cyanogenic plant, Rapid intake of sorghum equivalent to 4 mg HCN/ Kg is considered to be lethal. Cyanide is very toxic to mammals and its effects may be noticed within 5-15 minutes after the consumption of cyanogenic plant.

Cyanide is produced from dhurin in the stomach after the animals eat the young pods. It causes poisoning to animals.

Symptoms

The brain and heart are the first to be affected by lack of oxygen and so the resulting clinical signs prior to death include excessive salivation, difficulty breathing, bright red mucous membranes, muscle tremors, convulsions, collapse and death from respiratory paralysis.

If a small amount of pongee (Young Shoots of jowar) is eaten, the symptoms of stomach ache, animal restlessness, increase in breathing and heart rate, difficulty in breathing, bloated stomach of animals are observed.

If the cyanide effect is between 0.5 and 1 gram per ml; Skin hyperemia and heart rate increase. Between 1 and 2.5 g/ ml there is arousal and unconsciousness. An animal at this level goes into a coma, dies.

Abrus precatorius

Abrus precatorius, commonly known as Rosary Pea, is an ornamental plant native to India. These plants are famous for their seeds. abrine is a toxic ingredient in this. Chewing the seeds can be fatal to animals. Among livestock cattle are prone to become vic-

tims when left for grazing in open field dominated by *Abrus precatorius*. The poisoning of cattle with *Abrus* is of interest owing to the fact that it is one of the means employed for the malicious destruction of cattle; in India.

Symptoms

Ingestion of intact seeds by animals shows no symptoms. Because it is completely excreted from the dung. When an animal chews the seeds and swallows them whole, poisoning occurs.

Affected animal shows dermatitis and conjunctivitis as local effects. Oral consumption can produce severe gastroenteritis accompanied with severe pain, constant vomiting, watery diarrhea which later on changes to bloody, thirst, followed by circulatory collapse.

Systemically shows a series of inflammatory changes, with the site of injection turning edematous and hemorrhagic. Severe gastroenteritis can occur with severe pain, persistent vomiting, diarrhea; Later changes such as circulatory collapse may occur.

If not treated early, the animal goes into a coma.

Kanner

Kaner (*Nerium oleander/indicum*) is an ornamental shrub or small, densely branched tree, 1 to 10 m tall in the Dogbane family Apocynaceae This plant is also commonly grown as an ornamental plant due to the color of its flowers. This plant can survive even in waterless areas, so it can be seen planted along roadsides. Flowers grow in clusters in terminal branches, each 2.5 to 5 cm, funnel-shaped with five lobes, fragrant, various colors from pink to red, white, peach, and yellow.

All parts of the oleander plant contain cardiac glycosides, including the roots and the smoke produced from burning, as heat does not inactivate the glycosides. The toxic component are the two potent cardiac glycosides, oleanderin and neriine, which can be isolated from all parts of the plant.

All parts of this plant are poisonous, but the leaves and young shoots are more poisonous. Oleandrin, a substance that has a toxic effect on the heart, is found in large quantities in the milky fluid coming out of this area. This plant can poison almost all animals; It includes horses, goats and cows.

In large animals; Cows and horses eat about 30-50 grams of leaves and the animal can die. This plant is so poisonous that a human can die after eating 1 leaf and even a sheep after eating 2-3 leaves may die. Dried leaves are just as poisonous as green leaves.

Symptoms

This plant has a toxic effect mainly on the heart; It initially includes weakness with rapid pulse, increased heart rate, abdominal pain in the animal (horse).

Eventually cold feet, dilated pupils, muscle weakness, ataxia, hypotension, hypothermia eventually tetanic seizures occur and the animal may go into coma and die.

Death can occur within 24 hours of the onset of symptoms due to lack of blood flow to the animal's body.

Castor

The castor oil plant *Ricinus communis*, also known as *Palma(e) Christi* or wonder tree, is a perennial scrub of the spurge family *Euphorbiaceae*. Earlier this plant was used in veterinary and human medicine as an analgesic, nervine, tonic and ruminatoric. But this plant is not used in treatment due to increasing side effects. It is sometimes used as a rodenticide or insecticide. This plant is used for castor oil.

But the seeds of this plant are poisonous, the toxic substance called ricin is found in the pulp that remains after extracting the oil from the seeds. This chotha can cause poisoning if eaten by animals. The seeds are not poisonous if they are swallowed without biting them. Horses and humans are more susceptible to poisoning from this plant. Poisoning can occur in domestic animals such as goats, sheep and cows. 2g/kg of seeds by weight can cause poisoning in cows and 1 mg of ricin can cause death in humans.

Symptoms

Symptoms appear 12-48 hours after eating the seeds. It causes pain in the stomach of the animal, blood and thin dung (Bloody diarrhoea), stoppage of movement, excessive thirst of the animal. Diarrhea causes lack of water and electrolytes in the body, thus causing hypovolemic shock. This can lead to death of the animal after 1-10 days due to hypovolemic shock and respiratory paralysis (failure of the breathing center in the brain).

Measures to prevent poisoning

Animals should not be allowed to graze in areas with poisonous plants.

It is always a good idea to observe and investigate the area before leaving animals to graze in order to prevent accidental consumption of any poisonous plants.

Supplemental fodder and water should be given to the animal. Sometimes animals eat harmful plants to satisfy their hunger due to lack of fodder. Do not add hazardous chemicals or drugs to animal drinking buckets.

While cutting fodder, care should be taken to ensure that harmful plants do not come in between good fodder.

Do not feed the animal with moldy manure or weeds that have been uprooted in the field.

Treatment/First Aid

- If symptoms of poisoning occur, contact a veterinarian immediately.
- If possible, show the vet a sample of what plant the animal has eaten.
- Feed the animal with Tulsi, Fenugreek seeds solution, it will help to detoxify the poisoning agent.
- Follow veterinarian's instructions: Carefully follow the treatment plan outlined by the veterinarian. Administer any prescribed medications as directed and attend follow-up appointments.
- Feed garlic in small quantities to animals. Eating garlic reduces the problem of stomach ache and diarrhea.
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