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Survey of Some Common Toxic Plants of Livestock in Malegaon, District- Nashik, Maharashtra

[1]Yogesh Shastri, [2]Kapil T.Patil

[1]P.G. Department of Botany*, M.S.G. College, Malegaon camp, Dist- Nashik, 423105, M.S.
[2]P.G. Department of Zoology, M.S.G. College, Malegaon camp, Dist- Nashik, 423105, M.S.

ABSTRACT

Plants are major source of feed and have vital nutrition importance to animals. Plants are also used to cure diseases. Animals obtain food from plants, some of these plants consist of large variety of poisons. Poisonous plants produce toxic effects after being ingested or after absorption by animals. The toxic effects of plants include physical upset, loss of productivity and even a death. A variety of poisonous plants have caused excessive losses to livestock industry in many areas even in Malegaon. Total of 11 plant species from families were recorded identified and discussed in this investigation.

INTRODUCTION

Poisonous Plants that affect animals are major concern for practicing veterinarian, livestock producer and farmers over the world. This may be due to great effect it causes an animal health and production. The problem of the plants may be greater in countries possess higher plant biodiversity. India also possesses diverse agro climatic zones and wide range of plant diversity. Grazing is a normal activity in livestock management. Animals are exposes to variety of poisonous plants when the fodder availability is less. From the known poison around the world, plants share third largest division. Ingestion of poisonous plants by animals produces toxic effect such as loss of productivity, physical upset and even death.

Poisoning can be occur either by accidental ingestion of plants with usual feed or by wilful consumption of toxic plants. Aslani (2004) studied poisonous plant of Iran and their effects on animals. Haritha C.V.and et al (2019) recorded common plant poisoning in ruminants. Angesom H. Desta (2019) investigated livestock poisoning plants identification and its veterinary importance in afar region of Ethiopia. No such study is carried out in Malegaon Taluka of Nashik district of Maharashtra; therefore this study is carried out in Malegaon region.

MATERIAL AND METHODS

Study area –The study was conducted from December 2021 to June 2022 in Taluka Malegaon of Nashik District of Maharashtra. Malegaon is on Mumbai Agra highway. It is situated at the confluence of Girna and Mausam River.

The interviews of livestock owner, animal healers, animal health practitioner were taken. Poisonous plants were collected and identified with the help of flora and standard literature. The sample of each poisonous plant was collected and herbarium is prepared.

Table – 1) Information of poisonous plant parts, clinical signs, and species affected cattle and source of the plants

Sr. No.	Name of plant	Family	Local Name	Poisonous Parts	Clinical Sign	Species Affected Cattle	Source of the Plants
1	*Abrus precatorius L.*	Fabaceae	Gunj	Seeds	Gastroenteritis, cattle with vomiting and diarrhoea	Cattle	Domestic &Wild
2	*Ageratum conyzoides* L.	Asteraceae		Whole plant	Shivering,,Very high fever,anorexia and intence dirrhoea	Cattle	Wild
3	Calotropis gigantea L.	Asclepidaceae	Rui	Leaves and stalk	Latex causes blindness,skin and mucous membrane irritation	Cattle	Wild

4	*Cuscuta reflexa Roxb*.	Cuscutaceae	Amarvel	Whole plant	Vomiting,anorexia, abdominal pain and purgation	Cattle	Domesti cand wild
5	*Datura stramonium* L.	Solanaceae	Dhatura	Fruit, seed	Rapid Pulse, pupil dilation	Cattle	Wild
6	*Lantana camera* L.	Verbanaceae	Aamoni kamoni	Leaves, immature and mature fruits	Cholestasis,immature fruits are poisonous.	Cattle	Wild
7	*Nerium oleander* L.	Apocynaceae	Kanher	Leaves	Disturbance in Gastrointestinal and cardiac system	Cattle	Domesti c&Wild
8	*Parthenium hysterophorus L.*	Asteraceae	Congress gavat	Whole plant	Dermatitis in cattle and domesticated animals.Bitter milk disease when leaves are consumed.	Cattle	Wild
9	*Prosopis julifera* (Sw.) DC.	Fabaceae	Vilayati kikar	Leaf, seed Pod	Bloating, Fever, Jaw Dislocation, Neurol-ogical alteration	Horses Sheep, goat	Domesti c&Wild
10	*Ricinus communiS L.*	Euphorbiaceae	Erendel	Fruit,seed	Nausea, gastrointestinal irritation	Horse	Domesti cand wild
11	*Thevetia nerifolia L.*	Apocynaceae	Yellow oleander	Fruit,seed	Dries up the tongue and throat,heart beats increases,blood supply cut off and ending in death.	Cattle	Domesti cand wild

RESULT AND DISCUSSION

Poisoning in animals due to plants is one of the important health problems of livestock. Grazing is considering a routine in a livestock. It exposes the animals to variety of poison. . There are several factors that contribute to plant poisoning like season and weather conditioning. Animals which are already under nutritional stress are more susceptible to plant poisoning. Zhoao meng Li et al (2011) reported distribution of poisonous plant in China. Ganzalo J.Diaz (2011) worked on toxic plants in Columbia. V.K.Jaya Priya et al (2015) investigated poisonous plants in Dhoni forest, Palakkad, Kerala region. They were reported six toxic plants species, its chemical component, morphological characters and its poisonous effect on animals. Toxic plants are used in treatment of human diseases by using scientific methods, similar survey done by Anju Antony et al(2014) in Nilamber area of Kerala. Rahman Ullah Khan et al (2018) studied Poisonous plants of Bannu District of Pakistan. They found 87 poisonous plants belonging to 54 genera. Another worker Chinmay Chaudhari et al (2011) documented 24 ethnotoxic plants of 13 families which are mostly useful to treat various diseases. They were recorded maximum plant of family Solanceae, Fabaceae and Euphorbiaceae .

According to this study, a total of 11 plants from 7 families were identified and documented to have a poisonous effect on livestock. Asteraceae, Apocynaceae and Fabaceae family with two species each and remaining one to each families. Poisonous substances can be found in a variety of plant parts, including the leaves, fruits, seeds and latex. Out of 11 poisonous plants common and frequently poisonous plants complained by veterierians are Calotropis, Datura, Nerium, Parthenium that caused poisonous effect. This investigation also showed that the bloating, GIT and cardiac disturbance, dermatisis, cholestasis in horses, sheep, goat, ruminants and cattle due to poisoning by plants.

CONCLUSION

This investigation identified and recoded a total of 11plants having a poisonous effect on livestock. Calotropis, Datura, Nerium, Parthenium that caused poisonous effect. This study also showed the adverse effects like GIT and cardiac disturbances, dermatitis, cholestasis signs by livestock. Good practices of grazing, removing of poisonous plants from grazing area, knowledge about the poisonous plants helps to resolve the problem of poisoning by plants.

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