



***LANTANA CAMARA* POISONING, with special reference to cattle**

Course Title : Toxicopathology

Course No. : VPP-609

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Introduction

- ▶ Lantana (*Lantana camara* and *Lantana montevidensis*) is a shrub that was once grown as garden ornamentals and is now a major weed across all states
- ▶ Lantana Camara is species of flowering plant within the verbena family(verbenaaceae),
- ▶ Native to the American tropic and is commonly called as yellow sage, wild sage or shrub verbena.
- ▶ Common name in other parts of India are putus in Bihar and Jharkhand, Aripu in Kannada, Raimuniya in hindi, Konkini in Malyalam and others.
- ▶ In India,it was first brought by Portuguese in Goa as ornamental flowers which got spread as weed throughout the country.
- ▶ Although all lantana are poisonous, red flowered varieties are thought to be the most toxic but some white and pink flowered varieties can also be highly toxic.

WHAT DOES LANATANA LOOK LIKE?

- ▶ Lantana is easily recognized by its vibrant flowers that vary in colour from red-yellow, orange-pink and white depending on the location and plant maturity.



Host Range

- ▶ Species affected by lantana poisoning includes cattle, sheep, goats, guinea pigs and rabbits.
- ▶ Lantana is not toxic to humans unless berries are ingested.



Toxicity :-

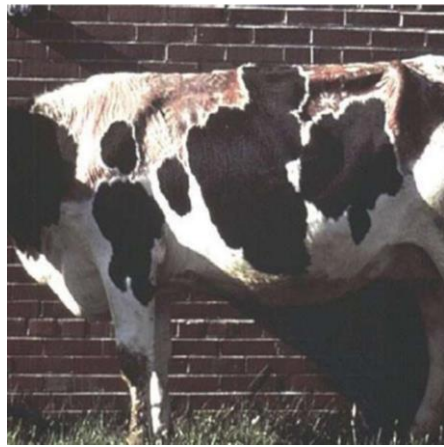
- ▶ Though Ripen fruits of *L. camara* are consumed by variety of livestock (cattle, sheep, horses ,dogs ,goats) and found to be toxic.
- ▶ Active substance known to cause the toxicity in grazing animals is **Pentacyclic-triterpenoids** causing hepatotoxicity and photosensitivity.
- ▶ Pentacyclic-triterpenoids called **Lantadenes**.

Hepatotoxicity and Photosensitization

- ▶ lantana poisoning in cattle, sheep, buffalo, and guinea pigs causes **obstructive jaundice & photosensitization**
- ▶ The unripe fruit of lantana causes hepatotoxicity mainly due to Lantadenes content.
- ▶ The periportal hepatic cells became swollen and vacuolated ,their particulate staining and glycogen content were reduced
- ▶ There is rise in concentration of bilirubin and phylloerythrin and in the activity of sorbitol dehydrogenase, arginase and glutamic oxaloacetic transaminase in serum.
- ▶ Liver and kidneys are the most affected organs during lantana poisoning.

Symptoms -

- ▶ Excessive skin sensitivity to sun
- ▶ Hepatotoxicity leading to liver damage - (Obstructive Jaundice).
- ▶ Jaundice, yellow discoloration of visible mucous, white portion of eye, skin and muzzle.
- ▶ Reddening and inflammation of non pigmented skin portion.
- ▶ Swelling of ears and eyelids with discharge from eyes
- ▶ In chronic case ulcer may develop and bacterial invasion may lead to sloughing of skin surface
- ▶ Animal avoid sun and stops feeding appear sluggish and dehydrated.
- ▶ Diarrhoea with strong smell and black colour faeces.
- ▶ Death may occur from 2 days in severely poisoned cattle to 1-3 weeks in less severely affected cattle



DIAGNOSIS:

It is based on the animal's access to lantana and clinical signs shown (e.g. jaundice).

► Reference:

1. <https://www.pashudhanpraharee.com/lantana-camara-poisoningwith-special-reference-to-cattle/>
2. Sharma OP, Makkar HP, Dawara RK, Negi SS. (1981).A review of the toxicity of *Lantana camara* (Linn) in animals. Clin. Toxicol.1981 Sep;18(9):1077-94.



Thanks