



# ***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 discolouration 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**