

Weed focus: Jimsonweed

Sharon Freeman, Ramon Leon, Deidre Harmon, and Matt Poore

Datura stramonium, or Jimsonweed, is also known as thorn apple or devil's snare. It is a member of the nightshade family and is native to Central and North America. Its name is a variant of "Jamestown weed" because British soldiers in Jamestown, VA consumed it while trying to quell Bacon's Rebellion in 1656 and ended up spending days in an altered mental state. All parts of the Jimsonweed plant contain tropane alkaloids (atropine, hyoscyamine, and scopolamine), which have hallucinogenic effects and can be toxic. While it has been used for various traditional medical treatments and as an analgesic/anesthetic, it can be dangerous, especially since toxin levels vary greatly from plant to plant and even within plant parts. Ratios of the toxins vary with the age and maturity stage of the plant. Atropine is higher prior to blooming and scopolamine is higher after. The plant is toxic fresh or dried. It is generally not palatable to livestock so they avoid it if other forages are available in pastures. Plants baled into hay can be a problem if the animals are not able to sort them out.

Jimsonweed is a warm-season annual. It has a slender pale green to purple, branching stem. Leaves are serrated and 3 to 8 inches in length. Flowers are white to purple and have 5 points. They generally bloom only for a single day. Seed pods are spiny, the reason for the name "thorn apple", and reach about 1 inch in length. They turn brown when completely ripe and open into 4 parts to release the seeds, which can remain viable in the soil for up to 40 years. Jimsonweed tends to be sticky and has a distinct aroma.



Photos: left and right-
Jimsonweed plant
Below left- flower
Below right- seed pods
(unripe)



Jimsonweed poisoning has been seen in all species of domestic livestock. Early symptoms include rapid pulse, polydipsia, rapid breathing, dilated pupils, muscle tremors, and frequent urination. Animals stop eating and lose weight. In fatal cases, pulse is weak, breathing becomes irregular, body



temperature lowers, coma and or convulsions may follow, and finally death.

Control of Jimsonweed in pastures: Jimsonweed does not compete well in healthy pastures but can thrive if a pasture becomes over-grazed, so good pasture management will help control this plant. Its root system is shallow so hand weeding or light cultivation can be effective if the population is not widespread. (Plants are not toxic to the touch.) Herbicides, such as 2, 4-D that kill broadleaf plants can be used to kill jimsonweed or tank mixtures that contain 2, 4-D with dicamba or triclopyr provide good control of this plant.

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