

Illinois Grazing Manual Fact Sheet

SPECIES • POISONOUS PLANTS



Black Locust



Plant Characteristics

Robinia pseudoacacia L: Black locust is a medium-sized tree reaching 60 feet in height and 1 to 2 ½ feet in diameter, although it may grow larger on favorable sites. The trunk is usually short and divides 10 to 15 feet above the ground into several stout, ascending branches. The trunk and branches lack large thorns. The pinnately compound, alternately arranged leaves, 8 to 14 inches long, have 7 to 19 nearly sessile leaflets. The flowers appear after leaf emergence, in May or June, and are borne in drooping racemes 4 to 5 inches long. Each flower is about 1 inch long and very fragrant. Its fruit is a flattened brown pod, 2 to 4 inches long and about ½ inch wide, that contains 4 to 8 kidney-shaped, compressed seeds.

Occurrence

Black locust is apparently native in the United States from Georgia to Louisiana and Arkansas, north to Pennsylvania, West Virginia, southern Indiana, southern Illinois, southern Missouri, and eastern Oklahoma. It was commonly planted farther north, and escaped to become a tree of roadsides, open woods, and waste places. Black locust has been widely used for erosion control. It reproduces itself by seeds, and also spreads by underground stems.

Condition of Poisoning

Animals have been poisoned from browsing black-locust sprouts, eating the pods and seeds, gnawing the bark, eating the leaves, and drinking water in which pods had remained for some time. Cattle are the most frequently poisoned of all animals. Horses are occasionally poisoned from gnawing the bark of black-locust trees to which they are tied.

Control

Woodlands and open pastures should be cleared of black-locust sprouts and seedlings. Do not let animals graze near black-locust trees or drink water containing the pods. Do not tie horses to black-locust trees.

Toxic Principles

The leaves, bark, flowers, and seed pods are poisonous. There are several substances in locust trees that appear to be toxic, but the principle one is robinine.



Clinical Signs

Animals stand with feet spread apart and do not respond to commands. The main clinical signs are rapid, irregular heartbeat, rapid, shallow respiration, pale mucous membranes, depression, occasional evidence of abdominal pain, diarrhea, and periods of nervousness. Death results from cardiac failure. Since many animals exhibit extreme depression, some veterinarians have referred to the action of the toxic principle as that of a narcotic.

Necropsy

There are no tissue changes characteristics of this poisoning.

Treatment

If you suspect black-locust poisoning, call a veterinarian at once. Any animal that shows suspicious signs after having fed on any part of the tree is in immediate danger of death. A hypodermic injection of digitalis to improve the heart action may be helpful. A veterinarian may administer other indicated treatment.

References

Evers, Robert A., and Roger P. Link. Poisonous Plants of the Midwest and Their Effects on Livestock, 1972. Special Publication 24, College of Agriculture, University of Illinois at Urbana-Champaign.



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