Noxious/Invasive Species

Great Lobelia or Blue Cardinal Flower

(Poisonous Plant)

Illinois

Plants of streams, ditches, ponds, springs, and swampy meadows

Description

Lobelia siphilitica L.: Great lobelia, or blue cardinal flower, is an erect, stout, sparsely branched perennial herb that grows to a height of 2 to 5 feet. The tall, angular stem is smooth or slightly hairy above, and supports alternately arranged, oval to lanceolate leaves that are 3 to 5 inches long, and have coarsely toothed margins. The numerous bright-blue flowers, about ¾ inch long, are crowded among numerous smaller leaves along the upper portion of the stem.

Occurrence

The great lobelia is a plant of swamps and wet ground from Main to Manitoba and Colorado, south to North Carolina, Alabama, and Texas.

Conditions of Poisoning

Animals browsing in moist places may eat the lobelia along with other plants. Only a few cases of animal poisoning have been attributed with certainty to the eating of the great lobelia.

Toxic Principles

The great lobelia, like other species of lobelia, contains the two alkaloids lobeline and lobelanine, as well as a volatile oil.

Clinical Signs

Since the alkaloids are identical with those of the Indian tobacco plant, the signs of poisoning are the same. Clinical signs include dilated pupils, salivation, nausea, vomiting, diarrhea, ulceration about the mouth and on the eyes, nasal discharge, and coma.

Necropsy

Lesions include ulcers in the mouth and on the cornea and edema of the conjunctiva. The stomach and intestine become severely inflamed, with hemorrhages in the muscle layers. Edema and congestion in the kidneys and fatty changes in the liver are also found.

Treatment

Atropine will relieve some of the clinical signs. A purgative may be administered if the animal shows signs of poisoning soon after eating the plants. Tannic acid given by mouth will combine with the toxic substances and delay absorption.

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.

December 2006

NRCS Natural Resources Conservation Service

University of Illinois Extension, College of Agriculture, Consumer and Environmental Sciences

Illinois Department of Agriculture

ILGLCI Illinois Grassland Conservation Initiative