

Human Concerns

Sheep Laurel is also toxic to people. The plant has been suggested as a herbal cure for skin problems and diarrhea, and so the possibility of poisoning from herbal cures exists. Mad Honey Disease is grayanotoxin poisoning from honey, made with large proportions of pollen from plants of the rhododendron or laurel family. The chances of experiencing this poisoning are remote because the honey would have to be made from an almost pure stand of Sheep Laurel. Individuals eating affected honey may show signs of vomiting, numbness, salivation and heart problems. The time of onset of symptoms and the outcome of the poisoning will depend on the amount of toxin ingested.

Links

Canadian Poisonous Plant Info System

<http://www.cbif.gc.ca/pls/pp/poison>

Museum of Nova Scotia

<http://museum.gov.ns.ca/poison/default.asp>

For more information, please contact your Regional Crop Specialist, your Regional Veterinarian, or the Animal Health Division.

Other information pamphlets are available online from the Department of Natural Resources at:

www.nr.gov.nl.ca/agric/

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Sheep Laurel Poisoning in Newfoundland and Labrador



Introduction

Perhaps the most common livestock poisoning seen in this province is from the ingestion of Sheep Laurel. Scientifically named *Kalmia angustifolia*, Sheep Laurel is also known as lambkill because of its effect on young lambs. Throughout Newfoundland, the plant is called goowiddy, gold-withy or gould. These local terms are also used to describe *Kalmia polifolia* or Bog Laurel. This plant is also toxic; but because it is found in wet boggy areas, it is less likely to be consumed by livestock.

Description

Sheep Laurel is a much-branched broad-leaved evergreen shrub with woody stems growing up to 3 feet. Leaves are usually opposite or in whorls of three, flat, narrow, leathery, olive green and shiny above, pale green and dull beneath. Flowers are rose-pink, cuplike and clustered around the stalk, with new leaves extending beyond the flowers. Blooms are usually seen from late June to early August.

The plant is found in a variety of habitats throughout Newfoundland and southern and central Labrador, including bogs, swamps, heaths and forested areas.

Bog Laurel (*Kalmia polifolia*) is a low, slender-stemmed evergreen shrub. Leaves are opposite, linear to elliptical, usually blunt at the tip, leathery, shiny dark green above, whitened or yellowish

beneath with small hairs. The mid-vein is depressed above and prominent beneath. Flowers are deep pink, in few-flowered terminal clusters. The flower stalks are smooth. Bog Laurel blooms in June and is found commonly in bogs, fens and wet heaths throughout Newfoundland and most of Labrador.

Poisoning by Sheep Laurel

Sheep Laurel contains the glycoside poison, known as grayanotoxins (formerly called andromedotoxins), in all parts of the plant. These chemicals interfere with sodium channels in the membranes of cells. In nerve and muscle cells, these channels are responsible for changing the activity of the cell. When the channels are interfered with, cells are stuck in an active stage. In the gastrointestinal tract this results in salivation, diarrhea and vomiting. Further interference with nerve cells may result in tremors, cardiac problems, convulsions and coma. Affected animals may die or recover without treatment, depending on the dose ingested.

The toxicity of Sheep Laurel varies between species. Sheep are considered to be the most susceptible with poisoning occurring when animals eat 0.15% of their body weight of the plant. Cattle show problems at .15% and goats at .25%. Horses do not usually eat the plant, but cases have been seen where young foals may ingest enough to show signs of toxicity. Moose in Newfoundland do not appear to eat Sheep Laurel. Chickens will eat Laurel and the meat of poisoned chickens will also be toxic.

Due to its woody stems and tough leaves, Sheep Laurel is not a preferred food for most animals. Problems with poisoning usually occur when there is a shortage of other feed or when young animals are first let out of barns in the spring. Inexperienced young animals will often sample any plant that is available to them when they are first allowed access to pasture. Due to the plant's small size, it does not take a large amount to cause problems. Toxicity can also be seen in the late fall or winter when the shortage of available feed may force animals to graze on *Kalmia* bushes.

Depending on the amount of plant material ingested, signs of Sheep Laurel poisoning can begin shortly after ingestion or take hours to first appear. The signs of toxicity are quite similar in cattle, sheep and goats. Gastrointestinal signs like salivation, soft feces and diarrhea occur and green froth is often seen around the victim's mouth. Staggering, shaking, weakness and recumbency (inability to stand) are often seen. The resulting pain will cause animals to grind their teeth. If enough toxin has been eaten, coma and/or death may result.

Sheep Laurel poisoning is diagnosed by the typical signs accompanied by the presence of the plant in areas accessible to the animal. On post mortem examination, the plant will be found in the rumen.

Treatment and Control

The success of treatment depends on how much of the plant has been eaten and how quickly treatment is begun. Poisoned animals and all other susceptible animals should be removed from the source of Laurel. If treatment is started early, mild laxative such as mineral oil or Epsom salts in water may help remove the toxins from the guts before irreversible harm is done. When poisoned animals are weak, using a stomach tube will decrease the danger of putting laxative into the animal's lungs. Supportive treatment, such as oral or intravenous fluids and warmth and shelter, may be of some help. Veterinarians may choose to use drugs such as vasopressors and atropine to support the cardiovascular system.

The best method of preventing Sheep Laurel poisoning is to keep animals away from the plant. If this is impractical, young animals should be given access to affected areas for short periods at the beginning of the spring. This will hopefully keep them from being poisoned. If they are poisoned, they should only get small doses of the plant and will be more likely to recover. Most animals will not eat Sheep Laurel after they have been poisoned with it. Control of the plant on pastures is difficult. Plants can be cut down when they are present in small numbers; but when large numbers are present, burning and herbicides have generally proven ineffective.