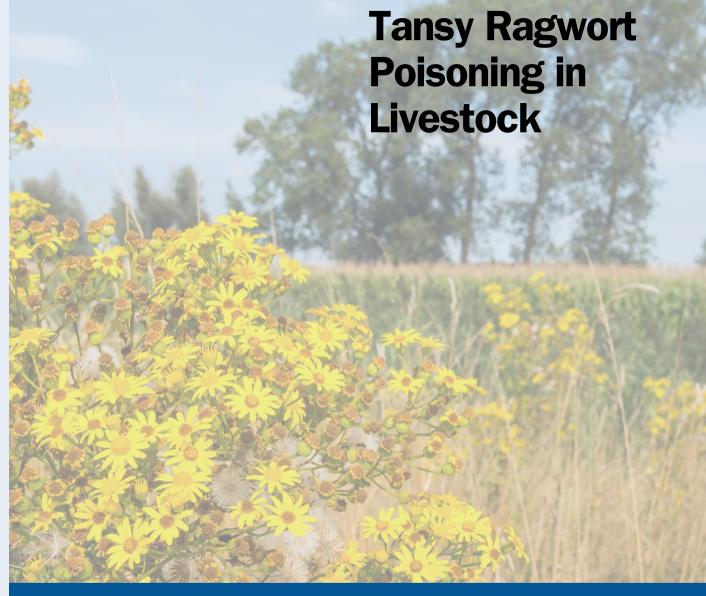


#### **Resources:**

Canadian Biodiversity Information Facility (CBIF)

cbif.gc.ca/pls/pp/poison

For more information, please contact the Animal Health Division.



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Designed for livestock owners, farmers, and anyone involved in animal care, this brochure provides essential information on identifying and managing Tansy Ragwort poisoning.

Last Revised: February 2024



Figure 1. Tansy Ragwort

## **INTRODUCTION**

Tansy Ragwort (Senecio jacobaea), sometimes referred to as Tansy, is a plant native to Europe and Western Asia. It was the first known to poison North American animals in the late nineteenth century when cattle in Nova Scotia and PEI began dying of "Pictou cattle disease". In Newfoundland, the first identification of the plant was in the early 1960s. Suspected poisoning occurred in the 1980s in the Codroy Valley. This outbreak killed half a dozen cattle, and was not diagnosed until 2001.

# **DESCRIPTION**

Tansy is a biennial or short-lived perennial in the Sunflower family. It spends the first year in the rosette stage. The underside of the leaf is somewhat hairy and appears whiteish. The overall rosette has a ruffled appearance, indented and blunt toothed lobed leaves. Flower stalks develop in the second year, growing up to four feet or more. Flat-topped clusters of small yellow, daisy-like flowers are produced at the top of the stem from midsummer to fall.

It is found in pastures, fields, roadsides, abandoned land and in waste areas throughout much of Newfoundland.

# **POISONING BY TANSY RAGWORT**

Tansy is poisonous because it contains chemicals known as pyrrolizidines. When the chemical enters the liver, they are changed into toxic compounds known as pyrroles. Pyrroles cause irreversible damage in the liver by killing liver cells, eventually causing liver cirrhosis. Among the many important functions of the body, the liver is responsible for filtering and neutralizing toxins that make their way into an animal's body. If the function of the liver is compromised by cirrhosis, more toxins are able to freely circulate in their body.

Tansy Ragwort poisoning has been reported in cattle, horses, goats and sheep. Young animals are especially at high risk. The susceptibility of sheep is low. There have been no reports of Tansy Ragwort poisoning in wild animals.

## **SYMPTOMS - HORSES**

- Staggering
- In-coordination
- Depression
- · Difficulty breathing
- Skin peeling
- Jaundice (yellow, discoloration in mucous membranes)
- Accumulation of fluid in the abdomen
- Coma

#### **SYMPTOMS - CATTLE**

- · "Bleached" hair appearance
- Rapid decrease in milk
- Bitter/bad milk smell

Poisoned cattle may survive six months with no signs and then the stress of pregnancy, lactation or poor nutrition, develop ascites and die with two to four days. It is possible for calves to be poisoned by the toxins present in dam's milk.

The signs of Tansy Ragwort poisoning are from liver failure and are not specific. Animals on pasture are often found dead, and the diagnoses can be made from a postmortem finding of liver cirrhosis combining with the presence of Tansy in the pasture.

#### **TREATMENT**

Once signs of disease are seen, liver damage is advanced enough that any treatments performed on the animal would not be effective. Efforts should rather be made to keep animals away from Tansy or to eradicate the plant.

#### **PREVENTION**

A number of different strategies have been used to deal with a Tansy infestation.

If a small number of the plant is present, pulling the plants may work. If plants are pulled when the soil is wet, there is a greater chance of getting the roots. After pulling, plants should be burned, and special care is given to preventing the release of seeds. Simple cutting of the plant is not helpful as new plants will grow back, and the cut plant is more likely to be eaten by livestock.

If a large number of plants are present, plowing up pastures can be successful if repeated yearly. However, if Tansy is present in nearby land and left untreated, reinfestation can occur. Phenoxy herbicides, such as 2-4-D and spot treatment with glycophosphate have been used. A single application of herbicide without pasture management will not work. It is important to remember that these pesticides may be toxic to other plants and animals.

Considerable success has been realized with the introduction of insects that feed on Tansy. In Western USA, the Tansy Flea Beetle, Cinnabar Moth, and Ragwort Seed Fly have been used. The Cinnabar Moth was successfully introduced on the West Coast of the island in the mid 1980s.