



Resources:

**Canadian Biodiversity Information
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cbif.gc.ca/pls/pp/poison

**For more information, please contact
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St John's Wort Poisoning in Livestock

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Designed for livestock owners,
farmers, and anyone involved in
animal care, this brochure provides
essential information on identifying
and managing St. John's Wort
poisoning.

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Figure 1. St. John's Wort

INTRODUCTION

St. John's Wort (*Hypericum perforatum*) has gained considerable fame as a potent herb remedy for depression. This plant, which was long considered to be a nuisance, has become a valuable commodity. It has a role as an anti-depressant in humans, to animals, it is poisonous.

DESCRIPTION

St. John's Wort is a hairless perennial, reproducing by seeds and underground runners from the base of the stem. It grows one to three feet tall, with spreading branches and small, deep green oblong to ovate leaves, perforated by transparent dots that are visible when held up to a light. Clusters of bright, yellow flowers with five petals and tiny black dots are produced mid to late summer. St. John's Wort turns rusty red at maturity, the fruit is a three-celled capsule containing small, dark brown seeds. These seeds are capable of living dormant for 10 years.

They grow in open woods, dry meadows and fields, grassy banks, and along roadsides throughout most of the province. It is tough and will tolerate average to poor, acid or alkaline soils, extreme heat or drought.

POISONING BY ST. JOHN'S WORT

When the leaves are held up to a light, the translucent dots that can be seen on the glands that produce the photosensitizing chemical hypericin. Hypericin remains stable when heated or dried, therefore, it can be incorporated into pills and infusions.

When the plant is eaten, hypericin is absorbed from the intestines and migrates to the skin. In areas of light coloured skin, ultraviolet light reaches the hypericin membranes of the skin cells.

Another type of poisoning is known as secondary hypersensitivity which occurs when St. John's Wort's chemicals interact with oxygen and damage red blood cells. This is known as photosensitive hemolysis.

Secondary photosensitization is also used to describe the poisoning of the liver that results in a decreased ability of the liver to metabolize any photosensitizing material. Animals that consumer clover, algal blooms, or lush spring growth may have enough liver damage that smaller amounts of St. John's Wort than normal may cause photosensitization.

SYMPTOMS

Cattle, goats, sheep, pigs and horses have all been reported to have photosensitizing reactions to St. John's Wort. Cattle that eat 1% of their body weight of the plant show signs. Sheep are not poisoned until they have eaten 4% of their body weight.

Signs of photosensitization occur 2-3 days after consuming. Areas of the animal's skin that is dark coloured or covered with dense fur are generally unaffected. The affected skin first reddens and then has fluid accumulate underneath it. The fluid eventually seeps out from under the now dead skin and the skin will peel off. Farmers often describe this as looking like battery acid has been thrown on their animal. Animals may die from starvation from secondary infection and gangrene or lesions around the face, making eating difficult. Lesions on surviving animals heal into hairless scars within a few weeks. Cattle show lesions throughout the body and utter.

Sheep are usually affected on the ears, lips, eyelids and above the hooves. Cattle with photosensitive hemolysis show signs of anemia and liver damage. Animals may occasionally go blind from corneal reactions or in rare cases, even have convulsions.



Figure 2. St. John's Wort leaf. Dots on the leaves help to identify the plant and contain the toxin.

TREATMENT

Once signs of photosensitization are seen, they should be moved to an area with shade and away from the source of the plant. Once skin begins to peel, your veterinarian may recommend local/and or systematic antibiotics and may recommend some pain relief remedies.

PREVENTION

St. John's Wort poisoning is best avoided by keep animals away from areas with large quantities of the plant. The plant's tough nature makes eradication extremely difficult.