

St. Johnswort: Identification, Management and Control

309-04

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St. Johnswort weed is a concern not only because it seems to be increasing in this part of the state, it also can have detrimental effects on animals that consume it. This purpose for this educational resource is to increase awareness of this weed and its potential to harm livestock and to provide guidelines for its management and control.

Identification

St. Johnswort (a.k.a. St. John's Wort and Klamath weed) is a taprooted perennial that reproduces by seeds and short creeping stems (above and below ground). Plants height is usually around two feet but in an ideal site, plants can reach five feet in height. Most stems have reddish or rust colored blotches on the lower end and are woody at the base. Leaves are about one inch long by about 3/8 inch wide, opposite, attached directly to the stem without a petiole and have distinctive small translucent glands that make them appear pierced when held up to the light. The flowers have five petals with many stamens, are yellowish-orange in color, and may have minute black dots along the margins. Flowers are numerous and found in flat groups at the top of the plant.

Toxicity Symptoms

Consumption of St. Johnswort causes a photosensitizing reaction to non-pigmented skin of livestock exposed to sunlight. Light colored animals are most susceptible,

developing dermatitis, which can include skin blisters and hair loss. Blistering can also occur in the non-pigmented skin of the mouth, nose and ears. Symptoms do not result from casual contact; the plant must be eaten. The toxin builds up in the body over time so symptoms may not show up until the animal has been eating the plants for several days to a week.

Care of Affected Animals

There is no antidote for hypericin, the toxin found in St. Johnswort. Care includes, removing St. Johnswort from the animal's diet and bringing affected animals out of direct sunlight. If the sunburn is mild, conservative treatment and supportive care is all that is required. Animals will resent handling, and horses will not be able to be ridden for at least a couple of weeks. More severely affected animals, including animals whose eyes are affected, or where the skin is blistered or sloughing, should be seen by a veterinarian.

Management

Livestock prefer grass over St. Johnswort when both plants are present. This may lead to overgrazing of grasses which provides openings into which St. Johnswort may spread. Dried St. Johnswort in hay or processed feeds is somewhat less toxic than when eaten fresh but animals are

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Clump of St. Johnswort in grass



St. Johnswort leaf



St. Johnswort flowers

less able to avoid eating it, so feeding hay containing St. Johnswort is a concern. If one must feed hay containing the weed, keep animals in the shade or inside a building during daylight hours while they are being given the hay and for a week after they are no longer consuming it.

Control

Several insects have been tested and released as biological controls of St. Johnswort in the Pacific Northwest. These have reduced the spread of the weed in some areas. Some beneficial insect species can be purchased from vendors on the internet (search on St. Johnswort).

Established stands of St. Johnswort are best treated with herbicides in the fall (September 15 to October 15) when the weed is storing reserves in the root system for the winter. Since the plant is easier to spot when in flower, mapping the infested areas or placing marker flags near the weeds while they are in bloom (June and July) will make it easier to find and treat them in the fall.

In pasture, rangeland and uncropped sites, picloram (Tordon) at 1-2 qt /A for spot treatment or 1-2 pints/A tank-mixed with 1 qt 2,4-D for broadcast application. Glyphosate (Roundup) at 1-2qts / A is also effective. Note: Glyphosate is non-selective so should only be used where loss of non-target vegetation is acceptable. Metsulfuron (Cimarron) is labeled for control of St. Johnswort in pastures, rangeland and CRP at the one ounce/acre rate. Note: This is a high rate of metsulfuron per acre and may result in stunting or death of some desirable species of plants in the pasture. Spot spraying only individual plants or patches of St. Johnswort is preferable to a broadcast treatment.

A followup foliar application of 2,4-D at two pounds active ingredient per acre in early spring will control plants germinating from seed and prevent them from flowering.

It is recommended to remove animals from pastures sprayed with herbicides until after the St. Johnswort plants are completely dead because herbicide treatment often increases palatability which might increase consumption by livestock.

Note: St. Johnswort is invasive and hard to control which is why it has been declared a noxious weed in some states (not in Nebraska). No single control method or one year treatment program will provide effective control of St Johnswort. It is a long term commitment that will require repeated applications and monitoring until eradication from the location is achieved.

As always, read and follow the product label before applying any herbicide. Be sure to note any grazing restrictions on the herbicides applied.

REFERENCES:

Weeds of the Great Plains, J. Stubbendieck, M.J. Coffin, and L.M. Landholt, published by Nebraska Department of Agriculture, Bureau of Plant Industry.

St. Johnswort, J.P. Fitzsimmons and L.C. Burril, Pacific Northwest Extension Publication, PNW 442, Oregon State University. <http://www.wagcomm.ads.orst.edu/agcomwebfile/edmat/pnw442.pdf>

St. Johnswort: Ill and ?Cure, Jane Krueger, Montana State University. http://www.montana.edu/wwwpb/ag/st_johns.html

"Common St. Johnswort," Klamath Weed, from *Indiana Plants Poisonous to Livestock and Pets*, Purdue University. <http://vet.purdue.edu/depts/addl/toxic/cover1.htm>

Mention of trade names is for clarity only and is not an endorsement by the University of Nebraska or Lancaster County Extension.