

St. Johnswort is Increasing in Eastern Nebraska

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I would like to call readers attention to a weed called St. Johnswort that is invading roadsides, pastures and hayland. This 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.

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



Clump of St. Johnswort in grass



St. Johnswort leaf



St. Johnswort flowers

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 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 (Sept. 15 to Oct. 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 1-2 qts /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.

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

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. Burriel, Pacific Northwest Extension Publication, PNW 442, Oregon State University. <http://www.wagcomm.ads.orst.edu/agcomwebfile/ednat/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>

"Windbreak Design & Maintenance" is September Rural Living Clinic

The University of Nebraska Cooperative Extension is presenting a series of seminars entitled "Acreage Insights — Rural Living Clinics" to help acreage owners manage their rural living environment. "Windbreak Design & Maintenance" is the eight in the series, to be held Sept. 25 from 9 to 11 a.m. at the Lancaster Extension Education Center, 444 Cherrycreek Road.

Windbreaks are linear plantings of trees and shrubs designed to enhance crop production, protect people and livestock, and benefit soil and water conservation. Learn which trees to plant, proper spacing for maximum growth, where to locate the windbreak, and how to manage it for a long and effective life.

Pre-registration is \$10 per person and must be received three working-days before the program. Late registration is \$15 per person. For more information, visit the Acreage & Small Farm Insights Web site at acreage.unl.edu or contact Sarah Browning at (402) 727-2775.

Upcoming Clinic:
"Grapes," Oct. 23, 9– 11 a.m.



Fall is a Good Time to Control Problem Weeds

Fall is an excellent time to control several species of perennial weeds in pastures and waste areas. Perennial plants such as field bindweed, Canada thistle and leafy spurge translocate food from the upper plant parts into the root system in the fall. Herbicides applied at that time readily move into the roots as well, greatly improving the effectiveness of the herbicide. Even if the chemical doesn't completely kill the weed, the plant goes into winter in a weakened condition and is much more susceptible to winter kill. Fall treatments can be made anytime after mid-September but before hard freezes occur. Treatments can even be made after a light frost has occurred as long as the plants are still active and growing. Daytime temperature in the 50's are satisfactory for effective control.

Fall is also the best time to control Musk thistle and related species. Musk thistle is a biennial, (sometimes a winter annual), that spreads by seeds.

Young plants will have a rosette form (a round cluster of leaves that lies nearly flat on the soil). They overwinter in the rosette form, then shoot up (bolt), form blossoms and go to seed in June, July and August. After producing seed, the plant dies. Fall is a good time to control Musk thistle because the newly germinated plants are small and more easily killed. As with the perennial plants, plants that are not killed outright go into winter

in a weakened condition and are much more susceptible to winter kill.

In addition to obtaining excellent control on the target weeds, the potential for drift damage to non-target species is lessened in the fall. Most field crops and gardens are finished producing by this time, and the current year's growth on perennial shrubs and trees is hardened off making them less susceptible to damage.



For chemical control recommendations on specific weeds in crops, pastures and non-crop areas, consult the University of Nebraska Cooperative Extension publication *2004 Guide for Weed Management in Nebraska* (EC 04-130-D), available for \$3 at the extension office or free on the Internet at www.ianr.unl.edu/pubs/fieldcrops/ec04-130.pdf