

ST. JOHNSWORT: Options for control

St. Johnswort (*Hypericum perforatum* L.), a class-C noxious weed in Lincoln County, Washington is of the St. Johnswort family. St. Johnswort is a native of Europe and is also known as Klamathweed or more commonly in Lincoln County as Goatweed.

St. Johnswort is an erect, opposite-leaved perennial herb, ranging from two to four feet tall arising from a taproot. The plant can have single or multiple stems. The reddish stems are smooth, somewhat two-edged, woody at the base, and branching out toward the top of the plant. The narrow, lance shaped leaves are about one inch long, stalkless, with pointed tips. Each leaf is spotted with tiny translucent dots. Each flower has five yellow petals and many yellow stamens. The black dots often visible along the petal margins are glands containing hypericin. The red pigment is also visible in glands on leaf margins giving the leaf a perforated look. The inflorescence is a flat topped cluster of many flowers found at branch ends. St. Johnswort spreads both by underground and above-ground creeping stems, and by seed.



St. Johnswort seedling, note how leaves attach directly to the stem. Base is often reddish.



Leaves are lance shaped and normally less than 1 inch long.



Prominent veins and tiny transparent dots are visible when held up to the light.

ows, dry pastures, rangelands, roadsides, and empty fields. However, it has the capability to invade healthy rangelands. It is not considered a serious threat in cultivated fields.

St. Johnswort flowers from May to September.

Basal foliage that overwinters will start growing in early spring, followed by vertical stem growth. Each plant may include several well spaced crowns, each with lateral roots. Lateral root buds are capable of producing new crowns. Plants connected by these lateral roots separate when these roots rot.

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 ani-



Flowers have 5 petals with many stamens, are yellowish-orange and may



St. Johnswort flowers in early summer, turns rust in color soon afterward and remains standing all winter long.



St. Johnswort grows into dense patches that crowd out other species.

St. Johnswort is well adapted to a variety of temperate climates and soil types. It prefers poor soils and full sun, and can be found primarily in mead-

Key identifying traits

- Leaves have prominent veins and tiny transparent dots are visible when leaf is held up to the light.
- Stems are smooth, upright, usually reddish, woody at the base, up to 3 ft. tall.
- Leaves are oblong, opposite and not over one inch long.
- Flowers have 5 petals with many stamens, are yellowish-orange and may have minute black dots along edges.
- About 25–100 flowers can be found in broad clusters at the top of each stem.

Biology and ecology

- Perennial forb, growing 1 to 3 feet tall.
- Reproduces vegetative by under ground stems or runners and by seed.
- Adapts best to poor dry, gravelly or sandy soils and full sun.
- Single plant can produce 100,000 seeds/year.
- Seeds disperse by wind, or because they have a gelatinous coating that becomes sticky when wet may adhere to animals, machinery, etc.
- Flowers from June to September.
- St. Johnswort is tolerant to many herbicides.
- Seeds remain viable for up to 10 years.
- Causes a photosensitizing reaction to non-pigmented skin of livestock exposed to sunlight.
- Commercially available as an antidepressant.

CONTROL MEASURES:

For this and other publications, see our website at: www.co.lincoln.wa.us/weedboard

Prevention:

- Beware of fill dirt, hay and seed from outside your area. **Early detection** is vital to prevent invasion.

Biological:

- *Chrysolina hyperici*/*Chrysolina quadrigemina*— both are leaf and flower eating beetles. However, are very cyclical and have not been found to be very effective in Lincoln County. They do a major clean up about every 10 years, and a minor one about every five years.

Cultural:

- Healthy competitive vegetation helps lessen chance of invasion, but doesn't stop it entirely.

Mechanical:

- Pulling should only be considered an option on new or small infestations, and repeated pulls will be necessary to ensure removal of the whole plant and any lateral roots. **Be sure to wear gloves and avoid touching eyes.**
- Be sure to monitor sites carefully for regrowth, as disturbed soil aides in germination of any seeds present.

Chemical:

- Weedmaster, Tordon, Telar and Milestone, are effective herbicide choice's.
- **Read the label instructions before applying.**



A key identifier to St. Johnswort is the leaves have prominent veins and tiny transparent dots are visible when leaf is held up to the light.

St. Johnswort is toxic to animals. The toxin is called hypericin. When animals ingest the plant, the hypericin is absorbed from the intestinal tract and goes into the circulation. Hypericin is photodynamic, able to convert sunlight into energy (primarily heat), causing cellular damage and sunburn (which can be severe). Cattle and sheep are the most sensitive to this toxin, but swine and horses may also be affected.

St. Johnswort is not palatable and is eaten only when better food is unavailable. Animals must consume the plants for 4 to 5 days or more before clinical signs are noted. The affected skin first becomes swollen and tender, then reddened. This occurs primarily on the lightly pigmented areas (pink or white skin), and on the areas of the body that receive more sunlight (head, neck, back). The skin can be burned to the point where large areas of skin peel off. This is extremely painful, and predisposes the animal to infection. Affected animals are reluctant to have the areas examined, and may act abnormally and not want to eat due to the discomfort. Occasionally the eyes will be affected, causing redness and inflammation of the eyelids and the eye itself. These animals may not be able to see.



St. Johnswort in full bloom.



Dead St. Johnswort plants are rust color in appearance.



This plant is highly invasive as shown by this infestation above. Hand pulling St. Johnswort just once may stimulate the plant to spread faster via its horizontal runners.



Distribution map.

***** Wear gloves and avoid touching the eyes when collecting. Reports of contact photosensitivity include second degree blisters on eyelids and fore-**