TANSY RAGWORT *(Senecio jacobaea)*

INTRODUCTION

Tansy ragwort, also known as tansy butterweed or stinking Willie, belongs to the *Asteraceae* or sunflower family. It was first introduced to the North American Pacific Coast in the mid 1850's and has since spread to several Canadian provinces. In British Columbia, tansy ragwort occurs throughout the coastal regions on Vancouver Island, some of the southern Gulf Islands and the Fraser Valley. It is primarily considered a coastal species; however, the largest provincial infestation occurs in the Chute Lake area of the Okanagan Valley. This isolated infestation is currently the only known occurrence of tansy ragwort in BC's Interior.

Tansy ragwort prefers disturbed area of pastures, hayfields, roadsides and clear-cuts. It can reduce forage production in pastures by as much as 50%, due to competition and plant toxicity.

The entire plant contains varying concentrations of poisonous alkaloids, which cause irreversible liver damage in wildlife and livestock. Animals often avoid grazing plants; however, they are unable to detect tansy presence when mixed into hay or silage. Animals may select tansy in overgrazed pastures; where better forage is limited. Poisoned animals may experience depression, loss of appetite, restlessness or a yellow or muddy discolouration of mucous membranes and an unpleasant pig-like skin odour. In severe cases, serum will seep through the skin due to a photosensitive reaction resulting in liver damage.

IDENTIFICATION

- Biennial or short lived perennial
- Grows 0.3 to 1.2 metres tall
- 1 to several erect stems
- Leaves are deeply cut into irregular segments, giving the plant a 'ragged' appearance
- Yellow ray flowers grow in a flat-topped cluster

Tansy ragwort is often confused with common tansy (*Tanacetum vulgare*). Common tansy lacks ray flowers, and its leaves are sharply toothed compared to tansy ragwort.

BIOLOGY

Tansy ragwort is a biennial to short-lived perennial; however, under favourable conditions it may act as an annual. Typically, rosettes are formed in the first year, followed by bolting of a single flowering stalk in the second year. Flowering occurs from July through September, depending on geographic location.

Tansy ragwort reproduces by seed. Seeds may germinate in both the spring and fall, forming new rosettes. A single tansy plant can produces more than 150,000 seeds, which may remain dormant for 4 to 5 years, and are viable for over 20 years. Seeds are primarily dispersed through wind and water and wildlife and human activities. Plants may also regenerate vegetatively when damaged.

INTEGRATED MANAGEMENT

The best overall method of control for tansy ragwort is an integrated program using a combination of cultural, mechanical, chemical and biological control methods. Small infestations may be hand pulled or cut. Plants must be cut prior to formation of wind-blown seed. Herbicides or biological control are better suited for medium-large infestations where it is impractical to use other management methods.

PREVENTION

The most effective way to ensure that your lands do not become infested with tansy ragwort is by prevention. Here are some recommendations to prevent tansy ragwort invasion on your property:

- Maintain your crops and natural lands in a healthy, vigorous condition to ensure a competitive plant community; competitive perennial grasses and forbs utilize water and nutrients that would otherwise be readily available to ragwort.
- Follow a well-designed grazing management plan; excessive livestock grazing reduces competition and favours weeds.
- Regularly patrol your property for ragwort plants and immediately manage new infestations.
- Cooperate with adjacent landowners and encourage them to prevent tansy ragwort spread.
- Immediately re-vegetate disturbed, bare soils with a suitable seed mixture that provides dense, early colonization to prevent weed invasion.
- Clean your vehicles and machinery of plant material and soil before leaving a ragwort infestation, or any other invasive plant infestation.

PHYSICAL CONTROL

Mowing may be utilized to prevent seed production. Plants should be cut just before flowering when plants have exhausted the greatest amount of its stored reserves but before its seed have started to develop. However, repeated mowing appears to increase rosette density. Hand pulling is an effective method, especially if it is done when soils are moist and the hole left after pulling is mulched. Mulching creates unsuitable habitat for ragwort germination by removing necessary light. Pulling is recommended for small patches or a follow-up measure after a population has been brought under control.

Longitarsus jacobaeae

BIOLOGICAL CONTROL

Biological control of tansy ragwort began in BC in 1962 with the introduction of the defoliating moth *Tyria jacobaea*. Since then 4 other agents have been released, including: *Botanophila seneciella* (fly), *Longitarsus flavicornis* (beetle) *L. jacobaeae* (beetle) and *Cochylis atricapitana* (moth). Depending on climate, varying degrees of success have been noted by single or combinations of agents. In the Okanagan, *L. jacobaeae*, *T. jacobaeae* and *C. articapitana* have all failed to survive and propogate; however, survivorship of a recently released summer breeding strain of *L. jacobaeae* is anticipated to be much higher.

For further information on weeds in BC check out the provincial websites at: http://www.weedsbc.ca or http://www.agf.gov.bc.ca/cropprot/weeds.htm
For more information about the Regional District of Okanagan-Similkameen Noxious Weed Education Program please contact the Regional District at 250-492-0237 or toll free at 1-877-610-3737. Information is also available on our website at: http://www.rdos.bc.ca

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