

**WRITTEN FINDINGS OF THE
WASHINGTON STATE NOXIOUS WEED CONTROL BOARD
(January 2003)**

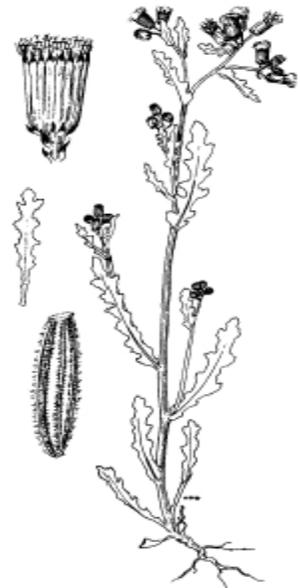
Scientific Name: *Senecio vulgaris*

Common Name: COMMON GROUNDSEL

Family: Asteraceae, *Compositae*

Legal Status: Proposed as a Class C Weed for Washington State's 2004 Noxious Weed list

Description and Variation: Leaves are elongate, with a blunt, rounded tip. The first true leaves have shallow teeth; the third and fourth leaves are more deeply lobed. Groundsel is a downy Winter or summer annual or biennial (LeStrange, 1977). The stems are succulent, hollow, slightly angled, and much branched, with many leaves on top (Georgia, 1942). Leaves are alternate on the stem and deeply indented. Upper leaves are attached directly to the stem, but lower leaves have a short petiole. The green bracts surrounding the flower cluster have conspicuous black tips that distinguish groundsel from other weeds in the thistle family. Plants have simple or branched upright growth, 6 to 18 inches tall. The foliage is generally smooth but may have light pubescence (Dennis, 1980). Flowers are yellow. Seeds germinate in early spring - late fall and 3 to 4 generations may develop in one season. The cotyledons and young leaves on seedlings are purple on the underside. Young plants appear as rosettes. Flowers in April to October. This weed prefers cool and wet environments with nutrient rich soil.



Economic Importance:

Beneficial: In the sixteenth & seventeenth centuries, it was widely used for a wide variety of health problems. These included tooth ache, intestinal worms, gripes & colic. It was also used for the treatment of amenorrhoea & dysmenorrhoea (Stuart, 1978). The plant is collected in May, when the leaves are in the best condition and dried. Juice is also extracted from all parts of the fresh plant (Grieve, 1959).

Detrimental: Common groundsel is a problem weed in cultivated crops, gardens, and nurseries. It is poisonous to cattle and horses and toxic to humans. It contains pyrrolizidine alkaloids, which can cause irreversible liver damage and possibly death. Common groundsel is common west of the Cascade Mountains. Although groundsel is not a strong competitor, heavy infestations have the potential to reduce mint yields. In one study, a medium infestation of groundsel caused a loss of 12 lbs per acre of peppermint oil.

Habitat: Populations are adaptable to many environmental conditions. Common groundsel grows mainly in cultivated soil, but may be found in pastures or along roadsides and disturbed areas. It can also be in gardens, nurseries, orchards, vineyards, landscaped areas, and other

agricultural lands. It is best adapted to wet environments and nutrient rich soils. Plants are known to die during extended dry, hot periods.

Geographic Distribution: Native to the Mediterranean and/or west Asia. It is noted to be common throughout the temperate region of the world. Is found in Oregon, Washington, and Idaho. It is most commonly found west of the Cascade Mountains in cultivated areas (Aldrich-Markham, 1994).

History: Native to Europe, groundsel is a plant that is noted to follow civilized man wherever he settles. There is hardly a disturbed land in Europe where it does not spring up. The thought is that the seeds probably mingled with grain which the European framers then took with them to the foreign countries (Grieve, 1959). The name Groundsel is of old origin, being derived from the Anglo-Saxon *grundeswelge*, meaning literally, 'ground swallower,' probably referring to the rapid way the weed spreads (Simpson, 1989).

Growth and Development: Winter or summer annual, sometimes acts as a biennial. Reproducing by seed and germinates early spring to late fall. Each plant may produce 3-4 generations of seeds in one season. Seedlings emerge in early spring, cotyledons and young leaves are purple on underside. The plants flower during April to October (Georgia, 1942).

Reproduction: Reproduces by seed. Seed dormancy may vary among populations. Seeds typically germinate early spring through late fall (year-round in some areas). Fluctuating temperatures, light, cold stratification, leaching with water, or scarification stimulate germination. Seeds spread by means of floating, on the wind or being cared by an animal (Aldrich-Markham, 1994). Seedlings mature rapidly, and 3 or more generations may be produced in one season.

Response to Herbicide: Common Groundsel is known as an agronomic weed problem and many experiments have been carried out to try to rid croplands of this weed. Groundsel is noted to be susceptible to many herbicides. Below are the results of a recent study comparing different herbicide treatments (Ransom & Ishida, 2000). Biotypes have evolved that are resistant to nitrate PSII inhibitors (William et al, 2001).

Several herbicides control groundsel. Removing groundsel from cereals and forage grasses is not difficult, but removing it selectively from actively-growing forage legumes is almost impossible. In alfalfa, herbicide applications can be made only during the winter dormant season. In mint, selective control with herbicides is possible when the groundsel is small.

In order to prevent or delay the appearance of herbicide-resistant weeds, it is important to avoid using herbicides that annually revised Extension publication available from the Extension bulletin offices of Oregon State University, Washington State University, and the University of Idaho. Carefully read and follow label directions when using any herbicide.

Response to Cultural Methods: Groundsel produces many seeds so it is important to control the plants before seed has been set. Cultivation is noted to kill groundsel plants when done prior to seed formation. It is also possible to crowd out plants by means of vigorous crop cover (Aldrich-Markham, 1994).

Response to Mechanical Methods: The key time to control groundsel by mechanical methods is just prior to seed set. Shallow tillage in fall and early spring will control winter and some spring annuals. Mowing hay fields before seed set will prevent the infestation from spreading by seed (Aldrich-Markham, 1994).

Biocontrol Potentials: The cinnabar moth, *Tyria jacobaeae*, feeds on both Common groundsel and tansy ragwort. It is noted that the caterpillars alone are not capable of sufficiently controlling groundsel infestations and a combination of control measures is suggested. Research is currently being done on *Puccinia lagenophorae*, a rust fungus, that delays flowering 1 to 2 weeks (Aldrich-Markham, 1994).

Rationale for Listing: Okanogan County weed board has proposed the listing of groundsel as a Class C weed. They believe that they have a few isolated patches of groundsel and that by putting it on the state weed list this then allows their county to fund control efforts.

References:

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Personal contact:

Representatives of the Okanogan Weed Board

Talcott, Patricia, July 25, 2002 "letter concerning the poisoning of livestock "