

Tansy Ragwort

Senecio jacobaea L

Description: Tansy ragwort (*senecio jacobaea L.*) is a biennial, sometimes perennial, noxious weed with a well-developed fibrous root system of coarse roots that spread out from the crown of the plant. As a biennial, tansy ragwort spends the first year in the rosette stage with dark green basal leaves that appear ruffled. During the second year one or several flower stems bolt and begin forming flower heads. Each flower head is composed of many daisy-like yellow flowers, with each flower a composite of disc flowers surrounded by usually 13 petals. Reproduction is mainly by seed, however some plants may become perennial if mowed, grazed, or otherwise disturbed.

Impacts: Tansy ragwort is toxic and a threat to livestock and agriculture. Toxicity of the plant remains when it is baled in the hay. Toxic properties are also a threat to humans as possible contaminants to the human food chain. Herbal remedies and contaminated milk, or honey are potential sources of toxins in the food chain, with long-term consumption being a concern.



Control Options: Thurston County's Integrated Pest Management emphasizes cultural, biological, and manual control methods to keep pests and vegetation problems low enough to prevent damage. The goal of Thurston County's pesticide use policy is to minimize the use of pesticides by utilizing and providing information about the most effective control options that are available and practical.

► Manual/Mechanical Techniques

Tansy ragwort can be controlled about half the time by manual pulling as long as it done before flowers begin to seed. Small sites are more effectively maintained by manual and mechanical Techniques. Tansy ragwort can re-grow when pulled if the fibrous roots are broken or anytime the plant is cut. When it re-grows it becomes perennial and returns each year until it produces seeds. The best time to use manual control of tansy is best when conditions allow most of the root to be pulled with the upper part of the plant. This will most likely occur when the soil is damp and the soil is not hard packed. Manually pulling the plant is best during the second and later years in the plants life cycle when it produces tall stems that are easy to see and pull. Cutting is effective if plants are going dormant due to an extended

period of drought, however we have not seen this situation in Thurston County for several years. If any rainfall occurs, re-bloom after cutting usually occurs within about 3 weeks.

► Biological Techniques

Biological control efforts to date have consisted of the distribution of three effective biological agents:

- The cinnabar moth, which defoliates the plant.
- The flea beetle that mines the root system.
- The seed fly that consumes the seeds.

All three biological agents are well distributed throughout the County as a result of a 25- year disbursement effort by the noxious weed program. Population densities of Tansy ragwort plants have dropped dramatically due to these three biological control agents.

Even though there is some degree of control using these biological agents, it doesn't satisfy the legal requirement for controlling this plant by property owners.

► Cultural Techniques

Cultural control includes the use of management tools such as revegetation of disturbed soil, fertilization, and the use of mulch. Reseeding with desirable species provides cover of bare and disturbed soils, prevents germination of tansy ragwort seeds, and provides competition. Reseeding is recommended anytime bare soil conditions exist.



Adult Cinnabar moth



Cinnabar larvae

► Chemical Techniques

There are two types of herbicides that can be used to control Tansy ragwort; selective and non-selective. Selective herbicides kill or inhibit growth of certain types of plants (like broad leaf plants) and do not kill other types (like grasses). Non-selective chemicals kill nearly all types of plants. *Glyphosate* is a non-selective active ingredient found in a number of products (like RoundUp Pro®, with 41% *glyphosate*) that are effective in controlling tansy ragwort. *Glyphosate* works well because it is a systemic herbicide that is taken in through the stems and leaves and distributed to kill all parts of the plant. *Glyphosate* products can be used to treat individual plants or small patches. *Glyphosate* will not prevent future tansy ragwort seed germination or prevent the growth of more desirable species. Products with an initial *glyphosate* concentration of 40% or greater should be used to mix to a 2% product spray solution (this excludes pre-mixed/ready-to-use products). Spot applications with *glyphosate* products are effective. Spot application means the herbicide is applied only to the plants and not on the surrounding plants or soil. Spray each plant thoroughly on the stems and leaves enough to be wet but not dripping.

- Remove domestic livestock before application and wait 14 days after spot application before grazing livestock or harvesting.
- Do not enter or allow worker entry into treated areas during the restricted entry interval of 12 hours. Keep people and pets off treated areas until spray solution has dried.
- Applications of *glyphosate* should be made during the time period from rosette stage to full flower stage. Herbicide applications beyond the brown-petal stage are ineffective.
- Timing also depends on the ability to see the plant. On pastures, the rosette stage can easily be seen and should be treated due to the high toxicity. On vacant lands the plant is difficult to see until the second year when the flowering stem elongates.

Herbicide & Method	Product Rates	Mix
RoundUp Pro® Spot/Foliar	2%	To 1 gallon of water add 2.66 oz. RoundUp Pro®, apply to foliage at or beyond bud stage.
Milestone® Spot/Foliar	1 tsp per 1000 ft ²	To treat a 1,000 sq. ft. area: Using a 2 to 4 gallon backpack or tank sprayer, add half of the water needed to cover all plants with one teaspoon Milestone™, agitate, then add water to reach desired amount (0.5 - 2.5 gallons total volume, depending on quantity and size of plants). Lightly spray all tansy ragwort plants in 1,000 sq. ft. area, then continue lightly spraying the tansy ragwort until the tank is empty and all plants have been thoroughly covered. The addition of a non-ionic surfactant (at least 80% active ingredient) is recommended to enhance herbicide activity.

Foliar applications of *aminopyralid* (Milestone®)

Another effective active ingredient for Tansy ragwort is *aminopyralid*. It is a selective herbicide for control of broadleaf weeds and is especially effective at targeting plants in the tansy ragwort (*asteraceae*) family. It can, however, cause significant damage to other broadleaf plants, including desirable forbs such as clover. *Aminopyralid* products are currently only sold in agricultural herbicides (like Milestone®). Agricultural herbicides are available in farm supply stores, and are only to be used on those areas

- Please read the Milestone® label for precautions. Follow all label precautions and safety measures. Always use personal protective equipment that includes long sleeve shirt and long pants, shoes plus socks.
- As a spot treatment only at a rate of 4 to 6 ounces (pastures section) fluid ounces per acre. Do not apply more than 7 fluid ounces per acre per year.
- Do not enter into treated areas during the restricted entry interval of 12 hours. Keep people and pets off treated areas until spray solution has dried.
- Milestone® should not be applied on residential or commercial lawns or ornamental plantings. Do not use plant material or hay from treated areas for mulch. Likewise, do not use manure from animals that have grazed or eaten hay from treated areas within the previous 3 days.

Timing: Control should take place when plants are actively growing and before seeds are produced.

READ AND FOLLOW ALL LABEL DIRECTIONS AND RESTRICTIONS. Obey all label precautions and safety measures. Always use personal protective equipment that includes coveralls, waterproof gloves, shoes plus socks, and protective eyewear. Use of brand names does not connote endorsement and is for reference only; other formulations of the same herbicides may be available under other names. Information provided is current as of the date of the fact sheet. Pesticide product registration is renewed annually and product names and formulations may vary from year to year.



Thurston County Noxious Weed Program
9605 Tilley Road S
Olympia WA 98512
Phone: 360-786-5576