

Tansy Ragwort

(*Senecio jacobaea*)

Description: Tansy Ragwort (*Senecio jacobaea* L.) is a biennial, sometimes short-lived perennial, noxious weed with a well-developed system of fibrous 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 even when it is dried and baled in hay. These toxins (pyrrolizidine alkaloids) are also a threat to humans as possible contaminants to the human food chain. Herbal remedies,

contaminated milk and other dairy products, and 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.

► Cultural / Habitat

Cultural control includes the use of management tools such as re-vegetation of disturbed soil, fertilization, and the use of mulch. Re-

seeding 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.

► Manual / Mechanical

Tansy Ragwort can be controlled about half the time by manual pulling as long as it's 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 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 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

Biological control efforts to date have consisted of the distribution of three effective biological agents: the Cinnabar Moth (*Tyria jacobaeae*), which defoliates the plant, a flea beetle (*Longitarsus jacobaeae*), that mines the root system, and a seed fly (*Pegohylemyia seneciella*), 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 have dropped dramatically, due in part to these three biological control agents, but it is insufficient in satisfying the legal requirements for controlling this plant by property owners.



Cinnabar larvae
Photo by Jens Buurgaard Nielsen



Cinnabar Moth Adult
Photo by Keith Edkins

► **Chemical**

Spot spraying with **glyphosate** (example: Roundup Pro®, Glyphos®, etc.) is effective in controlling Tansy Ragwort. Glyphosate products can be used to treat individual plants or small patches. Currently, products containing the active ingredient glyphosate are the only herbicides for the control of Tansy Ragwort considered “low in hazard” by Thurston County’s pesticide review process for the potential for chemical mobility and persistence.



Thurston County has observed that most ready-to-use, pre-mixed products do not contain sufficient active ingredients to be as effective as concentrated products that are then mixed with water to create a specific finished concentration. The following instructions are for products containing 41% glyphosate which will be mixed down to a specified dilution rate. Be sure to read your label carefully, and make adjustments to rates accordingly.

Foliar applications of glyphosate (ROUNDUP PRO™):

- 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.
- Glyphosate is non-selective, and will injure any plants that it comes in contact with, including grass.
- Keep people and pets off treated areas until spray solution has dried.
- Remove 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.

Foliar applications of aminopyralid (Milestone®)

For selective control of Tansy Ragwort in agricultural settings (pastures, hayfields, etc.): an herbicide containing the active ingredient **aminopyralid** (example: Milestone™, Milestone VM™, etc.) may be a preferred choice. Aminopyralid products will not harm grass and can be used around livestock (provided all label precautions are followed). **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.** Aminopyralid is currently sold in agricultural herbicides that are to be used only in areas listed on the label, and are available in farm supply stores. Aminopyralid is considered moderate in hazard by Thurston County’s review process for the potential for chemical mobility and persistence.

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.

Timing: Applications 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. Control should take place when plants are actively growing and before seeds are produced. Applications of aminopyralid are also effective in the fall before a killing frost.

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.

References:

- Proceedings Of The Symposium On Pyrrolizidine (Senecio) Alkaloids, Cheeke, P.R. (ed.) 1979, Oregon State University, Corvallis, OR;
- Pyrrolizidine Alkaloids: Their Occurrence in Honey from Tansy Ragwort”, Science Feb. 4, 1977, Vol. 195, pages 497-499;
- U.S. Food & Drug Administration CFSAN Foodborne Pathogenic Microorganisms and Natural Toxins Handbook;
- USDA/ARS PPRL Tansy Ragwort Findings; IVM Technical Bulletin: Tansy Ragwort, Bio-Integral Resource Center, Berkeley, CA;
- The Ecology and Economic Impact of Poisonous Plants on Livestock Production, Chapter 15,
- Milk Transfer of Pyrrolizidine Alkaloids in Cattle, Journal of the American Veterinary Medical Association, Vol.169, No.11, pages: 1192-1196



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