



**OREGON  
DEPARTMENT OF  
AGRICULTURE**



## *Jacobaea vulgaris...* **Tansy Ragwort**

- Tansy ragwort (Asteraceae) is a “B-List” noxious weed species
- Targeted for biocontrol in W. OR and eradication from limited E. OR extent
- Native to Eurasia, appeared in 1922
- 2 to 6 ft tall
- Confused with “common tansy”
- Seed lasts 15 years
- Biennial rosette of dark green, deeply lobed leaves
- Toxic to liver of cattle and horses
- Dried plants still have poisonous alkaloids that show up in resultant milk or honey
- Before the advent of biocontrol, Oregon agriculture suffered \$5 million per year in livestock losses

*Ragwort reproduces exclusively by seed forming new rosettes. Mowed or grazed plants become short-lived perennials.*

## “Why is my tansy so bad this year?”

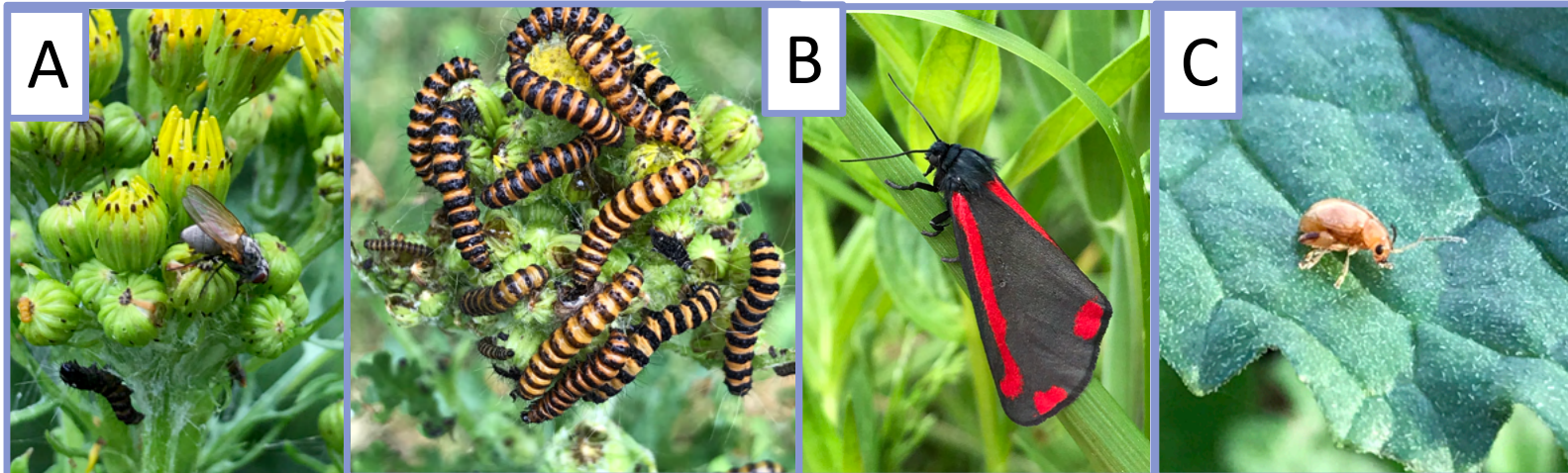
- ✓ Cycles significantly from year-to-year.
- ✓ Plants do best when a low ragwort year is followed by a warm, wet spring causing seed germination.
- ✓ Seeds can still form if treatment is conducted during full bloom, wasting time and money. Treatments before bolting are best.
- ✓ Thrives where grazing, logging, or fire disproportionately hamper native plants.
- ✓ Ragwort is often a symptom of overgrazing or rodent tillage opening room for seed bank germination.
- ✓ Ragwort suffers in dense grass formed if grazing is removed before seeding begins.



# Biological Control Options for Tansy Ragwort

*Biocontrol helps provide a safer, low-cost, and long-term solution.*

<b>Seed-head fly (A)</b> <i>Botanophila seneciella</i>	Introduced in 1968 and widespread at most ragwort infestations. Primary biocontrol in eastern Oregon. Larvae feed on seed-head and often create visible cap of spittle on flower disc. 5-10% (max. 40%) of seed heads are attacked, mostly the early buds. More common in shady areas.
<b>Cinnabar moth (B)</b> <i>Tyria jacobaeae</i>	Introduced in 1960. Can attack at elevations up to 3,000 feet. Adults fly in May/June. Does best on dense stands where inch-long larvae cause severe defoliation in June/July. Ragwort can grow back after defoliation as a short-lived perennial with late-summer moisture. The moth east of the Cascades has been mostly unsuccessful. Avoid distributing into mountain regions to avoid non-target impact concern. Moth populations limited by predators, parasites, and disease. Collect by hand picking mature caterpillars in paper bags. Release 10 larvae per plant with 250 to 500 larvae per site.
<b>Flea beetle (C)</b> <i>Longitarsus jacobaeae</i>	Introduced in 1971. Real “workhorse” of the three agents. 1/8 <sup>th</sup> inch-sized adults hop about during rainy season cause shot-hole feeding, killing smaller rosettes. Most damage done by larval feeding on root crown. Pupate in soil litter so disturbance damages beetle populations. Has reduced ragwort density by 90% in Oregon, 7 years post-introduction. If ragwort flares back up, insects will usually control plants within 2 years. Monitoring did not show beetles established in E. Oregon. Beetle populations can exist where ragwort densities are low.



*\*The goal of biocontrol is not eradication, but some level of significant reduction in the target plant to reduce economic impacts. Other forms of integrated treatments should be considered in intensive agricultural settings.*

## REPORTING

Check with your County Weed Control Program or local Soil and Water Conservation District for reporting and tips on controlling your noxious weeds.

## LEARN MORE

There's much more to learn about Oregon's noxious weeds from:

[oregon.gov/oda/programs/Weeds/OregonNoxiousWeeds/Pages/AboutOregonWeeds](http://oregon.gov/oda/programs/Weeds/OregonNoxiousWeeds/Pages/AboutOregonWeeds)

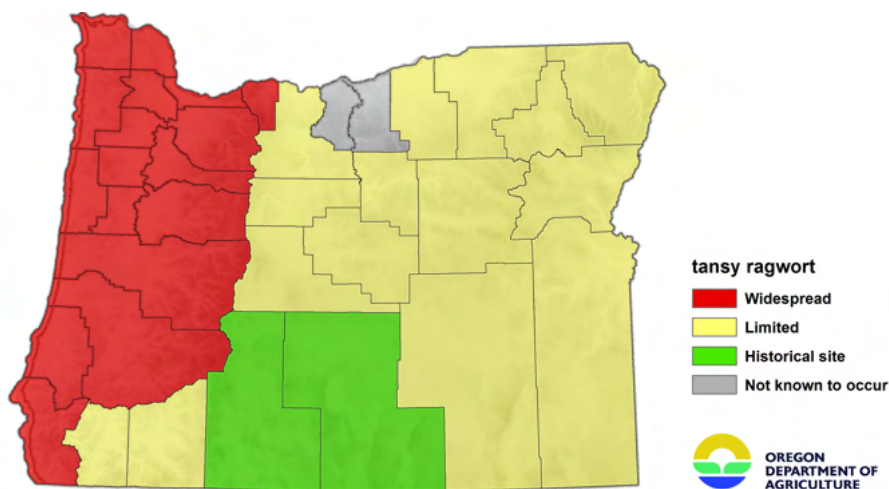




# Biocontrol on Tansy Ragwort is Best...

<b>In natural settings</b>	<ul style="list-style-type: none"><li>• Reduce pressure on desirable plants</li><li>• Allow ragwort and insects to cycle naturally undisturbed</li><li>• Counterintuitive, but insects need their specific target weed to survive</li><li>• Sites that are mowed or sprayed often return if grazing pressure is not reduced</li><li>• If eradication is not attainable, leave small population of ragwort as insect reservoir</li></ul>
<b>In new or difficult situations</b>	<ul style="list-style-type: none"><li>• Biocontrol reserved for insurmountably large infestations or rough terrain</li><li>• Most impactful when introduced to sites less than a few years in existence</li><li>• Insects so widely redistributed; rare to find sites where they do not already occur</li><li>• May take insects several years to resurge and control the weed</li></ul>
<b>In “normal” years</b>	<ul style="list-style-type: none"><li>• Extreme weather can send the plant/herbivore cycle into significant annual swings</li><li>• Extraordinary plant growth conditions can compensate for insect attack</li><li>• Unusually wet springs can flood out overwintering insects in the soil</li><li>• Insects can regionally adapt to new conditions but may take a few years to do so</li></ul>

Tansy infests 125k acres in Oregon and without controls like our beneficial insects, has been modeled to potentially infest 11 million acres resulting in over 12 million dollars of negative economic impact.



Updated 2022

State of Oregon Geospatial Enterprise Office (GEO)

Oregon Department of Agriculture has coordinated the use of millions of ragwort biocontrol insects across 60 years at 200 locations statewide.

## QUESTIONS ABOUT BIOCONTROL

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# Observations in the Field...

2020

2021

Portland, OR



Salem, OR



Sandy, OR



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