



Oregon State University
Extension Service
Marion County

Managing Tansy Ragwort in Pastures

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Yellow is a bright and cheery color, but for farmers and land managers in the Willamette Valley it can bring a sense of doom. Tansy ragwort is a weed with green ruffled leaves and clusters of small, bright yellow flowers. It is toxic and difficult to eradicate once established. This is in part due to its deep root and prolific seed production with up to 200,000 seeds per plant. It is generally a biennial plant that grows in cool, wet, cloudy areas, and can quickly invade disturbed sites like pastures, rangeland, riparian and logging areas, and construction sites.

Introduced to the Western U.S. in the 1920s, tansy became an issue with its peak in the 1970s. Because of its toxicity, it had a devastating effect on cattle and horses. Researchers at Oregon State University conducted extensive feeding trials, determining that the alkaloids in the plant are a “cumulative toxin” resulting in liver damage over time. The highest concentration of alkaloids are in the flowers, however all parts of the plant are considered toxic. It only takes around 4% - 8% of body weight in horses and cows to be fatal. For example, a 1200-pound cow would need to consume 48 pounds of the green plant to achieve a lethal dose. This can occur with a single feeding or over a period of months or even years.

In the early 1970's the Oregon Department of Agriculture launched a biological control program to reduce tansy ragwort infestations. The biological control included three insects – the cinnabar moth, flea beetle, and seed head fly. These insects feed primarily on tansy ragwort and can do significant damage to the plant when populations are high. The insects follow a boom-and-bust cycle with the plant and may take a few years to build up their population to do enough damage to an effected area. If management conditions are favorable for the insects, a tansy ragwort infestation can be reduced

significantly. However, this approach might require isolating the infested area to allow the biological control to be undisturbed and may not be applicable for every situation.

Due to the success of the biological controls, especially the tansy ragwort flea beetle, tansy maintained a low profile until 2005 when a winter drought was followed by a warm wet spring, which created the conditions for resurgence of the noxious weed. Because tansy populations were low, so were the biocontrol agent populations that depend on the weed. A long, wet, and cool spring seasons also favors the tansy and hinders the bio-controls. This boom-and-bust repetition is a natural cycle, and it takes several years for the insects to build up again and control the weed. Tansy ragwort has now made a big comeback in parts of the western Oregon, especially in the foothills where livestock grazing is prevalent. It remains to be seen if the bio-controls are able to make a comeback as well.



Cinnabar moth caterpillar on Tansy Ragwort flowers

Overgrazing and poor pasture management are contributing factors to tansy ragwort poisoning. If you do not have a healthy grass stand and you place hungry cows or horses on a pasture without proper nutrition, they can resort to eating tansy ragwort. One of the worst things livestock owners can do is to pull or mow tansy and leave it to wilt and dry in the pasture. Once dried the plant loses its qualities that warn the animal of its toxicity, it becomes more palatable and increases the likelihood of consumption. If you are going to pull, mow, or spray the plant, bag and take it to a landfill. Any methods you choose to target tansy ragwort should be paired with a strategic plan to improve your pasture and soil health. By seeding, fertilizing, and minimizing disturbance, tansy ragwort will have less room and resources to compete.

In July and August, tansy is in full bloom and has grown to maturity. This is when the plant is the most obvious and unavoidable to farmers, but it is the hardest time to manage it. If you spray or mow the plant while in full bloom, you are more likely to disperse the seeds and can encourage more growth. The best time to control tansy ragwort is in the fall or spring when there is new growth and seedlings are in the rosette stage.



Flea beetles offer biological control of Tansy Ragwort

If you prefer to use chemical agents against the weed, experts recommend applying an herbicide in the fall or during spring before the plant bolts. You can mow and bag the dead plant material, and after rains bring new seedlings or the green up of the rosettes, apply herbicide. An economical option would be an herbicide with 2,4-D + dicamba that is labeled for use on tansy ragwort. Always follow the directions and restrictions on the label as herbicides

can have different recommended timing and application rates. This herbicide information is only a brief and general summary, it is best to consult a local professional for a personalized recommendation.

For those who wish to manage the plant without chemicals, your options include removing the plant by hand or hoe, using biological control insects, and improving your pasture. Another option for those who have access to sheep can include targeted grazing. Sheep are generally immune to the toxins in tansy ragwort if they graze in the spring and early summer. Placing the sheep in the affected area while the plants are smaller and in the rosette stage can aid in your control efforts, however this is not recommended when the plant is mature.

No matter which options you prefer, be prepared to be in it for the long haul. Especially for severe infestations, it can take several years to get tansy under control. It is always best to combine multiple control methods with best management practices for your pasture and affected areas. OSU Marion County Extension Service is here to help you in your efforts to manage tansy ragwort and improve your pasture.

For more information visit:

- OSU Extension Weed Resources - <https://extension.oregonstate.edu/pests-weeds-diseases>
- Tansy Ragwort Fact Sheet - <https://extension.oregonstate.edu/pests-weeds-diseases/weeds/tansy-ragwort>
- OR Dept of Agriculture, Noxious Weed Control - <http://oregon.gov/ODA/PLANT/WEEDS/>
- Pacific Northwest Weed Management Handbook - <https://pnwhandbooks.org/weed>
- Recorded Webinar on biocontrol for tansy ragwort and targeted grazing for weed management - https://media.oregonstate.edu/media/t/1_97vl96kc