Email: noxiousweeds@co.cowlitz.wa.us/noxiousweeds

Linaria vulgaris

WA – Class C Noxious Weed OR – Class B Noxious Weed

Yellow Toadflax

Butter and Eggs, Common Toadflax, Wild Snapdragon

Family: Scrophulariaceae

<u>Origins:</u> Native to Asia and Europe. Originally brought to North America as an ornamental in the 1600s.

Range: Heavily distributed in the northwestern region of the United States. Found in every state except Hawaii.

<u>Habitat</u>: Commonly grows in disturbed areas, open fields, waste areas, agricultural areas, roadsides, and forest clearings, preferring moist, gravelly soils.

<u>Impact:</u> Yellow Toadflax grows rapidly, forming dense stands that crowd out native and desirable forage species. First-year plants can develop up to 100 secondary



Image 1: Tenton County Weed & Pest District. https://www.tcweed.org/weeds-of-the-month-dalmatian-and-yellow-toadflax/



Image 2: Oregon Noxious Weeds. https://www.oregon.gov/oda/programs/weeds/or egonnoxiousweeds/pages/aboutoregonweeds.aspx #wellow-toadflax

shoots from roots, and second-year plants can develop up to 250 shoots. Yellow Toadflax reproduces by seeds and by horizontal creeping rootstocks. Each plant produces up to 30,000 seeds, which can remain viable in the soil for eight or more years. Dead stems can remain upright and have seed-containing capsules still attached through the winter, sometimes longer.

<u>Description:</u> Yellow Toadflax is a perennial herb that grows up to 2.5 feet tall. The stems are generally unbranched and hairless, sometimes having short granular hairs. Plants have numerous leaves that are alternately arranged and crowded on the stem, giving the appearance of being whorled or opposite. The leaves grow up to 4 inches long, are soft and narrow with smooth edges and pointed tips.

Yellow flowers are crowded near the top 2 to 9 inches of the plant's stem. Flowers have orange throats and resemble snapdragons, each having a spur-like appendage at the base. The flowers are two-lipped and have two lobes on the upper lip petal and three lobes on the lower lip. Flowers bloom from June to September and have an unpleasant odor resembling cheese or spoiled dairy.

Common Look-Alikes: Dalmatian Toadflax, Yellow Snapdragons.

*Not known to be toxic.

Integrated Pest Management - Control Methods

Integrated Pest Management (IPM) combines various methods such as mechanical, cultural, biological, and chemical controls to manage pests. IPM offers the possibility of improving the efficiency of pest control while reducing its negative environmental impacts. For more information, see the Cowlitz County Noxious Weed's IPM Resources & Strategy Guide or contact your local Noxious Weed Control Board to develop a customized IPM plan.

Non-Herbicide Control

Mechanical (pulling, cutting, digging, etc.)	Young plants can be dug up or pulled. It is critical to remove all of the roots; fragments left in the soil can sprout and develop new stems. Do not compost.
Cultural	Establishing populations of healthy grasses will deter Yellow Toadflax from spreading.
Biological	The Toadflax Flower-Feeding Beetle, <i>Brachypterolus pulcarius</i> , larvae feed on reproductive structures within the flowers, including maturing seeds, and can reduce Yellow Toadflax seed production by up to 90%. Adults feed on young stems and decrease overall plant health by causing increased branching and stunted growth. *Feeds on both Dalmatian Toadflax and Yellow Toadflax.
	The Yellow Toadflax Stem Weevil, <i>Mecinus janthinus</i> , larvae feed within the stems and inhibit the plants' ability to transport nutrients, causing early wilting of the shoots and reduced flower formation.
	Toadflax Seed Capsule Weevil, <i>Rhinusa antirrhini</i> , larvae feed on immature seeds and may reduce seed production up to 90%. Adults feed on flowers and new shoots.

Herbicide Control: Foliar Broadcast Treatment

Dicamba (Banvel, Rifle, Clarity)	Timing: Early spring before plants reach bloom stage. Remarks: Repeat applications may be necessary; avoid drift to sensitive crops; Dicamaba severely injures or kills most broadleaf plants; grass tolerates Dicamba; do not apply near water.
Chlorsulfuron (Telar)	Timing: Spring to actively growing plants during the bud to bloom stage. Remarks : Suppresses Yellow Toadflax; use penetrating surfactant; spray complete uniform coverage; avoid drift to crops; apply only to non-cropland; refer to the label for use in aquatic areas.
Imazapic (Plateau)	Timing: Fall when the top 25% of the plant is dead, usually after a hard frost. Remarks: Add methylated seed oil to spray mixture; note crop rotations found on the label; do not apply near water.

^{*} Cowlitz County Noxious Weed Control Board does not endorse any product or brand name. Brand names are listed as an example only. Other commercial products may contain the listed active chemical for herbicide control. Always read and follow the safety protocols and rate recommendations on the herbicide label. **The Label is The Law.**

This control sheet includes excerpts from the Written Findings of the Washington State Noxious Weed Control Board (WSNWCB), nwcb.wa.gov. Herbicide information from the PNW Weed Management Handbook (ISBN 978-1-931979-22-1) and product labels.