

Convolvulus arvensis

WA – listed as an Class C noxious weed

OR – listed as a “B designate (T)”

Field Bindweed

Family: Asteraceae

Range: All of the U.S and Hawaii. In Washington and Oregon, it is estimated to infest approximately 500,000 acres in each state. All 39 counties in WA report documenting this species.

Habitat: Grows best on moist and fertile soils but can tolerate poor soils. Cultivated crop fields, gardens, pastures and roadsides. Can be found at up to 9000 feet in elevation.

Origins: Native to Europe

Impact: In cropland settings it is one of the most troublesome. Plants form large ground patches with extensive root systems and long-lived seeds. Plants can climb up other erect vegetation covering them and inhibiting growth. Outcompetes native plant species and can reduce crop yields significantly.



Description: *Convolvulus arvensis* is a vine-like herbaceous perennial with an extensive and deep root system. Roots include creeping lateral feeder roots and tap roots which can grow more than 10 feet in depth. Leaves are alternate arrow-like and dull green in color. Flowers can be seen from spring to early winter. Flowers vary in color from white to shades of pink. The flowers are axillary and solitary with a trumpet-shape of five fused petals.

Bindweed reproduces through seed, vegetative stem fragments and horizontal creeping rhizomes. One plant can produce up to 500 seeds that are viable for more than 20 years.

Integrated Vegetation Management - Control methods

Integrated vegetation management (IVM) is a structured approach to common sense management of weeds. IVM is a vegetation-only subset of integrated pest management (IPM).

Integrated Pest Management, as defined by RCW 17.15, is a coordinated decision-making and action process that uses the most appropriate pest control methods and strategy in an environmentally and economically sound manner to meet programmatic pest control objectives.

Non-Herbicide Control

<p>Mechanical (pulling, cutting, disking)</p>	<p>Pulling is not effective unless it is followed by an herbicide application. Mowing is not effective due to the low profile of the plant. Cutting or disking is not recommended due to root segmentation that will spread the plant.</p>
<p>Cultural</p>	<p>Burning is not effective as it only removes above ground plant material and not the root system or seeds.</p> <p>Using landscape fabric or black plastic is not effective in controlling plants since roots can grow past covered area to find sunlight.</p>

	Grazing by cattle is not recommended or effective since it is not palatable. Sheep have been known to graze on bindweed but plants will recover fully when animals removed. Hogs have been documented as being poisoned from consumption of the plant.
Biological	Approved biological control insects are approved: European field bindweed moth <i>Tyta luctuosa</i> , tortoise beetle <i>Chelymormpha cassidea</i> and bindweed gall mite <i>Aceria malherhae</i> . Biological control agents are long term management tools that need to be used in combination with other methods to be successful.

Herbicide Control

Herbicides listed by trade name are only examples of those containing the active ingredients in each category provided below. When using herbicides, follow the label for each as they provide the best information and rate recommendation. The label is the law. **For best results, a surfactant should be added to all spray mixtures.**

Foliar Broadcast Spray

2,4-D + Triclopyr (Crossbow)	Rate: 4 to 6 pt product/acre (1.9 to 2.85 lb a.e./acre); Spot spray: 1 1/3 to 2 product oz per gallon of water. Timing: After emergence to bud stage. Remarks: Must be used for several years to reduce by 60 to 80 percent; do not use near water.
Dicamba (Banvel, Clarity)	Rate: 1 to 4 lb herbicide/acre (0.5 to 2 lb a.e./acre); Spot spray: 0.16 to 0.375 product oz per gallon of water. Timing: After emergence when plants are actively growing but before bud stage; do not use near water; repeated applications likely needed. Remarks: Good suppression but follow-up treatments are necessary; do not use near water; repeated applications likely needed.
Triclopyr (Garlon, Element)	Rate: 3 to 4 pt herbicide/acre (1.13 to 1.5 lb a.e./acre); Spot spray: 1 – 2 oz product per gallon of water Timing: After emergence to bud stage. Remarks: Repeated treatments are necessary for effective control; use aquatic formulation if near water.
Glyphosate (Roundup)	Rate: 3 to 4 qt herbicide/acre (3.4 to 4.5 lb a.e./acre); Spot spray: 2-4 oz product per gallon of water. Timing: After emergence when plants are actively growing and up to early seed set. Remarks: Plants should not be under drought stress at time of herbicide application. This product is non-selective and may injure desirable plants. Use aquatic formulation if near water.
Imazapyr (Stalker, Chopper)	Rate: 1 pt herbicide/acre (4 oz a.e./acre); Spot spray: 1 -2 oz product per gallon of water. Timing: Pre-emergence or post-emergence when plants are actively growing. Remarks: These products are nonselective and may injure other desirable plants; use aquatic formulation if near water; use caution due to soil mobility.

Information for this control sheet includes excerpts from the Written Findings of the Washington State Noxious Weed Control Board. Herbicide information from the PNW Weed Management Handbook (ISBN 978-1-931979-22-1) and product labels.