



## Asotin County Noxious Weed Control Board

P.O. Box 881  
Asotin, WA 99402  
(509) 243-2098

### **Field Bindweed** *Convolvulus arvensis*

**Description:** Field bindweed is a mat forming or climbing perennial with stems up to four feet in length. The leaves are alternate with an arrow-head shape. The trumpet-shaped flowers range in color from pink to white. This weed flowers from June until first frost. It reproduces by seeds and rhizomes. The seeds may live for 50 years.

**Habitat:** Field bindweed can adapt to a wide range of environmental conditions. It has been found as high as the 10,000 foot level. It prefers fertile soils that can be either dry or moist. It can be found in cultivated fields, orchards, stream banks, and waste places.

Because field bindweed is widely distributed and has a significant history of causing economic problems for the agricultural industry, it has been called, one of the ten 'world's worst weeds'. The extent of damage to natural areas is not clear. Field bindweed utilizes nutrients that other desirable species could use and has been shown to reduce moisture in the top 2 ½ inches of soil.

New infestations of bindweed are primarily by seed. Seeds are transported by water, birds, animals, humans, and machinery. Seeds can pass through killdeer, quail, ducks, geese, yellowlegs, jays, ravens, mocking birds, and starlings and remain viable.

When working on a management plan for bindweed it is important to realize the extent of the below ground root system that needs to be depleted before the infestation is controlled. The above ground vegetation will regenerate and replace the root carbohydrates without careful monitoring. A multi year approach is necessary.

**Mechanical:** Hoeing or hand-pulling may encourage the germination of dormant seeds or encourage vegetative growth by breaking up root fragments. Mowing has not been successful because plants can be missed and it promotes ground-hugging growth. Repeated cultivation is required for field bindweed control because plants can regenerate from roots as deep as 5 feet. Studies have shown that bindweed needs to be cultivated every 4 to 14 days to achieve control.

**Biological:** Two gall mites, *Aceria malherbae* and *A. convolvuli*, have been introduced to control field bindweed. Their establishment in SE Washington is unknown.

**Fire:** Unknown

**Cultural control:** Some control of field bindweed has been achieved by planting a heavy over-story vegetation (sorghum, alfalfa, or millet) that reduces light to the weed. Grazing has only had temporary effects upon bindweed populations. Hogs and cattle get a negative reaction from grazing it. Sheep only eat it reluctantly.

**Fertilizer:** Unknown

**Chemical:** These chemical recommendations are for noncropland areas and are summarized from the "Pacific Northwest Weed Management Handbook - 2004". These recommendations are not intended to be a complete resource guide. Label requirements need to be followed for restrictions, concentrations, timing, and nontarget interactions. Chemical control can be effective, but must be maintained for several years to exhaust the seed bank.

- **Picloram:** (Tordon)  
Rate; 1 lb ae/A  
Timing; Results are best when applied early bud to full bloom  
Caution; Do not apply on or near susceptible crops or desirable plants. Label includes buffer zone restrictions, air temperature limits, and grazing restrictions. Do not contaminate water or where surface water from treated areas can run off to adjacent cropland. Do not apply to inner bank or bottom of irrigation ditches. Do not apply to snow or frozen ground. Do not allow grazing in areas where poisonous plants were sprayed until plants have died, herbicide may increase palatability. Do not spray pastures if the forage legume component is desired. Do not move treated soil. Do not transfer livestock onto crop areas for at least 7 days after grazing on land treated with picloram. See label for other restrictions. Most formulations are restricted use. Soil residues may persist for over three years. Many broadleaf crops are sensitive to picloram. Do not use in diversified crop areas.
- **Glyphosate:**  
Rate; 3 to 3.75 lb ae/A  
Timing; Apply at full bloom to early seed set  
Remarks; Repeat treatments may be needed  
Caution; This herbicide is non selective
- **Metsulfuron:** (Escort)  
Rate; 0.6 to 1.2 oz ai/A  
Time; Apply in early bloom  
Remarks; Use nonionic or silicone surfactant  
Caution; Avoid drift. Apply only to noncrop areas
- **2,4-D amine:**  
Rate; 2 to 3 lb ae/A

Time; Apply at bud stage  
Remarks; Must reapply every year  
Caution; Avoid drift

- **Imazapic:** (Plateau)  
Rate; 0.125 to 0.188 lb ai/A  
Time; Apply after 25% bloom through fall to actively growing weed  
Remarks; Add methylated seed oil  
Caution; Note restrictions on reseeding

**\*Treat** bindweed before it is drought stressed. Use a translocated herbicide, such as glyphosate or a combination of glyphosate and dicamba at the flowering stage of growth. The addition of dicamba gives the treatment some soil residual activity that helps with control of new seedlings. Re-treatments will be necessary to control both established plants and seedlings.

**Distribution:** Field bindweed is a common weed in Asotin County. It can be found along road ROW's, yards, rangelands, and fallow fields. The only extensive population in a natural area is that area west of Rattlenake Grade.

**ACNWCB Policy:** In Asotin County, field bindweed is controlled on a complaint basis when the complainant is an adjoining neighbor.

11/30/05

