



Asotin County Noxious Weed Control Board

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Whitetop

Cardaria draba, *Cardaria pubescens*

Description: Whitetop is a perennial that grows up to 3 feet tall. The leaves are grayish-green, shaped like arrowheads and clasp the stem. The flowers are white and appear in April and May along the Snake River and as late as early June in the higher elevations of the county. The flowers form a flat-topped appearance and are easily recognized from a distance. Plants typically do not flower the first year. One flowering stem of hoary cress can produce up to 850 mature pods. Later in the year, the distinctive inflated seed pods give a positive identification. Seeds are dispersed by water, vehicles, farm machinery, and contaminated hay and crop seeds. The seeds germinate in the fall after the first rains. Although seed production is somewhat important, the aggressive nature and stubborn persistence of these weeds is due to an extensive system of vertical and lateral roots. The tap root can reach up to 18 feet in depth, enabling it to withstand droughts and cold winter climates. The roots produce buds that can then produce new plants. Root fragments also generate new plants.

Habitat: This weed initially invades disturbed open sites, fields, grain and vegetable crops, especially irrigated crops (such as alfalfa), orchards, roadsides, and ditches. They are also found in riparian-upland areas and are somewhat salt and alkaline tolerant, but generally not shade tolerant. They readily establish in disturbed areas in range and wildlands and are favored during years of above average precipitation. Invasion potential is greater under heavily grazed conditions or other disturbances.

Mechanical: Mechanical control is extremely variable. Therefore, any mechanical control must be aggressively maintained for several years. Mowing alone is generally ineffective for control, as rapid regrowth occurs. The most effective timing for mowing is when plants are in the late bud to early flowering stage. This will also reduce seed production, but may also decrease competitive vegetation. Cultivation to a depth of 6 inches repeated throughout the season of emergence, for a period of 2 to 4 years, must be maintained for eradication.

Biological: Four agents are currently being investigated for their potential: *Ceutorhynchus cardariae* (a weevil that forms galls on leaf stalks), *Ceutorhynchus*

merkli (a shoot-mining weevil), *Ceutorhynchus turbatus* (a seed-feeding weevil), and *Psylliodes wrasei* (a shoot-mining fly). None of these agents are currently available.

Fire: Due to the emergence of new shoots from root buds it is unlikely that burning will offer control of whitetop.

Cultural control: Although sheep have been used to control whitetop in a moderate and continuous grazing program, a complete management program has not been developed. Cattle will graze them; however, dairy animals may produce milk with objectionable taste and odor. Legume crops, such as alfalfa, are important competitors for moisture and sunlight. However, one of the prime areas for new invasions is thinning stands of alfalfa. Rotation to winter annual grains allow cultivation and herbicide applications during the fallow season.

Fertilizer: Nitrogen fertilizer has been shown to enhance grass production and slow whitetop invasions.

Chemical: These chemical recommendations are for noncropland areas and are summarized from the “Pacific Northwest Weed Management Handbook - 2003”. 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 obtain long term control. Picloram has not proven effective on whitetop control.

- **2,4-D:**
 - Rate; 2 to 3 lb ae/A in noncropland and 1 lb ae/A as a selective treatment
 - Time; Apply early in the growth stage
 - Remarks; When possible use 2,4-D before plowing fields in spring. Respray in fall if new growth appears.
 - Caution; Avoid drift to sensitive crops.
- **Amitrole:** (Amitrol)
 - Rate; 3 lb ai/50 gal water for spot treatment
 - Time; Apply before first blossoms open
 - Remarks; Foliage must be thoroughly wet
 - Caution; This is a restricted use herbicide. It is not registered for crop or grazing lands.
- **Chlorsulfuron:** (Telar)
 - Rate; 0.75 oz ai/A (1 oz/A of 75% ai Telar)
 - Time; Apply at prebloom to bloom growth stage or to rosettes in fall.
 - Remarks; Using an 80% ai surfactant increases effectiveness.
 - Caution; Apply only to noncrop sites
- **Metsulfuron:** (Escort or Cimarron)

- Rate; 0.6 oz ai/A (1 oz/A) of the 60% ai Escort or 0.45 oz ai/A (0.75/A) Cimarron
- Time; Apply at prebloom to bloom growth stage or to rosettes in fall.
- Remarks; Using a nonionic or silicone surfactant increases effectiveness.
- Caution; Apply only to pasture, rangeland, and noncrop sites.

Distribution: Whitetop is a new invader to Asotin County. There is approximately one acre of known infestations. The infestations are scattered in the Buffalo Eddy, Montgomery Ridge and Cloverland areas.

ACNWCB Policy: These two species are mandated for eradication throughout Asotin County

12/30/03

1/25/05 update on biological controls

