



*Tribulus terrestris*

WA – Class B Noxious Weed

OR – Class B Noxious Weed

## Puncturevine

Caltrop, Goathead, Cat's-Head, Devil's Thorn, Tackweed

**Family:** Zygophyllaceae

**Origins:** Native to the Mediterranean region, it was introduced into the United States with imported livestock.

**Range:** Found throughout the United States, except along the northern tier from Montana to New England. In Washington and Oregon, infestations are more frequent east of the Cascades.

**Habitat:** Puncturevine is commonly found in pastures, roadsides, orchards, vineyards, waste places, parks, railway yards, and agricultural areas. It is highly adaptable to a wide range of conditions but prefers warm temperate conditions and light-textured soils.

**Impact:** Puncturevine forms a dense mat, crowding out native vegetation and reducing forage species. The fruit is a wood burr with sharp, rigid spines strong enough to puncture bicycle tires or shoe soles. The fruit can cause damage to the feet of animals. If animals happen to eat a burr, it may cause injury to the mouth, stomach, and intestines. Puncturevine reproduces by seed, typically producing 200-5,000 seeds per plant, but may produce up to 100,000.

**Description:** Puncturevine is a summer-annual herb growing flat along the ground from a simple, woody taproot. It produces numerous hairy stems, up to 6 feet long with many branches, forming a dense mat. The leaves are hairy, opposite, 1-3 inches long, oblong, and divided into leaflets; each leaflet is 1/4 inch long. The small, solitary, yellow, 5-petaled flowers are born on short stalks at leaf nodes.

**Common Look-Alikes:** Common Purselane, Prostrate Spurge

*\* Puncturevine is toxic to livestock.*



WSNWCB



## 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.)

Mechanical methods are most effective if done before the plant has set seed. Hand-pulling, hoeing, tilling, digging are all viable control methods. Mowing is ineffective due to the plants' low, prostrate growth habit.

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<b>Cultural</b>	Maintaining healthy, desirable vegetation can prevent Puncturevine infestations.
<b>Biological</b>	The Puncturevine seed weevil, <i>Microlarinus lareynii</i> , larvae suppress plant reproduction by destroying developing seeds. Adults feed on stems, leaves, flowers, and fruits. The Puncturevine stem weevil, <i>Mircolarnius lypriformis</i> , larvae feed within the stem and root crowns inhibiting nutrient transportation, while the adults feed on stems and leaves.  <i>*Toxic to livestock.</i>

### **Herbicide Control: Foliar Broadcast Treatment**

<b>2,4-D Amine</b> (Gordon's Amine 400)	<b>Timing:</b> Apply every 3 weeks during the growing season or when new seedlings appear. <b>Remarks:</b> Annual treatments needed to control seedlings; seeds will germinate throughout summer when moisture is available; avoid drift to sensitive crops; do not apply near water.
<b>Aminocyclopyrachlor + Chlorsulfuron</b> (Perspective)	<b>Timing:</b> Apply to actively growing plants in spring. <b>Remarks:</b> Even low rates can kill non-target tree and shrub species, avoid application within a distance equal to the tree height of sensitive species; do not allow spray to drift off-target; can injure grass species; do not apply near water.
<b>Imazapic</b> (Plateau)	<b>Timing:</b> Apply early postemergence when plants are cracking. <b>Remarks:</b> Note crop rotations found on the label; do not apply near water.
<b>Bentazon + Imazamox</b> (Basagran + Raptor)	<b>Timing:</b> Apply to small, actively growing plants. <b>Remarks:</b> Controls puncturevine in snap beans where few other products are registered for use; does not provide residual control; tank-mixing Basagran with Raptor improves crop safety and puncturevine control; add a nonionic surfactant or crop oil and nitrogen-based fertilizer to improve weed control; do not apply to drought-stressed bean plants with poor root development; do not apply near water, or in an area under the mean high watermark.
<b>Chlorsulfuron</b> (Telar)	<b>Timing:</b> Apply late fall or winter preemergence to growth. <b>Remarks:</b> Needs moisture to activate; use on pasture, range, and non-cropland only; do not apply to the frozen ground; maintain constant agitation while mixing the product with water; avoid contact with sensitive crops; do not treat powdery, dry soils and light, sandy soils if rain is not likely after treatment; refer to the label for use in aquatic areas.
<b>Other Listed Chemicals</b>	Bromacil + Diuron (Krovar I DF), Fomesafen (Reflex), MSMA (Buena or Trans-Vert), Norflurazon (Solicam), Paraquat (Gramoxone Max), Topramezone (Impact)

\* 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](http://nwcb.wa.gov). Herbicide information from the PNW Weed Management Handbook (ISBN 978-1-931979-22-1) and product labels.