

Annual

Puncturevine

Zygophyllaceae

Tribulus terrestris



Puncturevine is a member of the Caltrop Family and is a tap-rooted herbaceous perennial plant that grows as a summer annual in colder climates. It can also thrive in desert climates and poor soil conditions.

Origin: Warm temperate and tropical regions of southern Europe, Asia, throughout Africa and in northern Australia

Description: Prostrate mat-forming plants. Also known as goatheads, bullheads, Texas sandbur or Texas tacks

Color: Green leaves and yellow flowers

Roots: Central taproot

Stems: Trailing and forming numerous branches extending up to 10 feet. Can emerge as early as May and continue until frost

Leaves: The leaves are hairy and pinnately compound with 4 to 8 pairs of leaflets

Flowers: Yellow ½ inch wide 5-petalled flowers appear as

quickly as 3 weeks in the leaf axils after the seedlings emerge

Seeds: Fruits of 4 to 5 seed sections appear 1 to 2 weeks after flowering. On average, 4 seeds per fruit resulting in over 1,000,000 per plant

Viability: 3 to 7 years

Toxicity: Toxic to livestock, especially sheep, when consumed in quantity. Spines can cause damage to animals and people

Lookalikes: Common purslane (*Portulaca oleracea*)
Prostrate spurge (*Euphorbia humistrata*)

Puncturevine is a problem throughout Wyoming. It is a nuisance weed found in disturbed sites, along roadways, in overgrazed pastures, in lawns, gardens and waste areas. To successfully manage puncturevine, persistence in controlling emerging plants is necessary in order to deplete the soil seed bank.

Of all control methods, prevention is most important. Maintain healthy pastures and rangeland and continually monitor your property for new infestations. A healthy cover of desirable perennial plants will assist in discouraging puncturevine establishment.

On the backside of this sheet are management recommendations.

Recommended range and pasture management methods:

Cultural

Establishment of selected, aggressive grasses can be an effective cultural control. Contact your local Extension office or Natural Resources Conservation Service office (NRCS) for seed mix recommendations.

Proper grazing management will stimulate grass growth and keep pastures healthy. Healthy pastures are more resistant to invasion. Bare spots caused by overgrazing are prime habitat for weed infestations.

Mechanical

Cutting or pulling puncturevine at the root crown can effectively eliminate the plant. However constant monitoring is necessary as this is a very rapidly growing plant.

Well-established populations have a large seed bank in the soil that can remain viable for 3 to 7 years.

Biological

Two weevil biocontrol agents have been introduced in the U.S. A seed weevil (*Microlarinus lareynii*) and a stem weevil (*Microlarinus lypriformis*) when used in combination can greatly assist in the control of puncturevine. The weevils can be obtained from the Colorado Department of Agriculture's Insectary. Go to <https://ag.colorado.gov/conservation/palisade-insectary> for more information.

Herbicides

The following recommendations can be applied to range and pasturelands. Optimum results occur when the plants have recently received moisture and are actively growing.

<u>Herbicide</u>	<u>Rate</u>	<u>Application Timing</u>	<u>Comments</u>
Glyphosate Non-selective 41% concentrate min.	2% solution or 2 ⅔ oz/gallon water	Apply at early plant growth.	Use caution when applying near grasses or other desirable vegetation. Will possibly kill surrounding vegetation. No residual soil activity. <i>Will kill all vegetation.</i>
Outlaw (2,4-D and Dicamba)	1 to 2 pts/acre or 0.5 oz-1 oz/gallon water	Spring- at emergence of seedlings. Continue until frost.	Grazing restrictions. DO NOT apply near or under trees or where soils have rapid permeability or where water level is high. Add non-ionic surfactant @ 0.32 oz/gal water or 1 qt/100 gal water.
Telar XP (chlorsulfuron)	1 to 2.5 oz/acre	Apply pre-emergent or early post-emergent.	Add surfactant according to Manufacturers direction. Requires continuous agitation. Apply within 24 hours of mixing to avoid degradation. No grazing restrictions if less than 1 ⅓ oz applied.
Laramie 25DF (rimsulfuron)	4 oz/acre	An early post-emergent option. Must be activated with rainfall and applied when soil temps are cool.	Moisture must arrive within 2-3 weeks of application. Add a non-ionic or MSO surfactant @ 0.32oz/gal water or 1 qt/100 gal water.
Prowl H2O (pendimethalin)	Short Term (2-4 months) 2.1 qts/acre Long Term (6-8 months) 4.2 qts/acre	A pre-emergent chemical It will not kill established growing plants.	Spray solution may stain porous surfaces. Length of control is dependent on weather conditions. Pendulum AquaCap is similar, but is not labeled for use in range and pasture settings.

ALWAYS READ, UNDERSTAND, AND FOLLOW HERBICIDE LABEL DIRECTIONS

The herbicide label is the LAW