

**FC Noxious Weed Control  
Best Management Practices**



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## Puncturevine

*Tribulus terrestris*  
Family: Zygophyllaceae

Class B Noxious Weed  
Control & Containment

### Background Information

**Puncturevine** is of the Zygophyllaceae (Caltrop) family. This Class B noxious weed is on the education list in Franklin County. Puncturevine originates from the Mediterranean region and was introduced with transported livestock. Known by many names including tackweed and goathead, puncturevine grows as a summer annual in colder climates. It is found most often in dry or gravelly sites like roadsides and waste places, but it is also found in agricultural areas, such as pastures, vineyards and orchards. Seeds remain viable for up to 8 years because of varying rates of dormancy. Flowering and seed production can occur within 3 weeks of seed germination. A typical puncturevine plant will produce between 500 and 2000 seeds in a single growing season. Puncturevine is capable of large population increases over a short period of time. With its large seed production, long-term viability of seeds, and ability to hitchhike on people, vehicles and animals, puncturevine infestations increase rapidly if given the right conditions.



## Impacts

**Puncturevine** foliage is toxic to livestock, particularly sheep, when consumed in quantity. Puncturevine produces spiny, pointed burs sharp enough to puncture bicycle tires or shoe soles. They cause severe pain to feet, paws and hooves, and injure digestive tracts of livestock. Burs are undesirable in agricultural crops such as hay. Recreational value of an area is greatly reduced where puncturevine exists.

## Key Identifying Traits

- ◆ Mat forming prostrate growth with trailing stems may exceed 6 feet in diameter.
- ◆ Opposite compound leaves are divided into 4-8 pairs of small oval leaflets with fine hairs.
- ◆ Yellow flowers develop into hard spiny fruits that break into tiny sections when ripe.



Nutlets mature and adhere to tires

## Biology and Ecology



Close-up of flower

- ◆ Annual adapted to dry sandy sites and compacted soil, but tolerant of moist soil.
- ◆ Forms dense mats up to 6 feet or more across.
- ◆ Seeds germinate in late spring to early summer.
- ◆ Yellow, 5-petaled flowers occur from summer until frost.
- ◆ Tack-like spined burs are produced summer through fall, adhering to people, animals, and vehicles.

## Control Measures

**Prevention:** Control plants prior to seed production to prevent further seed from entering the seedbank. Make sure to clean clothing and equipment to prevent spreading seed to other areas. After controlling puncturevine, plant area with site appropriate vegetation to provide competition.

**Biological:** Not successful in Washington.

**Cultural & Mechanical:** Persistence is key in controlling puncturevine. Plants can be dug up to remove the taproot, be sure to wear gloves. Mowing is not effective because plants grow low to the ground.

**Chemical:** Pre-emergent herbicides applied late winter to early spring will keep seeds from germinating. Post emergent herbicides such as 2, 4-D, Dicamba, Triclopyr or glyphosate are effective. Glyphosate is a non-selective herbicide. Always use chemicals compatible with your goals.

**ALWAYS FOLLOW LABEL INSTRUCTIONS, THE LABEL IS THE LAW**

For this and other publications, see our website at: [fcweedboard.com](http://fcweedboard.com)

Photos: FCWB staff and WA State Noxious Weed Control Board