

Control Methods

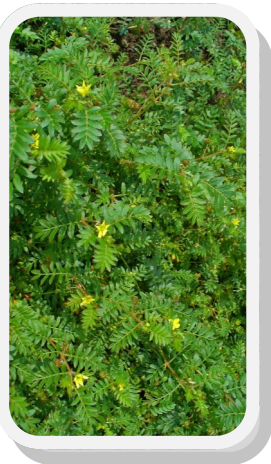
Mechanical- Successful hand pulling or digging can be done on small infestations, being sure to dig out the roots. Puncturevine is best removed by gripping the taproot, stem, or trunk, and pulling upward to remove the taproot. If the plant has produced seed heads, make sure to remove all possible spiny burs from the ground. Larger patches can be controlled by clean cultivation. Begin in early June and repeat throughout the summer months. It could take up to 2 - 5 years to eradicate. Mowing is not an effective method of control, because the plant grows flat on the ground.

Biological- The puncturevine seed weevil, and the puncturevine stem weevil have been known to provide good control if used together, however, these insects have a harder time establishing in climates with cold winters.

Chemical- Chemical control of puncturevine is generally recommended for a successful eradication of this troublesome weed. There are several herbicides registered for use in California, and are most effective when they are applied in late spring. This will minimize the production of the spiny burs, and reduce the number of new plants. As always, read and follow herbicide label directions carefully. Contact your local County Agriculture Department to determine the best herbicide for your situation.

History

Puncturevine was first recorded in California in 1902, and became one of California's most problematic weeds until the 1960s. During this time, puncturevine infested many roadsides. The tires of early cars were easily punctured by the burs, and photographs show roadsides lined with cars that had flat tires due to the puncturevine fruit. In 1961, the puncturevine seed weevil was introduced in California.



Distribution

Puncturevine is widely scattered throughout Europe, and North America. It is most prevalent in areas with hot summers, and can be found in many areas of California up to about 3300 feet. In Northern California, several infestation have been found in the Quincy and Genesee regions of Plumas County.



For More Information:

- Plumas-Sierra Counties
Department of Agriculture (530) 283-6365
Website: countyofplumas.com
- California Invasive Plant Council
Website: www.cal-ipc.org

Photos, and text provided by:

- ◆ California Department of Food and Agriculture
- ◆ University of California Agriculture and Natural Resources
- ◆ Washington State Noxious Weed Control Board
- ◆ Plumas-Sierra Counties Dept. of Agriculture
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Puncturevine

AKA: *Tribulus terrestris*



**Plumas-Sierra
Counties
Dept. of Agriculture**

**We Control and Eradicate
Invasive Weeds**

(530) 283-6365



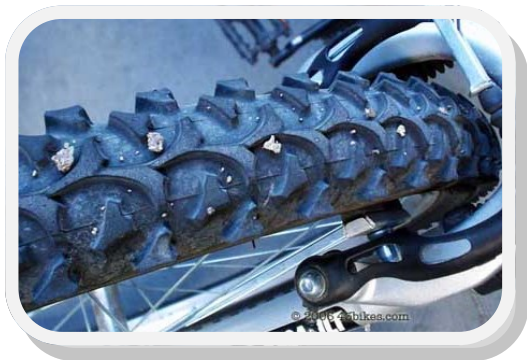
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Why should I care about noxious weeds?

Noxious weeds are non-native and very invasive. When noxious weeds spread, they impact the environment. They reduce the biodiversity of native plant communities and rapidly displace other plants that provide habitat for wildlife, food for people and livestock.

Weeds also have an economic impact by reducing the land's productivity and by decreasing the quality and value of crop and livestock production. Some weeds are poisonous to livestock. Some noxious weeds are so competitive that they crowd out all the desirable plants.

Weeds can increase maintenance costs and reduce the usefulness and value of recreation areas. Who wants to hike in noxious weeds?



What can I do?

- Drive only on established roads and trails away from weed-infested areas.
- When using pack animals, carry only feed that is certified weed free (or use pelletized feed).
- Beginning 96 hours before entering back country areas, feed pack animals only food that is certified weed free (or use pelletized feed).
- Remove weed seeds from pack animals by brushing them thoroughly and cleaning their hooves before transporting.
- If you find a few plants and decide to pull them, place the plants in a plastic bag or a similar container and dispose of them properly. Root parts can regenerate into new plants very readily from very small pieces.
- Some noxious weeds have pretty flowers and are often picked and used in floral arrangements. New weed infestations can be established when seeds shake off while these “pretty flowers” are being transported, or after the flowers are discarded. Some weeds can develop roots and produce new plants and can trigger a new infestation in your own backyard.
- If you find a weed-infested area, let the landowner or manager know so that they can take steps to control the weeds (or notify your local County Agriculture Department).
- Noxious weed seeds or plant parts may attach themselves to tires, shoelaces, camping equipment, construction equipment, garden tools, or any other surface that contacts an infested area. These seeds or plant parts can then travel hundreds of miles before falling to an uninfested area. To avoid starting a new infestation, please clean all surfaces before leaving any area.

What does puncturevine look like and how does it grow?

HABITAT: Puncturevine is prevalent in areas with hot summers, and grows best in dry, sandy soil, but will tolerate moist soil. It can be found in disturbed earth, roadsides, railways, cultivated fields, orchards, vineyards, waste places, pastures, and walkways.

GROWTH: Puncturevine is annual, prostrate, and mat forming, with trailing stems 1/2 to 5 feet long. Stems can be green, or reddish brown, and spread from the trunk outward, to open ground. Stems grow from a single taproot the extends up to 6 feet in the ground. Puncturevine can grow vertically if shaded, or competing with other plants.



FLOWERS: Puncturevine flowers from April through October. The flowers are bright yellow, about 1/2 inch wide, and are produced singly where the stem and leaf meet. The flowers only open on sunny mornings.

LEAVES: Leaves are opposite, oblong, and have short stalks. They are 1 to 3 inches long and have leaflets that are 1/4 inch long.

SEEDS: Burs are gray to yellowish brown, and have 2 to 4 sharp spines. Each bur contains up to 5 seeds. Puncturevine is also referred to as goatheads, sandburs, and tackweed, because of its hornlike structure.