

WATCH OUT *for* Saltcedar

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Invasive weeds are non-native plants that invade ecosystems and replace native plants. Noxious weeds are usually invasive and designated by State law as priority plants that require control by landowners. These weeds can reduce grazing land and impact wildlife habitat. Early detection and quick response is critical to slow spread and protect weed-free areas. The purpose of this bulletin is to provide early control methods for saltcedar (*Tamarix* spp.). Contact your county weed coordinator or Extension agent for management of large infestations.

Saltcedar (Tamarisk Family) is a native of Eurasia. It was introduced to North America for ornamental purposes, erosion control, and windbreaks. Saltcedar is a deciduous, loosely branched shrub or small tree. It is a long-lived plant that can reach heights of 20 feet or more. Leaves are appressed, scale-like, and alternately arranged. Flowers are whitish or pinkish and most abundant between April and August. The primary root of saltcedar can reach depths of 90 feet or more. After reaching the water table, horizontal roots develop and spread up to 150 feet laterally. These roots are capable of producing new shoots. In Montana, saltcedar commonly dies back overwinter and re-grows from stump sprouts, forming multiple stemmed bushes.

Habitat and impacts

Saltcedar can tolerate a wide range of environmental conditions, including highly saline habitats. It commonly establishes on floodplains, salt flats, wetlands, and along lake margins, streams, and rivers.

Saltcedar displaces native stands of wetland and riparian vegetation. It provides low wildlife habitat value and consumes large quantities of water. A large plant can transpire up to 300 gallons per day. Saltcedar also concentrates salt in its leaves. The accumulation of leaf litter increases the salinity of surface soil and renders the soil inhospitable to native plants. Saltcedar grows in dense stands. This widens floodplains and increases sediment deposition by clogging stream channels. Saltcedar is intolerant of shade. Shaded plants have altered morphology and reduced reproduction. Maintain a dense canopy cover to hinder saltcedar growth and establishment.

Saltcedar invasion may be hindered along rivers that experience spring flooding. These natural events maintain healthy riparian ecosystems by regenerating native vegetation and removing fine

sediments. In the absence of natural flooding, saltcedar colonization is aided by diminished plant competition and accumulated sediment. Natural flooding events maintain healthy river systems and hinder saltcedar invasion.

Biology and spread

Saltcedar reproduces by vegetative shoots and seeds. An adult plant can produce 600,000 seeds each year. Seeds remain viable for up to 45 days under ideal conditions. Seedlings grow slowly and require saturated soils throughout the first 2 to 4 weeks of growth. Ideal conditions for first-year survival are saturated soil during the first few weeks of life and open sunny ground with little competition from other plants. Saltcedar also has the ability to sprout from submerged or buried stems with adventitious buds. Saltcedar seeds are readily dispersed by wind and water. Seeds may also be transported to new bodies of water in the feathers of waterfowl or in mud on boots and equipment.



Photo by M. Tokerny

Saltcedar consumes more water than native plants and increases stream sedimentation.

Early control methods

Early control of saltcedar involves the application of herbicides to plant foliage, cut stems, or basal bark. Herbicide selection and timing should be advised by your county weed coordinator and application must follow label directions. Light infestations of saltcedar in areas without native shrubs and trees may be treated with a late spring to early fall foliar application of imazapyr (Arsenal®) at a rate of 1 pint/acre plus glyphosate (Roundup®) at a rate of 2 quarts/acre. These non-selective herbicides may require repeated treatments and can damage native vegetation. They are not recommended in areas where native grasses, shrubs and trees may be affected. Cut-stump or basal bark treatment methods will not affect native vegetation.

The cut-stump method is most effective on larger stems. This method is performed in the fall and involves cutting the stems within 2 inches of the soil surface, applying herbicide all around the perimeter of the stump within 1 minute of cutting, and retreating any resprouts 4 to 12 months following initial treatment. Herbicides must be applied immediately to the cut because wound healing is fast and decreases herbicide penetration.

Triclopyr can be applied to the cut stumps with undiluted PathfinderII® or a 50% solution of Garlon®. Imazapyr (Arsenal®) is effective when applied to the cut stumps at a rate of 12 ounces/gallon of water. Glyphosate can be applied to the cut stumps with undiluted Rodeo® or Roundup®.

Basal bark treatments are most effective on stems smaller than 5 or 6 inches in diameter. This method involves applying herbicide to the lowest 18 inches of intact stems. Herbicides must be applied to the entire circumference of every stem for the treatment to be effective. Triclopyr can be applied with undiluted Pathfinder II® or a 20 – 30% solution of Garlon® or Remedy® in natural oil. Follow-up management for all types of treatment is important to treat regrowth or saltcedar not killed by initial treatment.

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Photos by S. Dewey (USU)



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Flowers are pale pink to white racemes grouped in terminal clusters. Leaves are scale-like and tightly overlapping along the stem.

Prevent saltcedar invasion by maintaining a dense canopy cover and healthy vegetation to protect the soil surface from seeds. Prevent spread and colonization by locating and eradicating new plants early. The key to eradication is 100% control to prevent reinvasion. Encourage outdoor users to clean boots and equipment and report new invasions.