

Scotch Broom

Critical information on different ways to combat it

Concept for eradication = management of seeds

Sixty five percent of broom seeds germinate within the first two years, and they have been reported to remain viable for up to 25 years. This means successful eradication will take an extensive effort the first two years, with repeated monitoring of the site for germination over an extended period.

Pulling

Pull in the winter or spring when the soil is wet. Pull small plants by hand or larger with a weed wrench, which are loaned free to members of the Butte Fire Safe Council.

Cutting (by hand or mechanical)

Cut near the ground with a loppers in the late summer or fall before rains, when the plant is water stressed can kill 30 to 80% depending on drought stress. Cutting in the winter or spring when there is ground moisture will result in near 100% of the plants resprouting and vigorously growing back to the original height.

Mowing broom plants at 3 to 4 inches above the ground gives poor control, unless it is performed repeatedly throughout the growing season. Extreme caution should be used when mowing during the summer because of the potential for causing a wildfire. Mowing mature plants later in the season also can spread seeds.

Grazing

Grazing broom plants gives poor control, unless animals graze it repeatedly throughout the growing season. Broom contains chemicals that limit the amount an animal can eat each day. Make sure to have other forage available for them to mix with broom for nutrition. Goats and sheep provide the best broom control. Goats confined to a small area can help control young shrubs or young re-growth from cut or burned shrubs.

Prescribed Fires

Prescribed burns can eliminate above ground growth, but do not prevent re-sprouting from the crown and may stimulate a flush of seed germination. Burning followed by grazing, herbicides, or repeated annual fires will increase the effectiveness.

Herbicides

There are two herbicides commonly used for broom control: glyphosate (sold as Roundup® and under other trade names), triclopyr (sold as Ortho - Poison Ivy and Tough Brush Killer or Garlon). Products containing 41% glyphosate require 2.5 ounces of product per gallon of water. It will kill all plants that it is sprayed on. It needs to be applied when the broom plant starts to bloom. Triclopyr (61% active ingredient) can provide good to excellent control when applied at 1 to 1.25 ounces of product per gallon of water (0.75% to 1.5% of the total solution). They control many broadleaf plants, but do not impact grasses. It needs to be applied when the plant is actively growing in the spring.

Integrated Management

Integrated management of controlling the brooms includes other actions that reduce germination of seeds stored in the ground. This can be accomplished by planting competitive species (trees, shrubs, forbs, grass), leaving as many trees as possible that produce shade and decreasing soil disturbance in areas where broom plants were removed. All of these actions will decrease the number of germinating broom plants. Broom establishment is mainly through seed dispersal, so maintaining a healthy cover of desirable vegetation and reducing soil disturbance will minimize the potential of broom invasion. Seeding grasses like annual ryegrass 20 lbs./acre or other plants like Hykon rose clover 4 lbs./acre to compete with the broom will decrease successful germination.

Biocontrol

Two USDA approved insects, a stem boring moth, *Leucoptera spartifoliella*, and a seed beetle, *Apion fusciostre*, were introduced in the 1960s as biocontrol agents, but have had limited success in California. New insect biocontrol agents are being tested in England and France for use on broom in Australia and New Zealand. If proved safe and effective in California, these insects may ultimately become available for use as biocontrol agents in California.

For more information

<http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn74147.html>

<http://anrcatalog.ucdavis.edu/pdf/8049.pdf>