

Note to Mountain Democrat: A picture was submitted with the first article but not published. Please include the picture submitted with this article since we wish all readers to be able to identify this noxious plant species by sight.

## **TREE OF HEAVEN – Not So Heavenly! Part 2 – Control Methods**

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Part 1 of this 2-part series was published April 22, 2005 explaining why Tree of Heaven (*Ailanthus altissima*) is in the top category of the El Dorado County Invasive Weed Management Group's list of invasive plants needing eradication or control. Brought to California from China during the Gold Rush, it grows vigorously in our climate and reproduces prolifically, destroying both native habitat and residential landscapes. Not only does one female tree produce up to 325,000 seeds per year, the tree also reproduces vegetatively, forming new trees from stump or root sprouts.

This article addresses control and eradication methods, beginning with those which are most appropriate in fall. Unless otherwise specified, many of these techniques can be done at any time of the year but will be most effective during the seasons indicated. The number and density of trees you need to remove will also help determine how you wish to proceed. Because of the tenacity of this tree, you will probably need to remove seedlings, stump sprouts and root sprouts for several years. Eliminating them as soon as you see them throughout the year will prevent the plant from manufacturing food for itself and ultimately kill it. Consider utilizing a combination of several control methods, which is usually more effective than using a single technique.

The herbicides listed here are available to homeowners and gardeners at many places where plants are sold. If you are not comfortable performing any of the listed procedures yourself, contact a tree removal specialist or a pest control professional. Remember that herbicide trade names change often so always refer to the label for the active ingredient. Always read the label carefully and adhere to all safety precautions. Herbicide trade and/or brand names are listed for illustration purposes only, and do not constitute an endorsement or an exclusion of any product.

Because some people may experience allergic reactions when working with this tree, always wear protective clothing, including long sleeves, gloves and a dust mask, to protect against contact with the tree sap and allergens produced by the flowers.

### **LATE SUMMER – FALL**

**Cut down trees before the seeds mature.** Using hand tools (loppers, pruning saw, chain saw, etc.) cut the tree down as close to the ground as possible. Consider hiring a tree removal professional if the tree is large. Destroy the branches with blossoms/seed pods. Remove sprouts as they appear. This method will not kill the tree, but will prevent the production of seeds. If cutting and sprout removal is continued over a period of several years, it may eventually kill the tree as a result of stress. This method is less effective than using the "cut stump herbicide application" method (see late winter-spring control section) and is more labor intensive.

**Basal bark herbicide application.** Spray or paint undiluted triclopyr (e.g. Ortho Brush-B-Gon™ concentrate) on bottom 12-18" of a stem less than 6" diameter, or to a height of 24" on slightly larger trees. Obtain full coverage (no "skips") but avoid run-off. This technique will leave the dead tree standing, which may be beneficial for increasing wildlife habitat.

**If you have goats, try them.** Tree of Heaven has some nutritional value. Goats will eat seedlings and root sprouts.

**Hack and squirt herbicide application.** Using a hatchet, make 2-3" wide hack marks in the bark about 12-18" from the ground, one mark for each 3" in trunk diameter. Dribble about 1 ml of undiluted glyphosate (e.g. Monsanto RoundupPro™) into each wound immediately but do not let liquid run out. This technique will leave the dead tree standing, which may be beneficial for increasing wildlife habitat.

**Foliar herbicide treatment.** Glyphosate (e.g. Monsanto RoundupPro™) can be applied with a backpack sprayer on seedlings or small trees. Do not allow spray to land on desirable plants. Several applications may be necessary.

**Establish plants to “shade out” seedlings/root sprouts.** Tree of Heaven does not like heavy shade; consider planting grasses, plants or other trees to shade out new sprouts and seedlings.

## LATE WINTER – SPRING

**Cut stump herbicide application.** Cut tree off about 24” above the ground. Apply undiluted Triclopyr (e.g. Ortho Brush-B-Gon™ concentrate) to the outer 1/3 of stump surface by brush within 20 minutes of cutting. Avoid runoff. Not effective in summer/fall/winter applications.

**Pull out seedling and saplings.** This is easiest when the soil is loose after winter rains. It can be done in two ways: (1) As soon as they appear, grasp seedlings just below soil level and slowly pull straight up to minimize tearing off any roots that have formed. (2) Use a Weed Wrench® (available for loan from the El Dorado County Department of Agriculture (530) 621-5520) to pull out saplings less than 8 feet tall. If the roots break off when you pull up the plant, dig out all of the remaining roots to prevent multiple sprout growth.

**Dig up plants.** Because this plant grows so rapidly (an average of 3’ per year when it is young) dig it out as soon as possible. To prevent regrowth, the tap root and all lateral roots must be removed. Lateral roots are generally about 18-24” below soil level and will probably extend beyond the drip line of the tree. Dispose of all root fragments since small pieces left in contact with the soil can produce new trees.

**Remove stump sprouts.** Remove the sprouts with your fingernail or a knife at the point where they emerge from the stump. This is a task that should be performed continually throughout the year.

**Girdling.** Using a knife, hatchet, or handsaw cut away the bark and underlying cambium layer in a circle around the trunk about 1 inch wide about 18” above the ground. This technique will leave the dead tree standing, which may be beneficial in increasing wildlife habitat.

If you have any questions or desire information on suitable replacement trees for Tree of Heaven, please contact the Master Gardener office (530) 621-5512 Monday-Friday, 9:00 a.m. to Noon.