

Herbaceous Weed Control – Invasive Plant Control

Giant Hogweed – *Heracleum mantegazzianum*

Conservation Practice Job Sheet

VT-315



Giant Hogweed leaves (left) and inflorescence (right)

Giant Hogweed

Originally from Asia, giant hogweed can now be found around the world, including Australia, several European countries, the U.S. and Canada. It was originally introduced in the U.S. around 1917 for use as an ornamental plant. Giant hogweed has escaped cultivation and may become established in rich, moist soils along roadsides, stream banks and disturbed areas. It is a dangerous, poisonous plant that should not be touched.

Giant hogweed is a perennial and a member of the carrot family, *Apiaceae*. Giant hogweed is on New Hampshire’s prohibited invasive upland plants list due to its aggressive, invasive nature. It spreads through tuberous root stalks and forms a solid canopy that chokes out many native plants. More significant is the possible impact on human health. Giant hogweed produces a clear, watery sap that can cause “photo-dermatitis,” which is sensitive to sunlight (ultraviolet radiation). Photo-dermatitis can result in swelling, severe blistering, and painful dermatitis, so avoid contact with exposed skin. Caution should be taken when handling this weed. Removing it manually becomes very difficult because of the danger caused by its sap.

Similar Natives

Cow parsnip (*Heracleum maximum*), angelica (*Angelica atropurpurea*), poison hemlock (*Conium maculatum*).

Description

The most distinct characteristic of these species is their size. They grow up to 4-5 meters tall. The stems are often purple spotted or continuously purple. Leaves can grow up to 3 meters in length. White or rarely pinkish flowers are clustered in a large umbrella shaped head.

Control

Currently used control methods comprise a variety of manual and mechanical methods, grazing and herbicide application. Rather than recommending a single control method, a control program based on an integrated weed management strategy is preferred. Efforts should focus on optimal management with respect to efficacy, ecology and economy. The selection of control methods depends on the area covered by the plant, plant density and accessibility of the stand. Regardless of the control method, management usually requires repeated and correct application in order to obtain satisfactory control.

Biological Control

Grazing has proved to be very efficient for the control of large stands of invasive hogweed. In principle, the effect of grazing is similar to cutting. The animals remove most above ground plant parts, prevent photosynthesis, and thus deplete the energy resources stored in the root. Experience with livestock grazing has been gained mainly from the use of sheep, but the plant is also very palatable to cattle.

Sheep and cattle prefer young and fresh plants, and the most efficient control is obtained by beginning the grazing early in the season when the plants are small. Generally, livestock need a period of time to become used to the hogweed before they regularly eat the plants.

Mechanical Control

Manual and mechanical control methods include different control techniques such as root cutting, cutting the plant, mowing, and umbel removal. Except for root cutting, mechanical control does not cause the immediate death of the plants. Death occurs after two to three treatments per year during several growing seasons through depletion of nutrient reserves. Plowing can control an infestation of tall invasive hogweeds on agricultural land. The best results are obtained if the established vegetation of invasive hogweed plants is controlled mechanically or chemically prior to plowing. Wear protective clothing when working around giant hogweed so the sap does not touch your skin.

Chemical Control

Results of numerous trials have demonstrated the susceptibility of invasive hogweeds to systematic herbicides, and the application of chemicals is considered effective and cheap¹. It is recommended that herbicides are applied early in spring when they have reached a few feet in height and access to the center of the colony is still possible for operators. A follow-up spraying is recommended prior to seed set in new sprouts. In amenity areas, areas with mixed vegetation and nature reserves, spraying should be carried out using a nozzle that constricts the spray, weed-wiper or a brush.

Refer to the pesticide label for complete instructions on the use and application of a given herbicide. Some applications, by rule, may only be done by a certified pesticide applicator, and/or might require the applicator hold a special permit. Private landowners can apply anything purchased at your local garden

store without having a permit so long as it is not near a water body or known public aquifer. You should contact the Vermont Agency of Agriculture Agrichemical Management Section if there are any concerns before applying any pesticides.

¹- Nielson, C., H.P. Ravn, W. Nentwig and M. Wade (eds.), 2005. The Giant Hogweed Best Practice Manual. Guidelines for the management and control on an invasive weed in Europe. *Forest & Landscape Denmark*, Hoersholm, 44 pp.

Disposal

There are a few general rules of thumb that will ensure proper disposal. Be sure the plant is dead before placing in a mulch or compost pile. Either dry it out in the sun, or bag it in a heavy duty black plastic bag. If you have flowers and/or seeds on the plant, put the flowers and seed heads into the bag head first so that there is minimal risk in dispersing seed.

Information and Recommendations compiled from:

- Nielson, C., H.P. Ravn, W. Nentwig and M. Wade (eds.), 2005. The Giant Hogweed Best Practice Manual. Guidelines for the management and control on an invasive weed in Europe. *Forest & Landscape Denmark*, Hoersholm, 44 pp.
- Michigan Department of Agriculture.
- "Invasive Plant Management Guide." Stewardship Subcommittee of the Connecticut Invasive Plant Working Group. http://www.hort.uconn.edu/cipwg/art_pubs/GUIDE/guideframe.htm

CAUTION: The VT Agency of Agriculture Division of Agricultural Resource Management and Environmental Stewardship, Agrichemical Management Section regulates the sale and use of pesticides in Vermont. Many labels and registrations change from year to year, so applicators will want to be sure they are using a currently registered product. Contact the Agrichemical Section (802-828-6531) for information on pesticide registration, how to acquire a special permit, lists of currently-licensed pesticide applicators, and other information pertaining to the rules and regulations governing pesticide application in this state.