

Giant hogweed



Giant hogweed was introduced from the Caucasus to Victorian gardens in the 19th century. It was recorded growing in the wild shortly after its initial introduction. In its native range giant hogweed adapted to develop thousands of seeds due to the colder climate and more nutrient poor soils. However due to our climate being warmer and due to the higher nutrient content of our soils giant hogweed seeds germinate more readily here and subsequently it has become very invasive here. Historically, it is believed that this species may have been deliberately planted by rivers and ponds. It is invasive in suitable habitats, such as river and stream banks, railway lines, disused waste land and other damp places. It has spread rapidly, despite being the subject of on-going control measures in some areas.

Identification

You can download an identification sheet from the following link: [Giant Hogweed \(*Heracleum mantegazzianum*\)](#)

Giant hogweed is a tall (usually 3 – 5m), biennial or perennial herbaceous plant with several hundred small white flowers in large umbrella-like flower heads up to 500mm across. Stems are green with dark-red or purple blotches and are hollow; they can be up to 100mm in diameter. Leaves are dark green in colour and grow in a rosette formation. They are jagged in appearance and spiky are the ends. Lower leaves can be up to 1.5m long. Giant hogweed looks like very large cow parsley, with a pale, swollen rootstock. It produces 20-50,000 viable seeds a year, which are penny sized and paper thin.

Each flower head produces thousands of seeds (approx. 10mm x 7mm) that are easily dispersed by water, therefore the seeds can disperse rapidly along watercourses. Seeds may remain viable for up to 15 years prior to germination. The key identification features of the plant are:

- Often grows up to 3-5 meters in height / leaves expand up to 1.5 meters in width which

have a jagged appearance with spiky ends.

- Large flower heads that are usually 50 centimetres wide (It is important to note that in the first few years of a giant hogweeds growth the main flowering shoot may not appear).
- Large seeds in clusters.
- Purple blotched stems with a fine hair like appearance.
- Hollow stems / spread by seeds.

The following species are sometimes confused with giant hogweed due to their flowering head: wild carrot, fool's watercress, cow parsley, hedge parsley, pignut, sweet cicely, hogweed, wild angelica, alexanders, sweet cicely, water hemlock, wild parsnip, fennel and hemlock.

Health and Safety issues

The stems, edges and undersides of the leaves bear small hairs containing phototoxic sap. The slightest contact with human skin can cause painful blistering and severe skin irritation when exposed to sunlight. Blistering can take 24- 48 hours to appear after exposure, and dense pigmentation is visible after 3 – 5 days. The reaction can recur for 6 years or more. Protective clothing must be worn.

If you do come into contact with giant hogweed cover the affected area of skin immediately from sunlight. Then wash the skin with cold water as soon as possible. If contact is with the eyes or blisters occur seek medical advice.

Un-shaded habitats with high soil nitrate levels tend to produce greater quantities of phototoxic sap in the plant.

Impacts and key issues

The plant's very large leaves results in it shading out less vigorous native plants in its immediate vicinity, which results in decrease in the biodiversity of the surrounding area. As a consequence of out-competing native riverside plants, river banks can be left bare in the winter and susceptible to erosion during spates and floods.

Giant hogweed sap contains a chemical which, in the presence of sunlight, causes a nasty and potentially dangerous skin reaction in almost everyone who comes into contact with it, resulting in burning, itching and blistering. The lesions are slow to heal and any consequent scarring may persist for at least 6 years. The reaction can occur by individuals accidentally brushing past leaves and can be especially acute in children. For this reason it is considered to be a serious and significant danger to public health.

The following provides a summary of the key impacts of the species:

- Harmful to humans due to toxic sap making the skin sensitive to UV light.
- Can lead to the closure of public amenity areas.
- Excludes native species.

- Dies back in winter leaving river banks vulnerable to erosion.
- Has subsequent potential sedimentation impacts on fish spawning areas.
- Reports suggest that its leaves can be harmful to young wildfowl.

How the species spreads

Giant hogweed seeds are dispersed over short distances by wind but considerably longer distances by rivers and streams. The seeds, which readily germinate, can also be transported in soil adhering to shoes, machinery and other contaminated objects. Seeds can remain viable for up to 15 years after their initial dispersal.

Management summary

Control of giant hogweed should never be undertaken unless the operator is wearing full protective clothing to prevent skin contamination by the sap. Machine operators should take similar precautions as the sap can be spread onto machinery and subsequently come into contact with skin. Remember that when controlling the plant by digging or mechanical means, cut material can remain active for many hours.

It is important to remember that the seeds of this plant can remain viable for many years (possibly up to 15) although most will become unviable after just 2 years. Once a plant has produced seed, it should be assumed that the seeds will be present in the surrounding area for at least this length of time. Control measures will only affect those plants that have already germinated and viable seed may continue to germinate each year until the seed bank is exhausted. Eradication will require regular monthly checks during the growing season to ensure that any late germinating plants are controlled before they can set seed.

Non-chemical control

- **Digging:** A shallow excavation to about 20cm will remove the growing crown. This should be done in April or May. Spoil should be disposed of by deep burial or gathering on site into one area to be monitored for any regrowth. Any regrowth should subsequently be treated with a recommended herbicide. Any waste taken to a licensed landfill site must be done so following the guidance in the legislation section.
- **Biological:** Grazing by cattle, sheep, pigs or goats throughout the growing season will suppress growth, but does not eradicate it. Some research also suggests that giant hogweed may have an adverse impact on animals. There is further research ongoing into potential biological controls.

Chemical control

- In order to be effective, spraying must be carried out before (March – June) the plant flowers and sets seed, otherwise there will be thousands of additional seeds on the ground ready to grow at some point in the future. Following the early season spray checks should be carried out on a monthly basis for any late germinating seeds which are spot sprayed as necessary.

- Glyphosate based products can be successful in controlling this species between March and May / June when the plants are smaller to enable them to be worked more safely around. When the plants are more than 1.5m tall, proceed with extreme caution. Repeat chemical treatment may be required for several years until the soil seed bank is exhausted. Extendable lance sprayers may assist in accurate application of glyphosate to plants growing in inaccessible sites along river banks.
- Herbicides such as Glyphosate based products can be applied as a spot treatment to individual plants, using hand-held equipment, or as an overall spray using machine-mounted spray booms. In the latter instance, total weed control of all vegetation will occur and it may be necessary to reseed the treated area with grass and other native plants. Establishing a good sward of grasses soon after treatment of the weed may help to reduce the rate of re-colonisation of the area by seeds. In areas away from water and other mature vegetation other herbicides which contain the active ingredients 2, 4- d Amine or Triclopyr can also be used.
- The only herbicides known to control giant hogweed and with the necessary approval for use in or near water are glyphosate based products. A few products which contain 2,4-d amine are also approved for use near water. Glyphosate based products are sold under a number of brand names (some of which may not be licenced for use near water).

In general

- It is essential to establish vegetation quickly after control measures have been applied. A dense grass sward tends to discourage seed germination.
- On river systems, control should be undertaken on a catchment basis, working from the upstream end to prevent seed recolonisation. Please ensure that you have landowner permissions before accessing land to spray.

Giant hogweed on adjacent sites

It is particularly important to consider giant hogweed in the wider environment around a particular site. If this species is growing on an adjacent site, or upstream of a site on a riverbank, then no matter how good on-site control is, re-colonisation is likely. An understanding of the wider catchment context is necessary to determine if eradication or control efforts are likely to be successful. In some situations, eradication of all giant hogweed might not be possible due to the likelihood of re-colonisation. Infested areas accessed by staff or the public should receive control measures. Where possible, it is recommended that you work in partnership with neighbouring landowners to tackle giant hogweed.

Further details on control measures

Spraying with an appropriate herbicide is currently the most effective treatment option available, although it can take several years to eradicate the species completely. Spraying can start as soon as the plant is evident, usually in March, and continue with checks for any late germinating seeds throughout the summer. The soil beneath an established stand of giant hogweed will contain a large number of seeds that will continue to produce new plants until the soil seed bank

is exhausted.

It is essential that any herbicide treatment is carried out by an experienced, competent and qualified operator, complying with any approval advice provided by the relevant licensing authority and all Health and Safety considerations. Efforts should be made to minimise damage to non target species.

As giant hogweed seeds can remain in the soil for several years, a long-term strategy involving treatment with herbicide will be required.

Other sources of information

- http://www.dardni.gov.uk/ruralni/giant_hogweed.pdf