

Chemical Control of Japanese Knotweed

(NPTC Qualified Spray Operators Only)

Chemical control is the most successful treatment for controlling Japanese Knotweed as it kills the extensive rhizome system. However, complete control will seldom be achieved in one season. It is also important to select the appropriate product together with the method of application for the individual situation.

Choice of herbicide

The number of effective herbicides approved in Guernsey is limited. Although some products are approved for the control of this weed in the UK, they may not be approved in Guernsey. You must check with Guernsey HSE before deciding on a particular treatment. The current choice is:

- Glyphosate
- 2,4-D + dicamba + triclopyr

A). Glyphosate

There are well over 100 different formulations of glyphosate to choose from and most differ in their efficacy. Locally we have found Roundup Pro-Biactive 450 an effective product. Roundup Provenge 480 is also reported to be effective too.

Glyphosate is systemic and moves from the leaves or the stems back into the underground rhizomes. Care must be taken when using glyphosate because it is a total weedkiller which means any plant material sprayed could be damaged. It is a versatile product which can be applied using a knapsack sprayer, weed-wiper or stem injection gun.

B). 2,4-D + Dicamba + Triclopyr

This 3-way formulation is fully systemic and also grass safe. It should not be used near glasshouses or where sensitive plants are growing because in certain conditions vapour drift can occur resulting in possible plant damage. Examples of professional formulations are Kaskara, and Broadshot.

Application method

1. Knapsack sprayer

This is the most common method and can be used for all the above products. Care should be taken to avoid drift onto neighbouring plants by selecting the appropriate nozzle (deflector or even flat fan) and pressure (1 bar) and choosing a time when there is little or no wind. The treatments also need time to get into the plants, therefore, select a day when the weather is likely to be dry for at least 6 hours after treatment. Apply the spray when the plants are between 0.5-1m tall and repeat during the season. Read the label and wear the appropriate protective equipment. Also follow the local legislation when you are treating knotweed near water. Guernsey Water provides guidance on its website www.water.gg) on the application of herbicides within the water catchment area.

2. Weedwiper

This method of application is restricted to glyphosate formulations. It should be used in environmentally sensitive areas because there is no risk of drift onto plants or water, no wastage of chemical onto soil and little risk of operator contamination. Also follow the local legislation when you are treating knotweed near water.

3. Stem treatments

There are two basic stem treatments, one involves cutting the stems and pouring the chemical into the stem cavity and the other involves injecting the chemicals into uncut stems. The optimum timing for this is from mid-August to late September

Cut stem treatment

- Cut the mature stems below the first node (8-10cm above ground level) and stack the cut growth for drying and burning later
- Make up a glyphosate solution with water (1 part glyphosate to 5 parts water) and pour into the stem cavity
- Regrowth the following year will be low growing and distorted with thin stems unsuitable for another stem treatment. Spot treat this regrowth using a knapsack.
- Continue to monitor the site and spot treat any regrowth until the weed is controlled.

Stem injection

This treatment involves using the JK International Injection Tool, or equivalent, which can deliver 5-10ml of herbicide solution per stem. Local trials with glyphosate have proved most successful.

- Treatment can be applied at any time during the growing season provided the stems have a suitable diameter to accommodate the herbicide solution
- Make up glyphosate solutions with 1 part herbicide to 5 parts water
- Inject 5-10ml of solution into each stem just above the second node
- Regrowth will be unsuitable for further stem treatments because of the reduced stem diameter, therefore, spot treat using a knapsack sprayer
- Continue to monitor the site and spot treat any regrowth until the weed is controlled

Areas within the water catchment area

Herbicides should not be applied within 3m of high risk areas such as stream banks, ponds, wet meadows, ditches and drainage ditches if spraying is used, and 1m if a weed-wipe system is used. (The Prevention of Pollution (Guernsey) Law 1989)

For further advice contact Guernsey Water on 724552.

Commercial application

A certificate of competence is required to buy and use professional herbicides and to apply such treatments to commercial, agricultural and horticultural premises.

For further advice contact The States Analyst Laboratory on 707612.