

Darwin's barberry

Berberis darwinii

Exclusion Eradication **Progressive containment** Sustained control Site-led

Reduce the amount of Darwin's barberry and limit the locations that have it.

WHY IT IS A PEST PLANT

Production threat

Environmental threat

Public threat

Darwin's barberry (named after the naturalist, Charles Darwin) is very invasive in forests, riparian areas and in degraded pasture. It is considered a threat to forestry and native species and ecosystems. In the Waikato it is poised to become a serious forestry pest, as without control it will move into farmland and areas of indigenous forest.

Darwin's barberry grows in scrubland, forests, plantation margins and road sides. Darwin's barberry tolerates moderate to cold temperatures, damp to dry conditions, high wind, salt, shade, damage, grazing (not browsed) and a range of soils. It occasionally spreads by soil and water movement. It fruits earlier in the summer than many other species (both native and exotic) and its large amounts of seeds are dispersed widely by birds and other vertebrates such as possums. It can also regenerate via root suckers and layering.

Dense infestations near the Waikato region include Rainbow Mountain near Rotorua, within exotic forest in the Bay of Plenty region and the entire Kaingaroa Forest. There are also significant patches in the Manawatu-Wanganui region, southwest of Pureora Forest.

Related species

European barberry (*B. vulgaris*) is deciduous and has red berries. *B. souliena* and *B. wilsonae* are both cultivated. Barberry (*B. glaucocarpa*) has paler yellow flowers and less glossy leaves.

RESPONSIBILITY FOR CONTROL

All landowners/occupiers in the Waikato are responsible for the control of Darwin's barberry on their property.

All landowners/occupiers in the Waikato are responsible for controlling Darwin's barberry on their properties and are required to work with Waikato Regional Council in areas where control programmes are in place. Darwin's barberry is also banned from being sold, propagated, distributed or included in commercial displays.

HOW TO CONTROL DARWIN'S BARBERRY

Physical control

Smaller plants can be grubbed out. Leave on site to rot down (all year round). Cut stumps resprout quickly and can be hard to kill and seeds will germinate onto bare land. Follow up six monthly.



Photos: Trevor James



IDENTIFYING FEATURES

Darwin's barberry is a woody evergreen shrub that grows to between 4-5m tall.



Flower

- Hanging clusters of small deep yellow-orange flowers.
- Flowers are between 5-7mm in diameter and grow in clusters.
- Flowering is from July to February.



Fruit/seed

- Hanging groups of oval purple-black berries.
- Each berry is between 5-7 mm in diameter.
- Berries have a bluish-white surface.



Leaf

- Small clusters of hairless glossy dark-green leaves.
- Leaves are about 3cm long with spiny-serrated edges.
- There are five short sharp spines below each group of leaves.
- Leaves grown on tough, woody and densely hairy stems.
- Stems have tough, five-pronged, needle-sharp spines.

Herbicide control

Basal treatment of trunk

Apply with a low pressure sprayer using solid cone nozzle or a paintbrush. Liberally treat the full circumference and the basal parts of the shrub or tree trunks in a manner that thoroughly wets at least 2 to 3 times the diameter of the lower stem or trunk including the root collar area.

Cut stump treatment

Cut the plant down, leaving a stump no higher than 5cm above ground level. Paint herbicide immediately over the entire stump surface, including the sides.

Frilling

Make shallow downward cuts around the trunk and near the ground using a machete or axe. Cuts should overlap to effectively ringbark the tree. Apply herbicide immediately to the point of runoff into each cut.

Spray application

Most suitable for smaller plants, but pulling out plants by hand may be cheaper and easier. Total coverage of leaf surfaces is required for effective control.

Safety when using herbicides

- Follow the instructions on the manufacturer's label.
- Always wear protective clothing.
- Always minimise the risk to your other plants.
- Contact the supplier for further advice.

Disclaimer: Any product names mentioned below are not an endorsement nor are they a criticism of similar products not mentioned.

Summary of herbicides and application methods for control

HERBICIDE	APPLICATION
X-Tree Basal®	Basal treatment of trunk (all year round).
Glyphosate or metsulfuron or picloram gel or triclopyr/picloram mix or triclopyr	Stump swab (all year round), frilling.
Metsulfuron	Cut and inject (all year round), frilling.
Metsulfuron or triclopyr/picloram mix	Spray (spring to autumn).

Herbicide rules will apply. You may need to notify neighbours if spraying. The Waikato Regional Plan explains the agrichemical (herbicides) use rule in section 6.2, online at www.waikatoregion.govt.nz/regionalplan.

Management

After initial control, it's important to:

- clean out the site again at least annually to control regrowth
- stop weeds invading by replanting with non-pest plants (preferably native plants) once regrowth is no longer a problem.



MORE INFORMATION

Advice

- For advice and additional information on control methods, call our pest plant staff on freephone 0800 BIOSEC (0800 246 732).
- Chemical company representatives, farm supply stores and garden centres can also be good sources for advice.

Publications

View, download or order the following publications at www.waikatoregion.govt.nz/publications or call our freephone 0800 800 401.

- National Pest Plant Accord (Manual of plants banned from sale, propagation and distribution) (\$10.00 plus GST)
- Plant Me Instead! (Plants to use in place of common pest plants) (free)
- Poisonous Plants and Fungi in New Zealand – A Guide for Parents, Schools and Child Minders (free)
- Waikato Regional Pest Management Plan (RPMP) (free) (Section 5.19, page 76)
- Waikato Regional Council pest guide (free)
- What makes a pest a pest? A summary of the Waikato Regional Pest Management Plan (free)

Web

- www.waikatoregion.govt.nz/darwinsbarberry
- www.weedbusters.org.nz
- www.waikatoregion.govt.nz/rpmp

