

Biological Control of Weeds Recovery Sheet

(Please refer to the back of this sheet for instructions)



Manaaki Whenua
Landcare Research

Site name:
Organisation:
Observer(s):

Date:
Time of day:



**Darwin's Barberry
Seed Weevil**

Current weather conditions

- 1) Sunny / Partly / Overcast / Rain
- 2) Strong wind / Light wind / Calm
- 3) Temperature (°C) < 10 / 10-15 / 15 -20/ 20 -25 / >25

Insect information

- 4) Number of: Adults: Damaged fruit:
- 5) Time spent searching (mins):
- 6) Furthest distance insect or damage found from release point (m):
None Found / <20 / 20-50 / 50-100 / 100-300 / 300-500 / Further?
- 7) Overall damage to fruits: None / Occasional / Patchy / Heavy / Severe

Weed Information

- 8) Most obvious life stage: New Leafy Growth / Flowers / Green Fruit / Ripe Fruit
- 9) Darwin's barberry type at the release point: Isolated Bushes / Clumps / Block
- 10) Infestation: Major (as far as eye can see) / Moderate (>100m²) / Minor (<100m²)
- 11) Percentage cover at densest accessible point:
- 12) Photos taken: Yes / No 13) Photo compass bearing:
- 14) GPS for photopoint: 15) Photo file name:

Comments

- 16) Have any of the following happened to the site recently?
Mowing / Spraying / Grazing / Flood / Drought / Fire / Other?
- 17) Please use the back of this sheet to record any further observations or comments about the site,
including any checks for non-target damage.

INSTRUCTIONS FOR FILLING OUT THIS SHEET

(Please note that it is important to complete these questions in order)

Where choices are given mark the correct answer by bolding or highlighting it or by deleting the other options.

- **Site Name** – please be consistent in the use of site names to prevent confusion.
- **Organisation** – the name of your organisation.
- **Observer(s)** – the names of people who helped with this recovery not onlookers.

Current Weather Conditions

1-3) Choose the words that best describe the weather conditions.

Insect information

- 4) Look for the adults during the warmer months by beating foliage over a 1x1 m white sheet/card/tray. Collect and examine 20 beating tray samples close to the release point. For each sample beat a bush or branch briskly twice and examine what is dislodged, before moving to another branch or bush. If no beetles are found spend another 10 minutes beating bushes further away. Then spend 10 minutes at the release point looking for puncture holes in the fruit or shriveled fruit. If none are found spend another 10 minutes looking for damaged fruits further away. If you find large numbers of weevils or damaged fruits it is not necessary to count exactly just estimate how many
- 5) Record how long you spent actively searching.
- 6) If you have time to look further afield we would like to know how far away from the release point you can find adults or damaged fruit.
- 7) Record the amount of fruit damage seen overall at the site: occasional (signs of damage present but not common), patchy (signs of damage are present but are variable throughout the site, some plants may have no damage, and others may have heavy damage but this would be rare), heavy (the majority of plants are showing signs of damage and at least some plants are beginning to show signs of severe defoliation/damage or stress), and severe (severe damage is obvious and widespread).

Weed Information

- 8) Record the most obvious life stage.
- 9) Record the type of Darwin's barberry growing at the release point.
- 10) Estimate and record the approximate size of the infestation using the categories provided.
- 11) Estimate the percentage cover of barberry at the densest accessible point over an area of 5 x 5m, or if the site lend itself to a square use an equivalent sized shape.
- 12) Please indicate if you have taken photos.
- 13-15) If you have taken photos please record the photo compass bearing, the GPS point, the file name for the photo and attach hard copies to this form if you can.

Comments

- 16) Please indicate if any of these important events have happened to the site.
- 17) Tell us any other important information we should know about the site (e.g. whether you have been harvesting for release at new sites). If you are able to check for non-target damage the species of interest, if they occur nearby, include the other weedy barberry species (*Berberis glaucocarpa*), which we expect will be attacked, and any ornamental *Berberis* spp., which might be attacked to a lesser degree. Please indicate if you look and don't find any non-target damage. If you think you have found some please take photos and specimens to send to us to check. Use the top of this page if you need extra space