

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:

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



Tutsan Moth

Insect information

- 4) Number of: Adults: Larvae inside leaf tips: Larvae inside seed pods:
- 5) Time spent searching (mins):
- 6) Furthest distance insect found from release point (m):
None Found / <20 / 20-50 / 50-100 / 100-300 / 300-500 / Further?
- 7) Overall damage to foliage: None / Occasional / Patchy / Heavy / Severe

Weed Information

- 8) Most obvious life stage: New Leafy Growth / Flowers / Unripe Pods / Ripe Pods
- 9) Tutsan 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) The best times to look for moths and caterpillars inside webbed tips is from October- April. Look for moths flying about the plants in a corkscrew flight pattern. Also look for damaged, webbed shoot tips and pull them apart to see if there are white or grey caterpillars with black heads inside. If the caterpillars are green they are leafrollers. If you find large numbers of moths or caterpillars it is not necessary to count them exactly just estimate how many. If seed pods are present collect 20 pods, preferably when they are red in colour, from 5 different plants selected at random and break them open to see if there are caterpillars inside.
- 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 larvae.
- 7) Record the amount of feeding damage to tips 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. When pods are ripe they turn black.
- 9) Record the type of tutsan 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 tutsan 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, are St John's wort (*Hypericum perforatum*), our native *Hypericum* species (*H. involutum*, *H. pusillum*, and *H. rubicundulum*). 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.