



# HELP STOP THE SPREAD OF velvetleaf

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Photo courtesy of Landcare Research

## VELVETLEAF – HOW YOU CAN HELP

Velvetleaf (*Abutilon theophrasti*) is an Unwanted Organism under the Biosecurity Act 1993, and has been discovered in fodder beet crops on properties throughout New Zealand. Velvetleaf is one of the world's worst cropping weeds, and can cause significant yield losses if not controlled.

If velvetleaf is found on your property, this guide will help you manage and protect your farm from the risks posed by velvetleaf and continue with normal farm practises.

All farmers should have robust and enduring on-farm biosecurity practises in place to effectively manage velvetleaf and other pests.

The spread of weeds and pests by stock, vehicles, machinery and equipment has significant consequences and is an ongoing pest management problem.

The Velvetleaf Farm Management Plan (available at: [www.mpi.govt.nz/alerts](http://www.mpi.govt.nz/alerts)) provides recommendations for machinery hygiene, animal feed management, stock movement and crop management.

## HOW TO SPOT VELVETLEAF

Velvetleaf is an annual broad-leaved weed that grows up to 3 metres tall. In some areas, plants are only knee high due to environmental differences.

Flowers:

- buttery-yellow flowers about 3 cm across;
- from spring through to autumn;
- open for a few hours each day.

Leaves:

- large heart or circular shaped leaves;
- velvety and soft to the touch.

Seeds:

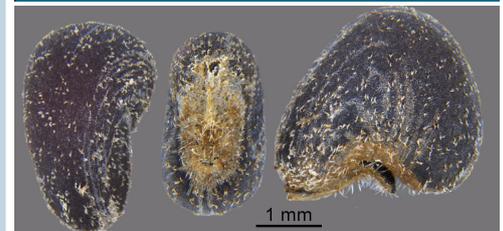
- distinctive seedpods or capsules, with 12–15 capsules in a cuplike ring;
- each seedpod is about 2.5 cm in diameter;
- each segment contains 1–3 large heart shaped black seeds.



Velvetleaf multiple seedpods



Velvetleaf seedpod



Velvetleaf seeds

## WHAT TO DO IF YOU FIND VELVETLEAF

Contact MPI on 0800 80 99 66 if this is the first detection of velvetleaf on your property.

MPI will assist with next steps.

### If the plants have no seeds or if seed pods are green:

- Record the location of the plant/s so it is easy to find again for future monitoring.
- Pull out the plant. Bag the full plant using a large bag (e.g. fertiliser bag or sack).
- Dispose of the bagged plant/s in your offal pit and cover or dispose by deep burial (at least 1 metre).
- You can contact your local regional council for advice.

### If the seed pods have turned black

- Carefully place a large bag (like a fertiliser bag or sack) over the seed capsules and tie it tightly around the stem. Make sure all seed heads are contained within the bag.
- Bend the velvetleaf plant in half so that seeds cannot escape out of the neck of the bag.
- Carefully pull out the plant, bag it again, and dispose of it as described above.
- Inspect the rest of your crop to ensure there are no more velvetleaf plants.

### Re-inspection

- Keep an eye out for any late emerging velvetleaf plants during the season.
- Re-inspect your field before stock graze the fodder beet crop. Even if your property was inspected for velvetleaf this season, re-inspect it.
- You need to start inspecting crops for velvetleaf from December onwards.
- Each year, inspect all paddocks where velvetleaf has been found regardless of crop.
- If you find velvetleaf plants, pull them out, double bag them, and dispose of them as described above.



## MACHINERY HYGIENE

Machinery hygiene must be practised anytime a machine is moved between infected properties. Remove all visible soil and plant matter that might spread velvetleaf.

This includes equipment used to:

- lift an infested fodder beet crop;
- transport an infested fodder beet crop;
- establish a new crop on a known velvetleaf infested paddock.

### Cleaning guidelines

Machinery should be cleaned down on the property close to the infested crop prior to movement thereby containing any velvetleaf to that area of the property.

Alternatively, machinery may be cleaned in a built-for-purpose wash down facility, but care should be taken to ensure there is no risk of pest spread during transport to that facility or from effluent run off.

Be sure to re-inspect cleaning sites in the future.

Important areas to clean are:

- behind cover plates;
- in awkward places such as: radiators, grills, interior and underside of vehicles, bumper bars, between dual wheels and any places where soil can be trapped.



Photo courtesy of Quigley Contracting Ltd



## STOCK FEED MANAGEMENT

When you have moved stock to fodder beet crops from other areas of your property, take the opportunity to inspect the rest of your crops. If you find velvetleaf plants, pull them out, double bag them and safely dispose of them (instructions on Page 4).

### Grazing infested crops

The aim is to avoid spreading velvetleaf seed from contaminated areas to clean areas or to other uncontaminated farms in dung or in stock hooves.

- If you have a mixture of contaminated and clear paddocks on your property, graze the paddocks with velvetleaf last. This will avoid the stock moving from the contaminated areas into your clear paddocks.
- Try to finish contaminated paddock grazing in a clear area of the contaminated paddock and try to leave stock in this uncontaminated area for at least 24 hours before moving them. This will give the stock time to empty out and for any seeds to have come off their feet. In other words, break feed the contaminated area first then graze away from that area.
- If you are grazing stock that will soon leave the property, graze the areas infested with velvetleaf at least three days before they are moved off the property. Finish in uncontaminated paddocks or areas. This will allow ample time for the stock to empty out before transfer.
- Fence off areas where velvetleaf has been found in a paddock to keep the stock out while they are being break fed in the clear area.
- When fencing off contaminated areas, allow a 1.5 meter buffer zone from the velvetleaf to the fence. For a single wire fence, use a 2.5 metre buffer zone.
- Leave the fodder beet in the ground.

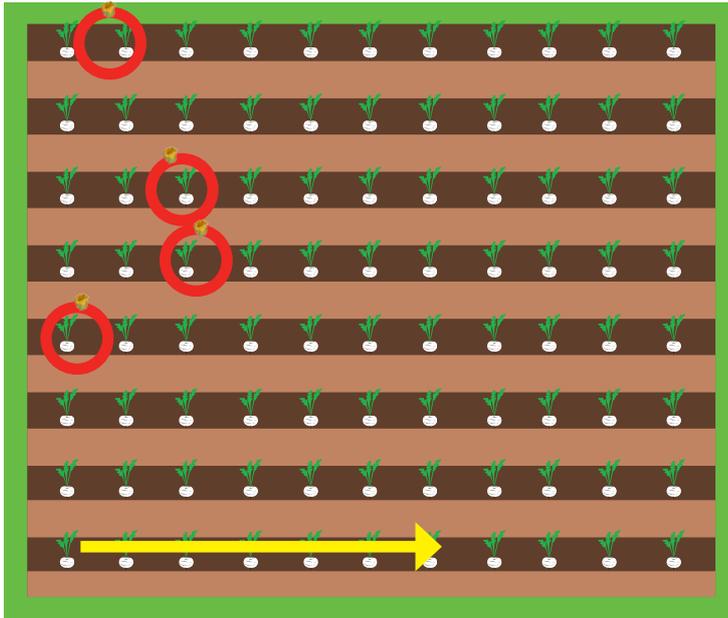
Lifting infested crops:

- fence off and do not lift areas where velvetleaf has been found within a paddock – use a 1 metre buffer;
- ensure machinery used to lift the fodder beet crop is cleaned thoroughly;
- if buying lifted fodder beet, try to purchase cleaned fodder beet.

## GRAZING STOCK

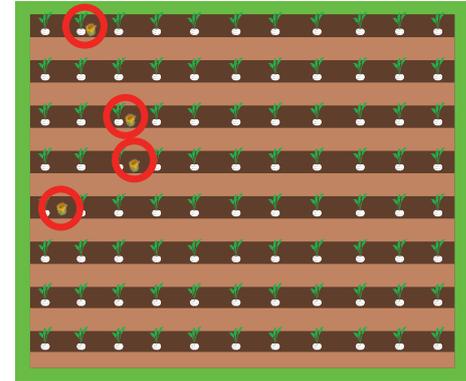
If the crop is being grazed by your animals, graze any contaminated paddocks last. Finish stock in a clean area of any infested paddock (as illustrated below).

If the crop is being grazed by someone else's animals, graze contaminated paddocks first and end in clean paddocks. Try to allow three days before moving the stock off the property.



Start from the contaminated area and graze away from it.

Help eliminate velvetleaf



Fence seed- contaminated areas – 1.5m around where adult velvetleaf plants were + 1m for a single wire fence.



Finish grazing on a clean section of the crop and leave stock there for at least 24 hours.

## STOCK MOVEMENT

Shifting weeds and pests to new places can have severe and long term costly impacts.

- Record stock movements for up to a week after grazing an infested paddock.
  - Monitor those areas in future.
- Record the path used when walking stock to another farm.
  - Monitor that area in future.
- Inform stock truck operators of the potential for velvetleaf seed contamination in effluent.
- Stock truck effluent must be disposed of in an approved effluent disposal site.
- Keep newly arrived stock in a holding paddock for 24 hours.
  - Monitor that area in future.



## MANAGING VELVETLEAF INFESTED AREA

**“KNOW WHAT YOU SOW” – Always keep a record of all seed varieties and line numbers sown in your paddocks.**

### Crop choice

1. Aim to sow crops as early as possible.
2. Select annual crops that do not grow taller than a metre.
3. Select crops that can be harvested in December and January.
4. Select crops where selective herbicides can be used.



Cereal crops for silage



Annual ryegrass



Short season crops such as peas and beans for processing



Cereal crops for grain and long season crops such as maize or forage brassicas

### Crop establishment

- Only the top 5 cm of soil should be disturbed when cultivating for the new crop.
- Each cultivation pass should be in the same direction as the previous year.
- Cultivate infested areas last and clean machinery before leaving the paddock, or somewhere nearby.

### Crop Management

- Inspect all crops for velvetleaf before harvest.
- After harvest, leave the paddock fallow for a few weeks to allow any velvetleaf plants to germinate.
- Aim to sow a winter crop as soil temperatures begin to cool in March.



## WHAT TO DO IF YOU FIND VELVETLEAF

If you have any questions or concerns around velvetleaf and how to manage it, refer to the MPI website [www.mpi.govt.nz/alerts](http://www.mpi.govt.nz/alerts). See the farm management plan on our website.

**Contact MPI's free 24-hour pest and disease hotline 0800 80 99 66**

## PLANTS THAT LOOK LIKE VELVETLEAF

### Thorn apple (*Datura stramonium*)

An upright growing annual shrub that reaches up to 1.5 m tall. Large hairless oval leaves with two-four deep indentations on sides. White or pale blue trumpet-shaped flowers 75–100 mm long. Has large spiny fruit in the ‘Y’ of every branch.

### Mallows

The large-flowered mallow (*Malva sylvestris*), the Cretan mallow (*M. linnaei*) and the tree mallow (*M. arborea*). Upright annual or biennial shrubs that grow to 2 m tall with medium sized, nearly round leaves with about seven lobes. Flowers are mauve with darker veins and have five petals, about 40 mm in diameter.

### Apple of Peru (*Nicandra physalodes*)

An upright growing annual shrub that reaches 60 cm tall. Has large oval leaves with ragged edges and pale violet, bell or trumpet-shaped flowers about 40 mm in diameter. Plant has yellow berries surrounded by a loose papery husk in the ‘Y’ of every branch.



Thorn apple (*Datura stramonium*)



Mallows



Apple of Peru (*Nicandra physalodes*)



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