



Photo: Variegated thistle

Variegated thistle

(Silybum marianum)

DESCRIPTION:

Variegated thistle is a robust, spiny thistle that begins as a flat rosette and generally grows to between 0.5 - 2 m tall at flowering. It has white veins and blotches on leaves.

OTHER NAMES:

Cabbage thistle, holy thistle, lady's thistle, milk thistle, spotted thistle.



Photo: Nodding and Plumeless thistle are virtually indistinguishable from one another.

Nodding thistle (*Carduus nutans*)

DESCRIPTION:

Nodding thistle is an erect, annual or biennial plant that begins as a flat rosette and flowers up to 2 m tall. It has spiny leaves and 'nodding', fragrant, pink or purple flowers.

OTHER NAMES:

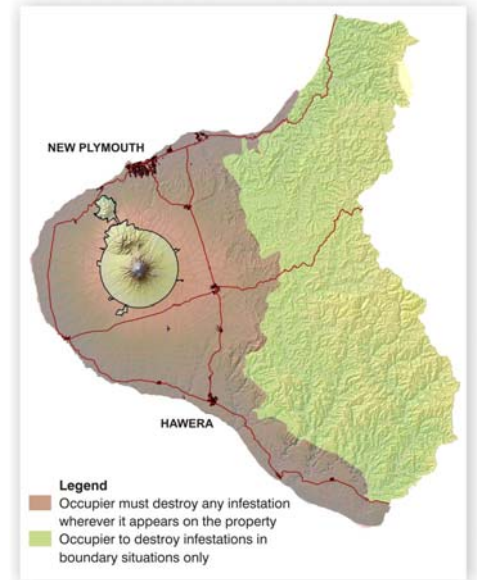
Musk thistle, bastard scotch thistle.

Plumeless thistle (*Carduus acanthoides*)

DESCRIPTION: Plumeless thistle is a spiny, biennial plant, very similar to nodding thistle. It begins as a flat rosette and has small pink or purple flowers on tall flowering stems.

OTHER NAMES:

Nodding thistle, welted thistle, bastard nodding thistle, Tarata thistle.



VALUES AT RISK:

Ecological values, through competition with, and the exclusion of, native plants along forest and riparian margins, and in low and disturbed forest.

Agricultural production, particularly in planted forests and pasture areas.

STRATEGY RULE:

In the areas shaded red in the map, you must destroy all nodding, plumeless and variegated thistle on your property.

In the areas shaded green in the map, you must destroy any nodding, plumeless and variegated thistle on your property for 100 metres inside your boundary.

Throughout Taranaki it is illegal to knowingly distribute or sell these thistles such as in hay.

All pest plants are banned from being sold, propagated or distributed.

For further advice or information about pest plant management contact:

TARANAKI REGIONAL COUNCIL

Pest Plant Management Section

Private Bag 713, Stratford

Ph: 06 765 7127 or 0800 736 222

Fax: 06 765 5097 www.trc.govt.nz

HOW TO DESTROY NODDING, PLUMELESS OR VARIEGATED THISTLES:

Mulch with mechanical cutters.

Grub or dig out of small seedlings.

Use herbicides:

Guidance for using metsulfuron (eg *Escort*)

- Best results for controlling nodding, plumeless or variegated thistles with metsulfuron are achieved when the plant is actively growing – up to and including flowering (the herbicide kills the seed when applied to flowering plants).
- If using a handgun – mix 5 gm of metsulfuron per 100 L of water.
- If using a knapsack – mix 1 gm of metsulfuron per 10 L of water.
- Spray application of the entire plant is not critical. Direct the herbicide to the centre of the plant only.
- These products must be under the care of an approved handler when used in a wide dispersive manner, or applied by a commercial contractor.

Guidance for using triclopyr and picloram mix (eg *Tordon Gold*)

- Best results for controlling nodding, plumeless or variegated thistles with triclopyr and picloram are achieved when the plants are actively growing – from July to January.
- If using a handgun – mix 500 ml of triclopyr (eg *Tordon Gold*) per 100 L of water.
- If using a knapsack – mix 12 ml of triclopyr (eg *Tordon Gold*) per 1 L of water.
- Apply evenly over the top of the plant.
- This product must be under the care of an approved handler during use.

Guidance for using 2,4-D Ethylhexyl ester (eg *Pasture Kleen* or *Relay*)

- Best results for controlling nodding, plumeless or variegated thistles with 2,4-D Ethylhexyl ester (eg *Pasture Kleen* or *Relay*) are achieved in spring.
- If boom spraying – mix 1.5 - 2 L of 2,4-D Ethylhexyl ester (eg *Pasture Kleen* or *Relay*) per hectare. Apply the lesser dilution rate to small rosettes only (root crowns greater than 2 cm in diameter as determined by cutting plant off at ground level). For multi-crowned plants or plants with rosettes greater than 4 cm in diameter, the addition of 100 ml of clopyralid (eg *Versatill*) to your spray

mixture, per hectare, is also recommended.

- This product must be under the personal control of an approved handler when applied in a wide dispersive manner; or used by a commercial contractor. Records of use must be kept when: a member of the public may lawfully be present; the substance is likely to enter air or water and leave the place; or if 3 kg or more of the chemical is applied.

Guidance for using 2-methyl-4-chlorophenoxybutyric acid (ie *MCPA*)

- Best results for controlling nodding, plumeless or variegated thistles with *MCPA* are achieved when the plant is actively growing – usually from July to January.
- If boom spraying – mix 3 - 4 L of *MCPA* per hectare. Apply the lesser dilution rate to small rosettes only (root crowns greater than 2 cm in diameter as determined by cutting plant off at ground level). For multi-crowned plants or plants with rosettes greater than 4 cm in diameter the addition of 100 ml of clopyralid (eg *Versatill*) per hectare is also recommended.
- Thistles may become more palatable following spraying. You should remove all stock until the treated plants die.
- These products must be under the control of an approved handler when used in a wide dispersive manner or used by a commercial contractor. Records of use must be kept when this product is used.

Guidance for using glyphosate

- Best results for controlling nodding, plumeless or variegated thistles with glyphosate are achieved when the plant is actively growing – usually from July to January.
- If using a handgun – mix 750 ml of glyphosate per 100 L of water.
- Apply evenly over the top of the plant.
- Follow mixing instructions carefully as concentrations of glyphosate vary in the different formulations of this herbicide.
- This product must be under the control of an approved handler when applied onto or into water. Records of use must be kept when applied onto or into water.

Guidance for using clopyralid (eg *Versatill*)

- Best results for controlling nodding, plumeless or variegated thistles with clopyralid, eg *Versatill* are achieved when the plant is actively growing – usually from July to January.

- If boom spraying – apply 1 L of clopyralid (eg *Versatill*) per hectare.
- If using a knapsack – mix 25 ml of clopyralid with 10 L of water.
- Spray the plant to give complete and uniform coverage.
- These products must be under the control of an approved handler during use if applied in a wide dispersive manner, or used by a commercial contractor. These products must not be used for any purpose, or in any manner, contrary to this label unless authorised under appropriate legislation. Records of use must be kept if using more than 3 L of product within 24 hours.

Guidance for using picloram (eg *Tordon 2G*)

- Best results for controlling nodding, plumeless or variegated thistles with picloram, eg *Tordon 2G*, is when the plant is actively growing – from July to January.
- Crush the centre of the plant.
- Apply half a level teaspoon of picloram, eg *Tordon 2G* to the crushed centre of the plant.
- This product must be under the care of an approved handler during use.

The Taranaki Regional Council accepts no responsibility for any error or omission in these pages, nor for the use or misuse of any herbicide product. Users must observe safe practice guidelines and any directions on the product label. If in doubt, contact the product supplier for advice

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