

## PLANT PEST CONTROL

### LAND PLANT PESTS

#### Cotton Thistle: *Onopordum acanthium*

##### **Why are we worried?**

Cotton Thistle can invade and colonise pastures. This plant can tolerate droughts, spread in drier areas and is resistant to commonly used hormone sprays.

##### **What does it look like?**

- Cotton Thistle is a vigorous biennial. It is whitish grey with woolly stems and leaves.
- The plant starts from a rosette of divided leaves with spiny margins.
- Its stems are erect with spiny wings which extend from the leaves.
- Flower heads are large and purple with spiny bracts which are less than 3 mm broad and yellow.

##### **Where is it found?**

Cotton Thistle is a native of the Eastern Mediterranean and in New Zealand it occurs mainly in the drier areas of Otago.

It is found in three areas in Hawke's Bay - on gravel flats north of Napier, the Seafield Road area and at Maraekakaho.

##### **What's the best way to control the plant?**

Cotton Thistle is susceptible to non-hormone sprays such as Glyphosphate and Escort. The adult plants are not susceptible to hormone sprays.

Grubbing is also a successful control method. Eradicate this plant before it becomes established. Sites need to be monitored at least twice during the growing season and isolated plants grubbed out ensuring no seeds are produced.



and many areas of Hawke's Bay would be suitable for it to become established.

***What's the best way to control the plant?***

In Hawke's Bay all areas suffering from summer droughts which open up the pasture are susceptible to invasion by Chilean Needle Grass. In fertile productive pastures it does not appear to establish, probably because it doesn't compete with the more strongly-growing pasture plants.

Eradication of Chilean Needle Grass is difficult once the grass is established, as seeds are viable for many years. Where only a few plants occur they should be grubbed out before seeds mature (seeds are mature when they do not squash when pressed by fingers). They can also be sprayed by herbicides such as glyphosate at 3.0 litres of Roundup a hectare.

Where the infestation is large or dense, control is more difficult. Here the effort needs to be one of killing plants and stopping new plants establishing through pasture competition. Spring and autumn spraying with Dalapon (3kg a hectare) at Waipawa has been shown to prevent spread as it stops seeding and kills some plants. However after eight years Dalapon resistant plants have been identified.

To counter this, tests are underway on a pasture management system:

1. spray with a herbicide in spring (October) to kill all vegetative material.
2. grow a summer crop or leave fallow all summer.
3. respray in autumn with herbicide to kill all germinating plants. Shallow cultivate (5 cms) to prevent transferring seeds deep into the soil, sow with a drought-resistant pasture mix, and maintain continuous ground cover.
4. ensure the pasture is always at least 5cm high.

Steep land areas are best planted in a fast growing cover forest. However this must be managed to ensure rapid shade is achieved and maintained to control the Chilean Needle Grass, rather than concentrating on high quality wood.

Spread can be stopped by ensuring sheep do not graze during seeding in November to January. Organise stock management to ensure stock from Chilean Needle Grass affected areas do not move onto clear areas. Do not make hay from affected areas.

**For further information**

If you think you may have this plant pest on your property, please contact the Biosecurity Plants Officers at Hawke's Bay Regional Council for advice and we will work with you to eradicate it.

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TOLL FREE	0800 108 838