



Californian Thistle – *Cirsium arvense*

This Weed File comes in two parts (Part 1 and Part 2, of course) because there's a bit more information than will reasonably fit on one page. So please make sure you read both parts to get the full story.

CONTROL METHODS

There are three recognised methods used to control Californian thistles: Pasture Management, Biological Control, and Chemical Control. None of these is a failsafe solution, but with good timing and understanding of the processes involved, very pleasing results can be obtained.

PASTURE MANAGEMENT

A combination of mowing and heavy (sheep) stocking can be used to obtain quite good levels of control over a two-year programme. It's a four-step process, as follows:

- 1 Mow the thistles in mid-December or after weaning when ewes are mobbed.
- 2 Immediately graze ewes over the mown area at about 350 per Ha until mowed thistles are eaten off.
- 3 Return ewes to the area every 3-4 weeks to eat new growth while it's soft.
- 4 Repeat the process next year (even though thistle numbers will be much lower than year 1).

Spraying with MCPA has also been successfully used instead of the hard grazing.

Alternatively, a decent result can be had simply from constant mowing timed just at flower bud stage, but before bud burst. Repeat the mowing each time the thistles reach this stage. Over two years this will also substantially reduce the density of Californian thistles in a paddock due to gradual depletion of the root reserves, and thus provides much better pasture utilisation. There will however continue to be at least some regrowth from any surviving root sections.

BIOLOGICAL CONTROL

There are two types of imported beetles being used or trialled in New Zealand, the Californian Leaf Eating Beetle, and the Californian Thistle Flea Beetle. These are promising but it may be some years yet before the complete picture is known.

HERBICIDE CONTROL

Weed Wiper

This is an excellent control method for Californian thistles, for two reasons. Firstly, it allows the use of metsulfuron-methyl, a herbicide that the thistle is especially vulnerable to at all stages of its growth, and that is safe, easy and very inexpensive, but which cannot be sprayed because of grass and clover damage. And second because the Cali is such an erect weed that a very useful proportion of its total area is sticking up into the wiping zone, safely above the pasture.

- **MSF600** applied at 2g/L of water. For faster visible results add **Glyphosate 360** at 250ml/L water. Graze to reduce pasture height prior to treatment, so that the wiper can be set as low as possible. Make multiple passes over thick patches.

Boom Spraying

Best results with spraying will come from making two applications in each of two successive years, as follows:

- **2,4-D 720 Amine** at 3.0L/ha. Is effective against seedling plants but will damage clover. Graze 3-7 days before application to minimise clover damage.
- **MCPA750** at 4L/Ha plus Clopyralid (300g/L active ingredient) at 200ml/Ha applied in autumn. This will take out any fresh growth plus and now-large survivors from the early season treatment above but will cause some clover damage. The Clopyralid (300g/L active ingredient) is also very effective at killing root systems at this stage of growth.
- **MCPA750** or **MCPB+** **MCPA** applied in early summer to the then smaller plants at 4L/Ha.
- Clopyralid (300g/L active ingredient) used alone in a conservation tillage situation at 1L/ha until early flowering.

Spot Spraying

- **GrassMate** at 6m/L applied anytime to whole plant. Grass friendly but will suppress clover.
- Clopyralid (300g/L active ingredient) at 25ml/10L (knapsack) or 100ml/100L (handgun). Effective anytime against larger plants.

Spot Treatment

- **Buckshot** granules applied dry at 2g to the crushed centre of each plant. Best applied to smaller plants, but effective against larger plants as well. An excellent option for killing thistles that have survived or been missed in earlier treatments.