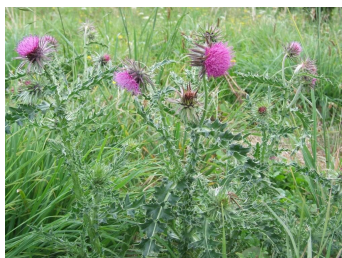


Nodding thistle

Asteraceae - Carduus nutans



What does it look like?

Nodding thistle is a biennial plant that grows from over-wintering rosettes and has a long, fleshy taproot. The flowering stems grow up to 1.5m tall bearing red-purple or, occasionally, white flowers that droop or nod when mature. Sharp spines densely cover the stems and leaf margins.

Nodding thistle grows in most places across Southland. It is predominantly a weed of pasture, but also invades roadsides, riverbeds and wasteland. It will grow in most soil types but prefers sunny, free-draining, dry sites.

Why is it a problem?

Nodding thistle is considered to be the most aggressive thistle in New Zealand. It can invade pastures at all stages of development, particularly those grazed by sheep, and quickly establish in pastures suffering from summer drought. Its main economic impact is that it prevents stock from eating plants growing in the vicinity of the thistle, replaces desirable vegetation, and hinders stock movement.

Nodding thistle is capable of producing up to 10,000 seeds per flower, of which two-thirds are viable. Seed may lay dormant in the soil for up to 20 years.

Control methods

Autumn treatment

There are two options; pasture competition or winter spraying:

- Competition approach

Maintaining a dense pasture sward from early autumn to early winter can help prevent germination or out-compete any seedlings that do germinate.

Thick long grass will also accelerate the rotting process of any seed on the soil surface, helping to reduce future seed load.

Pasture can be eaten out in winter after this germination period is over.

- Winter spraying approach

This approach is only suitable for areas with higher weed density.

Boom spraying in early winter after the germination period is over. Mostly newly germinated seedlings will be killed this way.

Before spraying graze the pasture hard to expose the emerging seedling, and then allow one week for it to freshen up before spraying. Clover can be damaged by these sprays, but grazing will remove most of its leaves and therefore minimise uptake. This combined with the clover beginning to enter its dormant phase will limit damage.

It's imperative that the appropriate chemical is used at the correct rates to achieve success. For newly germinating plants ideally use a 2, 4 D (Ethylhexyl ester or Amine) based herbicide.

Plants larger than seedling size will not be controlled by the above chemical.

Summer treatment

In summer attack individuals that have made it through to seeding. Be aware that chemicals suitable for summer control will also kill clover and other desirable pasture plants.

- Spot spraying

Can be the most suitable option for fence lines and hard to access places. Negative factors are spray drift and dead grass patches which can allow for new weed growth.

- Carpet or weed wiper

Carpet or weed wipers use minimal chemical and can be used in a wider range of weather conditions than spot spraying. They rely on a good height difference between the pasture and the weed growth. They have the potential to be very effective if they are well maintained and operating according to manufacturer's guidelines, especially in terms of application speed.

Do: granules (grills)

Management programme

- Sustained control

Summary of rules

- Environment Southland can direct you to control all Nodding thistle within 50 metres of your property boundary land *if* your neighbour is controlling Nodding thistle within 50 metres of that boundary.

Environment Southland will only enforce this rule if we receive a complaint, in writing, from the adjoining affected owner and/or occupier.

For full rules please see the [Southland Regional Pest Management Plan](#) (Rule 21).

- Dry granules (prills)

Herbicide granules are applied dry and then rely on moisture to activate them. With ragwort a better kill is often achieved by bruising the plant first with your heel. Prills are a targeted approach that leave behind a minimal dead patch. Using a pogo stick type applicator is fast, efficient, and easy on the back. They are also easy to carry in a range of farm vehicles.

- Grubbing or hand pulling

Grubbing works best with rosettes and early flowering plants. Try to remove at least 5cm of root to prevent re-growth. A grubber can be carried on a range of farm vehicle. Hand pulling can be effective provided large root fragments are not left behind.

- Boom spraying

Not usually considered an option in summer due to the impact on clovers and other desirable pasture species.

- Mowing

Not recommended as the ones that survive will re-grow as strong multi-crowned plants and become difficult to kill.

Biocontrol

Biocontrol uses the natural enemies of a pest to reduce the damage it causes. We supply biocontrol agents free of charge to Southlanders, though availability is determined each year by the amount able to be collected from established populations. If you would like to learn more, follow the link to our Biocontrol web page, click on the request info button or contact us on 0800 76 88 45 Monday - Friday, 8:00 am - 5:00 pm.

For further information or control advice please contact one of our Biosecurity Officers at Environment Southland on 0800 76 88 45

CAUTION: When using any herbicide or pesticide, PLEASE READ THE LABEL THOROUGHLY to ensure that all instructions and safety requirements are followed.

More information

[Request info](#)

<https://eservices.es.govt.nz/online-services/new/BiosecurityRFS/step/1?Subject=PlantPests&Species=95>