



Scotch thistle – *Cirsium vulgare*

**DESCRIPTION**

Scotch thistle is a biennial weed, meaning that it normally lives for two years maximum, but doesn't flower until the second year. It therefore relies heavily on achieving establishment from seed. The usual cycle of the Scotch thistle in pasture is to germinate in late autumn, winter or early spring, passing its first summer as a rosette form plant, and then flowering in its second summer. Once established as a multi-branched shrub it can grow to a substantial bush of 1.5 metres in height.

The Scotch thistle has a substantial tap root, as do most thistles. However the Scotch thistle is also distinctive among all New Zealand thistles in its leaves; it has sharp spines both on the leaf margins and on the surface of the leaves, while other thistles have spines only on the leaf margins. The foliage is also a darker green than most other thistle species.

The flower head is quite distinctive, reddish purple in colour, and up to 60mm long by 50mm in diameter, and usually appears singly, but can be in 2 or 3 flower clusters on a stem. On the flowering stem, the lower leaves will be on stalks while the upper leaves are stalkless. The flowers are smaller than the nodding and variegated thistles, but larger than the Californian and winged thistles.

The stems are erect, quite substantial, and are branched with spiny wings.

The seed heads are a collection of florets, with each seed attached to a pappus known as thistledown, allowing seed distribution by the wind.

The Scotch thistle is abundantly established throughout New Zealand. It appears in pastures, roadsides, waste areas and arable land, and is often prolific after fire or soil disturbance. It is rarely eaten by sheep or cattle, but goats will graze it in the flowering stage.

**PASTURE MANAGEMENT**

The best control measure is pasture management, because a tight pasture sward will minimise thistle germination and throttle growth of any thistle seedlings. However, thistles will usually find some opportunity to establish themselves, and one plant quickly becomes a clump, which soon becomes an infestation.

**GRUBBING-OUT**

Individual plants and isolated clumps can be grubbed or chipped out successfully before seeding. Take the entire crown and at least 5cm of the taproot to avoid regrowth.

**MOWING**

In the vegetative rosette stage, Scotch thistles can tolerate mowing. In the later stage when erect stems are forming, mowing will remove the stem before flowers can form, preventing seed development. However, the crown will remain and will need to be removed or sprayed to prevent re-emergence of flowering stems.

**HERBICIDE CONTROL**

Large infestations are best sprayed. The optimum times for spraying are late autumn/early winter or in spring, when the plants are seedlings and more susceptible. If there's good pasture cover present, graze it well a week before spraying to maximise results and minimise pasture damage.

**Boom Spraying**

- **2,4-D Granules** at 1-1.5kg/Ha (seedlings) or 1.5-2kg/Ha (rosettes).
- **MCPA** at 3L/ha on seedlings, 4L/ha on small rosettes with crowns to 4cm diameter. This herbicide will damage clover if present.
- **MCPB+MCPA** at 4L/Ha on seedlings to six leaf. Reasonable control at later stages. This type of herbicide avoids clover damage.
- **Cobber** used alone at 1L/ha until early flowering. **Cobber** is also an excellent addition at 100-200ml/Ha to both MCPA and 2,4-D Granules where larger, multicrown or otherwise hard-to-kill thistles are present.

**Spot Spraying**

- **GrassMate** at 6m/L applied anytime to whole plant. Grass friendly, but will suppress clover.
- **Cobber** 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.

**Weed Wiper**

- **MSF600** applied at 2g/L of water. For faster visible results add **Glyphosate** 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. Where a weed wiper can be used, this method is cheap, very effective against even mature & multicrown thistles, and of course is totally pasture-friendly.

