

Californian thistle

Cirsium arvense

What does it look like?

Californian thistle is one of New Zealand's most common thistles, and is most frequently seen on roadsides, rough ground, and grassland. It has creeping roots and buds that grow into aerial shoots. It has slender flower stems up to 1m tall, which end in purple or mauve flower heads. The flowers appear in summer, and are around 2cm in diameter and fragrant. Flowers appear differently depending on whether the plant is male or female. The male flower head is shorter and less urn-shaped than the female, and lacks the fluffy white pappi (in late summer early autumn) that act as parachutes for dispersing the seeds from the female flower head. It occurs as distinct patches of either male or female plants, mixed patches of both. The leaves are spiny and the stem is spineless. Leaves may either be hairless or have cobwebby hairs, and are green above and paler underneath. There are shallow notches between triangular spiny lobes.



Why is it a problem?

Californian thistle is very problematic in pastures because it is so difficult to control. Once a plant has established in a pasture, it forms a patch of plants which are initially connected by the creeping root system called rhizome, but these connections rot away in time. These patches of thistles eventually get larger over time if conditions are suitable for its growth. Every winter, the foliage dies off, but the creeping root system is still alive underground. New plants re-establish from these roots in spring, and flowering occurs in summer and autumn. It is unwanted in pasture because livestock do not like grazing too close to the spiny foliage, so pasture plants beside thistle plants don't get eaten. In crops, Californian thistle can be very competitive, establishing quickly in a new crop from old root systems. Californian thistle is also well-adapted to growing in situations such as asparagus crops and in orchards where residual herbicides are used. Residual herbicides remain active in the soil for several months, killing weed seeds as they germinate. As the creeping root system of Californian thistle is deeper in the soil than the residual herbicide, the plant is unaffected.



Control methods

Physical control

- Constant mowing can be effective, and the best time for mowing is when the thistle has just reached the flower bud stage, but flower buds have not yet opened.

Herbicide Control

- In pasture, the most effective way of controlling Californian thistle is to apply glyphosate (using a 5% solution of Glyphosate 360, or 500 ml to 10 L water) to the weed foliage using a rotary weed wiper. It is most effective when applied in late summer or early autumn.

For more detailed information about control of this plant, visit the Massey University website via the link on this page.

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

Related links

Massey University <https://www.massey.ac.nz/massey/learning/colleges/college-of-sciences/clinics-and-services/weeds-database/californian-thistle.cfm>

New Zealand Plant Conservation Network http://www.nzpcn.org.nz/flora_details.aspx?ID=3691

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Management programme

Organisms of interest

Request info

<https://eservices.es.govt.nz/online-services/new/BiosecurityRFS/step/1?Subject=PlantPests&Species=121>