# weed warning

## Don't let them get away!

Invasive weeds are most effectively controlled when they and their numbers are small — a little weed control work today will save many dollars and days of work in years to come. Now is the time to take action!

## Control that weed!

Keeping pastures in good condition and minimising bare patches is a good preventative measure to stop thistle seedlings from becoming established in the first place.

Active control methods for Californian thistle can include a combination of cultivation, the selective application of herbicides and ongoing monitoring.

Californian thistle is a stubborn plant pest, and established populations will require several years of control efforts to eradicate completely. The extensive root networks established by this plant allow it to store vast reserves of energy. Plants can resprout a number of times after initial control, so follow-up work is essential to ensure that primary weed control efforts are not wasted.

**Cultivation** of areas of Californian thistle infestation over a number of seasons is considered to be an important element of an integrated control strategy for this plant pest, especially where the area affected is large. Cultivating the soil repeatedly breaks up the thistle's rootstock, forcing it to resprout and progressively weakening it. This method **must** be combined with **chemical control** using appropriate herbicides. **Always read and follow the label**, wear protective equipment and avoid off-target damage during chemical control.

The best solution for your site will vary with the type and intensity of infestation. Detailed advice on how to control Californian thistle on your property can be found at the DPIPWE website (www.dpipwe.tas.gov.au/weeds).

For larger infestations on agricultural properties, consulting an agricultural specialist to help you develop an integrated weed management plan is recommended.

## Do the right thing

Weed waste dumped in bushland or local reserves gives pest plants a leg-up into new areas. Do the right thing, and dispose of your weed waste responsibly.

Weeds are easily spread by contaminated machinery and people – check your clothes, shoes, vehicles and other machinery for soil or plant matter that could be carrying weedy plant materials.

And make sure tip-bound waste is properly secured – the seeds that blow off your trailer today will become the weeds that infest our environment tomorrow.

## Get informed

Californian thistle is a significant weed threat for Southern Tasmania. For further information contact your local Council office or call DPIPWE on 1300 368 550.





## Also known as

Creeping thistle, Canada thistle, perennial thistle

## **Impacts**

Readily invades agricultural areas, riparian areas, and roadsides.

Reduces biodiversity and agricultural productivity

#### **Current distribution in Southern Tasmania**

Widespread across the region



# Background

Californian thistle (*Cirsium arvense*) is native to Europe, northern Africa and western Asia. It has long been recognised as a pest plant within Australia, having been declared a noxious weed in Victoria in 1885. Since then, it has become a serious problem in areas of agricultural land in many countries across the world. It thrives in regions that receive 700mm or more of rain annually, and is capable of growing from sea level up as far as sub-alpine areas.

Californian thistle diminishes agricultural production through competing with desirable pasture species, thereby reducing livestock productivity, and can cause ulcerations in the mouths of stock that consume it. It can also cause problems during harvesting, and may become a contaminate of some vegetable products.

The extensive branching root system of Californian thistle allows it to become a successful weed of agricultural systems. No other thistles display this behaviour within Australia; individual plants have been known to expand their root-print 13m horizontally and 6m vertically over just one year. Cultivation of areas of Californian thistle that is not followed by further control work can allow broken roots to sprout into new individual plants, worsening established infestations, and the root fragments are easily spread on dirty machinery.

Most infestations of Californian thistle spread vegetatively (via expansion of their root systems), rather than by seed. While seeds are still not considered to be the main means by which this weed spreads, it is thought that the larger the infestation, the more chance plants will have to cross-pollinate to produce viable seeds. Seeds have been known to travel more than 200m from the parent plant, allowing the thistles to invade new areas.

# Get a positive ID

Californian thistle is a prickly herb that may grow up to 1.5m tall, but is generally significantly smaller. Seedlings may emerge in autumn or spring, growing into rosettes with elongate leaves up to 15cm long, whose edges are irregular and bear spines. The stems which sprout from the rosettes are ridged, branching as they ascend, and bear arranged alternately leaves (ie. not in opposite pairs) up to 20cm long. Over winter, this above-ground growth dies off.

As well as a tap root, Californian thistles develop extensive rhizomatous root systems – rhizomes are creeping roots which grow close to the surface, which may sprout new buds along their length. If these rhizomes are broken, they may form individual plants. These roots persist over many years, live on while the top growth dies off over winter, and are the main means by which this weed spreads.

Flower heads develop in groups of 1-5 at the end of the stem branches, and may be up to 2.5cm long and wide. Each flower head contains numerous small, pink tubular florets, which are ringed at the base by rows of purplish, spiny bracts (modified leaves) — these together form the thistle head. Each floret creates a single small brown seed. Each of these seeds bears a 'pappus' — the oft-observed white feathery structure which catches the wind and transports the seeds, parachute-like, to new locations.

There are a number of common weedy thistle species within Tasmania. Californian thistle may be most easily distinguished from other thistles by its extensive, rhizomatous root system; this is not seen in other thistles.

# Weed management – it's your responsibility

Many people unwittingly harbour pest plants on their farms and in their gardens – some even actively grow them, knowing nothing of their weedy ways.

This plant is a declared weed under Tasmania's *Weed Management Act 1999*. It is your responsibility to control Californian thistle on your land. Failure to remove it from your property could result in legal action. It is also illegal to distribute the plant or its seed in any way, whether as cut flowers, in contaminated feed, on livestock or on dirty equipment.

Weeds are a growing problem.

Act now – make a plan and make a start!

#### Images:

- 1. Side-on view of flowers
- 2. Stems with groups of flowers
- 3. The irregular-edged, spiny leaves