



CALIFORNIAN THISTLE BIOCONTROL

Cirsium arvense



Project overview

Californian thistle is native to Eurasia. It is widespread throughout New Zealand agricultural land where it reduces pasture availability.

Five agents have been released to attack Californian thistle. Despite being released widely throughout the country in the 1990s, the Californian thistle flea beetle (*Altica carduorum*) did not establish, the Californian thistle leaf beetle (*Lema cyanella*) remains highly localised and the Californian thistle gall fly (*Urophora cardui*) is limited by stock grazing on the galls. In 2008, the green thistle beetle (*Cassida rubiginosa*) and the Californian thistle stem miner (*Ceratopion onopordi*) have been released. Establishment success of the stem miner is unknown but the green thistle beetle is establishing well and showing promise against a range of thistles.

Three pathogens also commonly attack this thistle, none have been deliberately imported as biocontrol agents into New Zealand: *Sclerotinia sclerotiorum* (white soft rot), *Phoma exigua* var. *exigua* (Phoma leaf blight) and *Puccinia punctiformis* (rust fungus).

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From top to bottom: Californian thistle flea beetle, Californian thistle leaf beetle, Californian thistle gall fly, green thistle beetle and Californian thistle stem miner