

Velvety tree pear

Opuntia tomentosa



Velvety tree pear is an upright, drought tolerant shrub that rapidly invades pastures and natural areas and overwhelms native vegetation. Dense infestations can also impede access and reduce stock-carrying capacity.

It can also reduce land use and pastures. The spines can cause injury to stock, humans and native animals, reducing or preventing grazing activities and productivity.

Possession, propagation and distribution of velvety tree pear as an ornamental plant are not considered reasonable and practical measures to prevent or minimise the biosecurity risks posed by velvety tree pear.

In Queensland, it is illegal to sell velvety tree pear on Gumtree, eBay, Facebook, Facebook Marketplace, at markets, nurseries or any marketplace.



Legal requirements

Velvety tree pear is a category 3 restricted invasive plant under the *Biosecurity Act 2014*. It must not be given away, sold, or released into the environment. The Act requires everyone to take all reasonable and practical measures to minimise and prevent the biosecurity risks associated with invasive plants under their control. This is called a general biosecurity obligation (GBO). This fact sheet gives examples of how you can meet your GBO.

At a local level, each local government must have a biosecurity plan that covers invasive plants in its area. This plan may include actions to be taken on certain species. Some of these actions may be required under local laws. Contact your local government for more information.

Description

This tree-like plant forms a central woody trunk over 40 cm wide and grows up to 6 m high. The stems are divided into oblong pads that are dull green and velvety to touch due to the dense covering of short fine hairs. The pads are 15–35 cm long, 8–12 cm wide and 1.5–2 cm thick.

Young plants have 2–4 white or pale yellow spines located in the areoles with one spine reaching a length of 2.5 cm. The areoles usually become spineless as the plant matures. A more spiny variety does exist and has more than 50 spines in each areole on the trunk.

The flowers are a deep orange, 4–5 cm long and 4–5 cm wide. The fruit is green, turning to reddish-purple as they mature. They are egg-shaped, about 5 cm long and 3 cm wide, and dull red. The top of the fruit is saucer-shaped with circular lines that meet in the centre and give the fruit a shrivelled appearance. The fruit produces many seeds, 3–5 mm long within a reddish pulp.

Life cycle

Velvety tree pear reproduces by seed as well as stem fragments, fallen flowers and immature fruit. Flowering occurs mostly during spring and summer.

It can also spread by attaching to animals, footwear, vehicles and machinery. It can also spread in garden waste and by people growing as an ornamental plant.

Fruit are eaten by birds and other animals, and the seeds then spread in their droppings.

Methods of spread

Velvety tree pear can spread by segments breaking off and attaching to animals, footwear, vehicles and machinery. The stem segments break off easily from the parent plant. These pads can survive long periods of drought before weather conditions allow them to set roots. It can also spread by floodwaters, and in some cases by being rolled along bare ground by strong winds.

Fruit are eaten by birds and other animals, and the seeds then spread in their droppings. The seeds have hard seed coats that allow them to survive heat and lack of water.

Habitat and distribution

Native to Mexico and Guatemala, velvety tree pear is common around Goondiwindi and Warwick. It is also widespread throughout central and southern Queensland.

Velvety tree pear prefers hot, semi-arid environments but also occurs in drier sub-tropical and warmer temperate regions. It can be found along roadsides, railways, disturbed sites, pastures, open woodlands, rangelands and grasslands.

Control

Managing velvety tree pear

The GBO requires a person to take reasonable and practical measures to minimise the biosecurity risks posed by common tree pear. This fact sheet provides information and some options for controlling velvety tree pear.

The best control for velvety tree pear incorporates integrated management strategies, including herbicides, mechanical, physical and biological control methods.

Physical control

Dig out plants completely and deep bury. Ensure that all tubers that can grow are removed and destroyed. Ploughing is not considered an effective means of control unless followed by annual cropping.

For advice on disposal options, contact your local government office or Biosecurity Queensland on 13 25 23.

Mechanical control

Mechanical control using machinery is difficult because stem segments can easily re-establish.

Biological control

Velvety tree pear has been recognised as a pest in Queensland since the 1920's. It has been partially controlled since the late 1920's by the biological control agent, *Cactoblastis cactorum*. Both the cactoblastis moth introduced 90 years ago and a more recent introduction of the cochineal bug, *Dactylopius opuntiae* have proven to be effective in reducing the fruiting of velvety tree pear, and to reduce the abundance of seedlings and plants under 1 m in height.

While cactoblastis larvae and cochineal bug can kill young tree pear, they have little impact on large plants. Older tree pear pads and stems contain tough, fibrous material that the insects cannot penetrate.

Some evidence suggests that felling or pushing over large trees where there are nearby infestations of cochineal, is a way to increase the impact of the biological control agents.

The insects multiply in number when they are protected from the elements, forming a nursery that can spread to regrowth from cut stumps or pads in contact with the ground. Once established, the adults provide a continuous supply of new insects to attack new growth and surrounding plants. Cochineal insects are wind-borne and may require some manual assistance for dispersal onto new plants.

How to distribute cochineal

Spreading cochineal insects involves the manual transfer of cochineal-infested segments onto other plants. For safe handling, use strong tongs and a knife to cut infested stem segments. Carry infested plant material in plastic tubs with lids. Don't leave cochineal in direct sunlight or hot vehicles. Using tongs, the infested stem segments should be wedged or tied near new fresh segments on the receiving plant, so that the insect nymphs can crawl over to infest fresh plant segments.

Many opuntoid cacti species are incorrectly referred to as prickly pear, which is the common name for common tree pear (*Opuntia stricta*). Different opuntoid cacti are controlled by different biological control agents – including different species of cochineal that all look very similar. For effective control, the correct biological control agent must be used for each species.

Table 1. Herbicides for the control of velvety tree pear

Situation	Herbicide	Rate	Comments
Agricultural non-crop areas, commercial and industrial areas, fence lines, forestry, pastures and rights-of-way	Triclopyr 240 g/L + Picloram 120 g/L (e.g. Access)	1 L/60 L diesel	Apply as an overall spray
Non-crop areas around buildings, commercial and industrial areas, domestic and public service areas and rights-of-way	Amitrole 250 g/L + Ammonium thiocyanate 220 g/L (e.g. Amitrole T)	4000 mL/100 L of water	Foliar spray
	Amitrole 250 g/L + Ammonium thiocyanate 220 g/L (e.g. Amitrole T)	Neat	Stem inject 1 mL injected into cuts at 3 cm spacing
Areas of native vegetation, bushland reserves and revegetation areas, non-crop areas and open public spaces	Glyphosate 360 g/L	1:1.5 with water to undiluted herbicide	Permit 82307 (expires 31/07/2022) Injection: drill, frill or axe
Non-agricultural areas, domestic and public service areas, commercial and industrial areas, bushland/native forests, roadsides, rights-of-way, vacant lots, wastelands, wetlands, dunal and coastal areas	Glyphosate 360 g/L	Neat	Drill, frill, axe or stem injection at 1 mL per 2 cm hole or cut Permit 11463 (expires 30/06/2023)
	Triclopyr 240 g/L + Picloram 120 g/L (e.g. Access)	1 L/60 L diesel	Permit 11463 (expires 30/06/2023)
	Picloram 100 g/L + triclopyr 300 g/L (eg fightback)	500 mL/100 L of water	Foliar spray Permit 11463 (expires 30/06/2023)
	Aminopyralid 8 g/L + picloram 100 g/L + triclopyr 300 g/L (e.g. Grazon Extra)	500 mL/100 L of water	Foliar spray Permit 11463 (expires 30/06/2023)

Read the label carefully before use and always use the herbicide in accordance with the directions on the label.



Pad infected by the biological agent cochineal bug



Note the velvety appearance on the pad

Refer to factsheets for *Opuntia aurantiaca*, *Opuntia monacantha* and *Opuntia stricta* for further information about the biological agents that target these species.

Herbicide control

Herbicide options available for the control of velvety tree pear in Queensland are listed in Table 1.

Landholders and contractors should check if the property is in a hazardous area as defined in the *Agricultural Chemicals Distribution Control Act 1966* prior to spraying.

Further information

Further information is available from your local government office, or by contacting Biosecurity Queensland on 13 25 23 or visit biosecurity.qld.gov.au.



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Fact sheets are available from Department of Agriculture and Fisheries (DAF) service centres and our Customer Service Centre (telephone 13 25 23). Check our website at biosecurity.qld.gov.au to ensure you have the latest version of this fact sheet. The control methods referred to in this fact sheet should be used in accordance with the restrictions (federal and state legislation, and local government laws) directly or indirectly related to each control method. These restrictions may prevent the use of one or more of the methods referred to, depending on individual circumstances. While every care is taken to ensure the accuracy of this information, DAF does not invite reliance upon it, nor accept responsibility for any loss or damage caused by actions based on it.