Drooping tree pear

Opuntia monacantha

Drooping tree pear is an upright tree-like plant that is found in northern and south-eastern Queensland.

It can invade native pastures and dense infestations can impede access and reduce stock-carrying capacity. It can become a dominant species and displace native vegetation and pasture species.

The sharp spines can cause injury to stock, humans and native animals.

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

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

Legal requirements

Drooping 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 the biosecurity risks associated with invasive plants under their control. This is called a general biosecurity obligation (GBO).

Queensland Government

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 drooping tree pear. Some of these actions may be required under local laws. Contact your local government for more information.

Description

This erect succulent shrub has fibrous roots and grows 2–3 m high but can reach up to 5 m high. The branches are divided into glossy light green pads up to 45 cm long, 15 cm wide and 1.5 cm thick. The dark grey trunk grows up to 25 cm in diameter. Drooping tree pear gets its name because the upper segments tend to droop. The areoles on the older pads have 1–5 sharp spines about 5 cm long.

Small, scale-like leaves are found on areoles of very young pads and are quickly shed as the pad grows. Drooping tree pear produces yellow flowers that are 6 cm wide and have red markings on the back. The fruit is pear-shaped and 4–7 cm long with a green skin. The flesh of the fruit is red and pulpy and contains round seeds that are yellow or pale brown. The fruits have areoles with tufts of fine, barbed bristles.

Life cycle

Drooping tree pear reproduces by seed and vegetatively via stem segments. Most reproduction is from broken stem fragments. Flowering occurs mostly from early spring until early autumn.

Methods of spread

Drooping tree pear can be spread by animals, footwear, vehicles and machinery. The fruit and stem segments break off easily from the parent plant. It can also spread by floodwaters and in dumped garden waste. The fruit are eaten by birds and other animals (e.g. foxes) and the seeds then spread in their droppings.

Habitat and distribution

Native to South America, drooping tree pear can be found in south-east Queensland. Small populations occur on Stradebroke Island.

Drooping tree pear prefers sub-tropical, semi-arid and warmer temperate environments. It can be found in pastures, open woodlands, grasslands, roadsides, railways, creekbanks, disturbed sites, waste areas and coastal areas.

Control

Managing drooping tree pear

The GBO requires a person to take reasonable and practical measures to minimise the biosecurity risks posed by drooping tree pear. Propagation of drooping tree pear to keep as an ornamental plant is not considered reasonable with reducing the risk of further spread of this plant.

This fact sheet provides information and some options for controlling drooping tree pear.

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

Physical control

Slashing and ploughing are not considered effective control as this can lead to further spread through establishment from stem fragments. Chip out, bag and burn any isolated plants or dispose of them at council-approved landfill tips.

Ensure that all tubers that can grow are removed and destroyed. Plant material must never be included with green waste.

Mechanical and fire control

Mechanical control using machinery is difficult because stem segments can easily re-establish. A hot fire is considered an effective management method for use on more dense infestations.

Biological control

A cochineal *Dactylopius ceylonicus* is proving an effective biological control agent for drooping tree pear. It should be noted that this insect is not effective on other species of cactus, so its utilization on other species should be discouraged.

Once established on individual plants, the adults provide a continuous supply of new insects to attack new growth and surrounding plants. Cochineal insects are wind-borne and spread to new plants, that rely on individuals landing on suitable plants. However, control and spread can be enhanced if the cochineal is manually transferred to new plants (see photo below).

Placing an infected pad on drooping tree pear

How to distribute cochineal

Spreading cochineal insects simply involves the manual transfer of cochineal-infested segments, like the one in the photo, onto plants that do not contain cochineal insects.

To assist in the distribution and spread of cochineal, physically move infected stem segments and place on isolated plants (>50 m away). Collect infected stem segments from existing drooping tree pear plants using tongs and a knife. To transport stem segments, use plastic tubs with lids. Don't leave cochineal in direct sunlight or hot vehicles.

Herbicide control

A few herbicides are registered for control of drooping tree pear, often referred to as smooth tree pear in the label. There are also four permits allowing the use of other herbicides and application methods to control drooping tree pear.

Herbicide options available for the control of drooping tree pear in Queensland are shown 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.

Prior to using the herbicides listed under the permits, you must read or have read to you and understand the conditions of the permit. To obtain a copy of these permits visit apvma.gov.au.

More information

For more information contact your local government or visit biosecurity.qld.gov.au.

Table 1. Herbicides for the control of drooping tree pear

Situation	Herbicide	Rate	Comments
Agricultural non-crop areas, commercial and industrial areas, forestry, pastures and rights-of-way	Triclopyr 300 g/L + Picloram 100 g/L (e.g. Conqueror) or Triclopyr 300 g/L + Picloram 100 g/L + Aminopyralid 8 g/L (e.g. Grazon Extra)	500 mL/100 L water	Foliar spray Apply as a thorough foliar spray to all stems
Agricultural non-crop areas, commercial and industrial areas, fence lines, forestry, pastures and rights-of-way (APVMA permit PER92465)	Triclopyr 240 g/L + Picloram 120 g/L (e.g Access)	1 L/60 L diesel	
Native pastures, agricultural non-crop areas, rights-of-way, commercial and industrial areas (APVMA permit PER92465)	Metsulfuron-methyl 600 g/kg (e.g. Metsun 600 Herbicide)	10–20 g/100 L water	
Non-crop areas, roadsides, fencelines and storage areas (APVMA permit PER90719)	MSMA 800 g/L (e.g. AC Militate Herbicide)	2.5 L / 100 L water	
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)	Undiluted	Stem injection 1 mL injected into cuts at 3 cm spacing around the lower trunks of mature plants
		1 L/25 L water	Foliar spray Apply liberally to small plants and regrowth
Pastures, roadsides, rights-of-way, bushland/native forests, agricultural non-crops areas, commercial and industrial areas, domestic and public service areas, vacant lots, wastelands (APVMA permit PER92459)	Triclopyr 200 g/L + Picloram 100 g/L + Aminopyralid 25 g/L (e.g. Tordon RegrowthMaster Herbicide)	Undiluted	Stem injection Apply 2 mL solution per 10 cm cut
	Glyphosate 360 g/L (e.g. Roundup)	Undiluted to 1:1 in water	
	Amitrole 250 g/L + Ammonium thiocyanate 220 g/L (e.g. Amitrole T)	Undiluted	Stem injection 1 mL injected into cuts at 3 cm spacing
Non-crop areas, including native vegetation, conservation areas, gullies, reserves and parks (APVMA permit PER92475)	Aminopyralid 4.47 g/L + picloram 44.7 g/L (e.g. Vigilant II)	Undiluted	Cut stump Apply 3 mm gel layer over each cut stem
Agricultural non-crop areas, commercial and industrial areas, forests, pastures and rights-of-way	Triclopyr 600 g/L (e.g. Garlon 600)	800 mL/60 L diesel	Basal bark Plants up to 10 cm basa diameter Cut stump Plans in excess of basal bark sizes

Note: Refer to the permits for more herbicide options. Read the label and permit carefully before use and always use the herbicide in accordance with the directions on the label.

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