Declared Plant Policy

Government of South Australia

This policy relates to natural resources management under section 9(1)(d) of the Landscape South Australia Act 2019 *(the Act), enabling co-ordinated implementation and promotion of sound management programs and practices for the use, development or protection of natural resources of the State. Specifically, this policy provides guidance on the use and management of natural resources relating to the prevention or control of impacts caused by pest species of plants that may have an adverse effect on the environment, primary production or the community, as per object s7(1)(f) of the Act.*

prickly pears (*Opuntia* and *Tephrocactus* spp.)

Opuntioid cacti include species known as prickly pears (*Opuntia* and *Tephrocactus* species); they are succulent perennials that may encroach on rangeland and native vegetation in the drier parts of South Australia. Wheel cactus (*Opuntia robusta*) and common prickly pear (*Opuntia stricta)* are the most prominent species. There are also hybrid cultivars grown for fruit production under the name of *Opuntia ficus-indica.*

The various species of chollas, Hudson pears and rope cactus (*Cylindropuntia* and *Austrocylindropuntia* species) are the subjects of separate policies.

Management Plan for Prickly Pears

Outcomes

- Productivity of rangelands and quality of adjoining native vegetation maintained by minimising impacts of opuntioid cacti.

Objectives

- Existing infestations of prickly pears contained and reduced.
- Spread of prickly pears to uninfested areas of the pastoral regions prevented.
- Introduction of additional prickly pear species to the pastoral regions of the State prevented.

Best Practice Implementation

- Regional landscape boards to ensure high priority infestations are controlled, according to their size and strategic location.
- Regional landscape boards and Green Adelaide to develop plans to control or contain other infestations in collaboration with land managers.
- Regional landscape boards and Green Adelaide to control priority infestations on road reserves and recover costs from adjoining landholders.
- Regional landscape boards and Green Adelaide to promote landholder understanding of the identification of opuntioid cacti, their potential to spread, and control techniques.

Regional Implementation

Refer to regional management plans for further details.

Region	Actions
Alinytjara Wilurara	Destroy infestations
Eyre Peninsula	Manage weed
Green Adelaide	Monitor
Hills and Fleurieu	Monitor
Kangaroo Island	Monitor
Limestone Coast	Contain spread
Murraylands and Riverland	Contain spread
Northern and Yorke	Manage weed
South Australian Arid Lands	Destroy infestations

Declaration

To implement this policy, all *Opuntia* and *Tephrocactus* species except spineless *Opuntia ficus-indica* are declared under the *Landscape South Australia Act 2019* throughout the whole of the State of South Australia. Their entry to South Australia, movement or transport on a public road by themselves or as a contaminant, or sale by themselves or as a contaminant are prohibited. Regional landscape boards and Green Adelaide may require land owners to control prickly pear plants growing on their land. These authorities are required to control plants on road reserves in their regions and may recover costs from the adjoining land owners.

Prickly pears are declared in category 2 under the Act for the purpose of setting maximum penalties and for other purposes. Any permit to allow their entry, sale or road transport can only be issued by the Chief Executive of the Department for Environment and Water or their delegate pursuant to section 197.

Under the *Landscape South Australia (General) Regulations 2020*, Regulation 27 specifies the conditions under which a person is exempt from the operation of section 186 and may transport wool, grain or other produce or goods carrying prickly pears on public roads, or bring them into the State. Regulation 28 specifies conditions under which a person is exempt from the operation of section 188(2) and may sell wool, grain or other produce or goods carrying prickly pears. Note that certain produce or goods may be excluded from these general movement and sale exemptions by Gazettal Notice of the Chief Executive, DEW.

The following sections of the Act apply to prickly pears throughout each of the regions noted below:

Region / Sections of Act	AW	EP	GA	HF	KI	LC	MR	NY	SAAL
186(1) Prohibiting entry to area	X	X	X	X	X	X	X	X	X
186(2) Prohibiting movement on public roads	X	X	X	X	X	X	X	X	X
188(1) Prohibiting sale of the plant	X	X	X	X	X	X	X	X	X
188(2) Prohibiting sale of contaminated goods	X	X	X	X	X	X	X	X	X
190 Requiring notification of presence									
192(1) Land owners to destroy the plant on their properties									
192(2) Land owners to control the plant on their properties	X	X	X	X	X	X	X	X	X
194 Recovery of control costs on adjoining road reserves	X	X	X	X	X	X	X	X	X

The spineless cultivars known as *Opuntia ficus-indica* (Indian fig) are exempt from all sections.

Review

This policy is to be reviewed by 2025 or in the event of a change in one or more regional management plans for prickly pears or in their status as Weeds of National Significance.

Weed Risk

Invasiveness

Prickly pears are mainly established as a weed close to localities where they were formerly planted. The fruit are eaten by birds and some mammals, which effectively disperse the seed over wider areas. Infestations can also start when pads are dumped with garden waste. The plants disperse down watercourses when detached pads and whole small plants are carried in runoff water.

Infestations become progressively larger and denser under grazing pressure as prickly pears are too spiny to be eaten by livestock.

Impacts

Prickly pear species vary in their weediness but many can become weeds of pastoral land and open native vegetation. In these habitats species such as wheel cactus can displace desirable vegetation, and form dense infestations that limit access by stock, humans and vehicles. When in fruit they can also act as hosts for fruit fly, and *Opuntia* is classed as a fruit fly host.

Potential distribution

Various *Opuntia s*pecies could occupy a wide range of habitats within the pastoral zone, the Murray Mallee and permanent pastures on the northern edge of the agricultural zone, but the land uses of cropping and more intensively managed grazing do not allow serious infestations to develop. They are also effectively excluded from native vegetation in higher rainfall regions by competition from other plants.

Wheel cactus is of particular concern in South Australia. It is estimated that 18% of the Alinytjara Wilurara region and 11% of the SA Arid Lands region are suitable for the establishment of this species, with smaller areas on the northern edges of the Eyre Peninsula, Murraylands and Riverland and the Northern and Yorke regions.

Feasibility of Containment

Control costs

Control by herbicides or mechanical removal is made more difficult by the types of terrain in which infestations are found. Although species such as common prickly pear are attacked by the *Cactoblastis* and cochineal biological control agents, in South Australia they are rarely found in sufficient density for biological control to be viable.

Wheel cactus has a thick cuticle that reduces the penetration of herbicides and prevents attack by *Cactoblastis* caterpillars. One of the introduced strains of cochineal insect will feed

on this species, but damage is limited and its widespread use as a control measure is untested.

The control technique of stem/pad injection has been used effectively for wheel cactus in the Flinders Ranges.

Persistence

Individual *Opuntia* plants are long-lived. Fire is rarely a factor in the sparsely vegetated habitats where infestations occur, and they are little impacted by grazing.

Current distribution

The major infestations of wheel cactus occur in the Flinders Ranges and the adjoining North East Pastoral districts, and on permanent grazing lands near Peterborough and in the Mid Murray area.

Infestations of common prickly pear are in the Flinders Ranges and Riverland regions. Other spot infestations occur in the Adelaide area, along the highway from Adelaide to Port Augusta, Murray Bridge, Goolwa and Reevesby Island.

Opuntia aurantiaca, O. elatior, O. engelmannii, O. microdasys, O. monacantha, O. puberula, O. tomentosa and several other species occur as individuals and small patches close to gardens and former settlements wherever they have been planted in the agricultural and pastoral zones of South Australia.

State Level Risk Assessment

Assessment using the Biosecurity SA Weed Risk Management System gave the following comparative weed risk and feasibility of containment scores by land use, assuming a "worst case scenario" based on the species with the highest impacts and widest distribution:

Land use	Weed Risk	Feasibility of control	Response at State Level
Grazing - rangeland	high 112	high 16	contain
Native vegetation	high 112	high 16	contain

Considerations

Risk assessment at State level indicates containment as the management action in rangelands and native vegetation.

The Alinytjara Wilurara and South Australian Arid Lands regions aim to destroy infestations as they include most of the land at risk from prickly pears. The Limestone Coast and the Murraylands and Riverland regions aim to contain spread, and the Eyre Peninsula and Northern and Yorke aim to manage the weed. Prickly pears are monitored in the Green Adelaide, Hills and Fleurieu and Kangaroo Island regions where there is little or no land vulnerable to their impacts.

The opuntioid cacti including *Opuntia* species have been recognised collectively as a Weed of National Significance and will be the subject of a national control strategy.

Opuntia ficus-indica is the name given to a group of spineless hybrid forms that have been domesticated over many centuries. They are grown for their edible fruit in many home gardens, and commercially on a small scale in South Australia and other States. Therefore spineless *Opuntia ficus-indica* is not included in the declaration of prickly pears.

Synonymy

Opuntia Mill., Gard. Dict. Abr., ed. 4. (1754)

All species except *Opuntia ficus-indica* (L.) Mill. (approx. 170 species).

Tephrocactus Lem., Les Cactées 88. (1868).

All species.

Other common names of wheel cactus include bartolona, camuesa, dinner plate cactus, silver dollar cactus, sweet purple cactus and wheel pear.

References

Biosecurity SA (2009) *State Opuntioid Cacti Management Plan, December 2009*. 35 pp.

Sheehan, M.R. & Potter, S. (2017) *Managing Opuntioid Cacti in Australia*. Department of Primary Industries and Regional Development: Perth.

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