



Declared Plant Policy

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.

witchweeds (*Striga*)

Striga is a genus of between 30 and 40 species of parasitic herbs known as witchweeds. Four species (*S. curviflora*, *S. multiflora*, *S. parviflora* and *S. squamigera*) are native to northern Australia and are not covered by this policy. Several other species are major weeds of grasses including sugarcane and maize in the tropics and subtropics overseas. No *Striga* species occurs in South Australia, either wild or in cultivation.

Management Plan for Witchweeds

Outcomes

- Prevention of national movement of plants with potential to become major weeds.

Objectives

- Prevent any supply of witchweeds as a seed contaminant via South Australia to regions of Australia where they could become invasive weeds.

Best Practice Implementation

- Compliance action in the event of witchweed being detected as a contaminant in goods for sale.

Regional Implementation

Refer to regional management plans for further details.

Region	Actions
Alinytjara Wilurara	Prevent sale or movement
Eyre Peninsula	Prevent sale or movement
Green Adelaide	Prevent sale or movement
Hills and Fleurieu	Prevent sale or movement
Kangaroo Island	Prevent sale or movement
Limestone Coast	Prevent sale or movement
Murraylands and Riverland	Prevent sale or movement
Northern and Yorke	Prevent sale or movement
South Australian Arid Lands	Prevent sale or movement

Declaration

To implement this policy, witchweed is declared under the *Landscape South Australia Act 2019* throughout the whole of the State of South Australia. Its entry to South Australia, movement or transport on a public road by itself or as a contaminant, or sale by itself or as a contaminant are prohibited.

Witchweed is declared in category 3 under the Act, for the purpose of setting maximum penalties and for other purposes. Any permit to allow its entry, road transport or sale can only be issued by the regional landscape board or Green Adelaide 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 witchweed 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 witchweed. Note that certain produce or goods may be excluded from these general movement and sale exemptions by Gazettal Notice of the Chief Executive of the Department for Environment and Water.

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

Sections of Act	Region								
	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									
194 Recovery of control costs on adjoining road reserves									

Review

This policy is to be reviewed by 2025, or in the event of a change in one or more regional management plans for witchweed or its discovery in South Australia.

Weed Risk

Invasiveness

Witchweeds are parasites of grasses in tropical and subtropical regions. They have very small numerous seeds that are spread by cultivation machinery, runoff water, and in mud on vehicles, livestock and feet of humans.

Impacts

Most witchweeds parasitise tropical or summer-growing grass crops such as sugar cane, maize, sorghum, dryfield rice, pearl millet, oats and wheat. *Striga gesnerioides* parasitises the tropical legume crop cowpea. They attach to the host roots and draw nutrients and water, resulting in reduced growth and reduced grain yields.

Potential distribution

The host crops are not widely grown in SA as they are not adapted to this State's summer dry, winter growing season climate. If any form of *Zea mays*, such as sweetcorn or fodder maize became a significant crop under irrigation or in the high rainfall regions of SA, *Striga asiatica* or *Striga hermonthica* could potentially establish in these areas.

As parasites, witchweeds are not easy to cultivate and have no appeal to gardeners. They are not available commercially.

Feasibility of Containment

Control costs

Because most of the life cycle of witchweed is hidden below ground, its control requires management strategies including quarantine of affected areas, control of movement of farm equipment, selective herbicide treatments, and planting trap crops to reduce the seed bank in soil.

Persistence

Seed may remain viable in the soil for 10 to 20 years. Very large seed banks can develop under old infestations in continuously cropped land, with only a small percentage of seeds germinating each year. However, many legumes (soybean, pigeonpea, groundnut) act as trap crops for *Striga*, causing the seed to germinate but not allowing it to attach.

Current distribution

Not present in South Australia. Incursions of *S. asiatica* and *S. angustifolia* have been detected in Queensland.

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:

Land use	Weed Risk	Feasibility of control	Response at State Level
Irrigated pastures	low 13	very high 0	monitor
Vegetables	low 13	very high 0	monitor

Considerations

Meeting 17 of the Standing Committee on Agriculture and Resource Management (SCARM) committed every State and Territory to prohibit the deliberate trade and distribution of witchweed as one of six plants regarded as potential weeds by declaration under their respective weeds legislation. As prohibiting the sale of these plants will not impose an additional cost burden on any industry or landholders, no additional risk assessment is needed.

Synonymy

Striga Lour.; all species except *Striga curviflora* (R.Br.) Benth., *Striga multiflora* Benth., *Striga parviflora* (R.Br.) Benth. and *Striga squamigera* W.R.Barker, which are regarded as native to Australia.

Major weedy species of *Striga* around the world include:

- Striga angustifolia* (D.Don) Saldanha, Bull. Bot. Surv. India v. 70 (1963)
- Striga asiatica* (L.) Kuntze, Revis. Gen. Pl. 2: 466 (1891)
- Striga gesnerioides* (Willd.) Vatke, Oesterr. Bot. Z. 25: 11 (1875)
- Striga hermonthica* (Delile) Benth., Companion Bot. Mag. 1(12): 365 (1836)
- Striga lutea* Lour., Fl. Cochinch. 1: 22 (1790)

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Minister for Environment and Water

Date: 28 March 2021