



Government
of South Australia

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.

bellyache bush (*Jatropha gossypiifolia*)

A tropical shrub that has been declared a Weed of National Significance in Australia because it is invasive in subtropical and tropical summer rainfall climates.

Management Plan for Bellyache Bush

Outcomes

- No national trade in bellyache bush.
- No establishment of bellyache bush in South Australia.

Objectives

- Prevent any supply of bellyache bush via South Australia to other States or Territories where it is an invasive weed.
- Prevent the introduction of bellyache bush to South Australia.

Best Practice Implementation

- Compliance action in the event of bellyache bush being found on sale in South Australia.
- Respond to any incursion found in the northern part of the Alinytjara Wilurara region.

Regional Implementation

Region	Actions
Alinytjara Wilurara	Destroy infestations
Eyre Peninsula	Prohibit sale and road transport
Green Adelaide	Prohibit sale and road transport
Hills and Fleurieu	Prohibit sale and road transport
Kangaroo Island	Prohibit sale and road transport
Limestone Coast	Prohibit sale and road transport
Murraylands and Riverland	Prohibit sale and road transport
Northern and Yorke	Prohibit sale and road transport
South Australian Arid Lands	Prohibit sale and road transport

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Refer to regional management plans for further details.

Declaration

To implement this policy, bellyache bush is declared under the *Landscape South Australia Act 2019* throughout the whole of the State of South Australia to prevent any further entry, sale or movement of the plant. 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.

Bellyache bush is declared in category 2 under the Act for the purpose of setting maximum penalties and for other purposes. Any permit to allow its entry, sale or road transport can only be issued by the Chief Executive of the Department for Environment and Water (DEW) 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 bellyache bush 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 bellyache bush. Note that certain produce or goods may be excluded from these general movement and sale exemptions by Gazettal Notice of the Chief Executive of DEW.

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

Sections of Act	Region	AW	EP	GA	HF	KZ	LC	MR	NY	SAA
186(1) Prohibiting entry to area	X	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	X
188(1) Prohibiting sale of the plant	X	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	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 bellyache bush or a change in its status as a Weed of National Significance.

Weed Risk

Invasiveness

Bellyache bush is a shrub that can grow from seeds and vegetatively from root suckers or broken stems. Its seed production is not high, as individual seeds are relatively large. This is an advantage in its establishment.

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Most seed falls close to the parent plants. The pods can be dispersed by running water if they are shed into waterways. Seeds can also be transported as a contaminant of garden soil and in mud adhering to stock or vehicles. Dispersal of seeds by birds has been reported.

Impacts

It can form dense stands that reduce the regeneration of native plants including rangeland forage species. This is most severe along rivers. The fruits, containing the toxalbumin curcin and a purgative oil, are poisonous to stock and humans but other parts of the plant are less toxic.

Potential distribution

Bellyache bush grows in tropical, summer-rainfall climates. Infestations are found in disturbed rangelands, savannah or pasture. It may become deciduous in seasonally dry climates, regenerating from the stem or as root suckers in the next year. In its native range it grows on well-drained sands, sandy loams, loams and stony soils, in low elevation coastal areas.

It has sometimes been grown as a low-care garden plant in the tropics, and became naturalised there from garden escapes.

Predictive mapping indicates that the potential range of bellyache bush in Australia does not include any part of South Australia.

Feasibility of Containment

Control costs

Control of any bellyache bush incursion would be achieved by spot spraying or hand weeding, but would be expensive due to the remote area of the State where it would most likely occur.

Persistence

Bellyache bush is a woody plant that would persist once established by suckering and seedling regeneration. High seedling emergence can occur for at least four years after clearing of an infestation, but seed is not very long-lived in the soil, with only a small percentage remaining viable after 15 years.

Current distribution

Scattered in northern Australia from the Kimberley region of WA to just south of the Tropic of Capricorn in Queensland, but absent from 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:

Land use	Weed Risk	Feasibility of control	Response at State Level
Grazing - southern	negligible 0	very high 0	monitor
Grazing - rangeland	low 16	very high 0	monitor
Native vegetation	negligible 4	very high 0	monitor

Considerations

Bellyache bush is native to South America from Brazil to the Caribbean, but now has a pantropical distribution. It was grown in tropical Australia as an ornamental and spread from gardens into bush and pasture. Insects are being developed by CSIRO as biocontrol agents against it.

Various *Jatropha* species have been used as herbal medicines as aphrodisiacs for centuries and this use has caused many deaths overseas.

Risk assessment indicates monitoring as a management action at State level; since the species is absent from South Australia, this is implemented by preventing entry of bellyache bush to the State. As it is a Weed of National Significance, sale and movement of bellyache bush is prohibited in South Australia. In the Alinytjara Wilurara region the species is targeted for destruction in the event of an incursion occurring across the border from Western Australia or Northern Territory.

Synonymy

Jatropha gossypiifolia L., Sp. Pl. 2: 1006 (1753).

Nomenclatural synonyms:

Adenoropium gossypiifolium (L.) Pohl, Pl. Bras. Icon. Descr. 1: 16 (1826).

Manihot gossypiifolia (L.) Crantz, Inst. Rei Herb. 1: 167 (1766).

Taxonomic synonym:

Jatropha elegans (Pohl) Klotsch, Bot. Voy. Herald 3: 102 (1853).

Other common names include cotton-leaf physic nut, red physic nut, purging nut, red fig-nut flower, wild cassava, black physic nut, danmar menah, faux manioc and pinhão roxo. It has sometimes been confused with the castor-oil plant (*Ricinus communis*).

References

Bebawi, F., Vitelli, J., Campbell, S., Vogler, W., Lockett, C., Grace, B., Lukitsch, B. & Heard, T. (2009) *Jatropha gosssypiifolia* L. In Panetta, F.D. (ed) *The Biology of Australian Weeds* 3: 102-127.

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