



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.

variegated thistle (*Silybum marianum*)

Variegated thistle is a large, spiny annual weed of pastures. It is scattered in high rainfall, high fertility sites in southern South Australia.

Management Plan for Variegated Thistle

Outcomes

- Minimise losses to pasture production in higher rainfall areas due to variegated thistle.
- Prevent the spread of variegated thistle to uninfested vulnerable habitats.

Objectives

- Improve pastures to exclude variegated thistle.
- Prevent variegated thistle seed from dispersing from road reserves or properties to adjoining uninfested areas that are suitable for its establishment.

Best Practice Implementation

- Landscape boards in the active control regions (Kangaroo Island and Limestone Coast) to ensure high priority infestations, as determined by the authority, on private or public land are controlled in accordance with regional management plans.
- Landscape boards in the active control regions to control high priority infestations on road reserves.
- Landscape boards in the active control regions to ensure large infestations are contained according to property action plans.
- All regional landscape boards and Green Adelaide to ensure contaminated seed and fodder is not brought into, or distributed within, priority control areas in accordance with regional management plans.

Regional Implementation

Refer to regional management plans for further details.

variegated thistle policy

Region	Actions
Alinytjara Wilurara	Limited action
Eyre Peninsula	Limited action
Green Adelaide	Limited action
Hills and Fleurieu	Limited action
Kangaroo Island	Protect sites
Limestone Coast	Contain spread
Murraylands and Riverland	Limited action
Northern and Yorke	Limited action
South Australian Arid Lands	Limited action

Declaration

To implement this policy, variegated thistle is declared under the *Landscape South Australia Act 2019* throughout the whole of the State of South Australia. Its movement or transport on a public road by itself or as a contaminant, or sale by itself or as a contaminant, are prohibited. The Kangaroo Island and Limestone Coast Landscape Boards may require land owners to control the weed on their land. These two landscape boards are required to control plants on road reserves in their regions, and may recover costs from the adjoining land owners.

Variegated thistle is declared in category 3 under the Act for the purpose of setting maximum penalties and for other purposes. Any permit to allow its 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 variegated thistle on public roads. 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 variegated thistle. 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 variegated thistle 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									
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			
194 Recovery of control costs on adjoining road reserves					X	X			

Review

This policy is to be reviewed by 2025 or in the event of a change in one or more regional management plans for variegated thistle.

Weed Risk

Invasiveness

Variegated thistle depends on seed for dispersal. The seed has a pappus of feathery hairs but is not adapted for wind dispersal because the pappus easily breaks away from the heavy seed. Most falls within 18 metres of the parent plant. Fodder movement and livestock, particularly sheep, may also spread the seed.

Establishment is favoured by bare ground or sparse pasture, consequently infestations often occur on stock camps, rabbit warrens and cultivated fire breaks. Variegated thistle has a high early growth rate, which allows it to out-compete many pasture seedlings.

Impacts

Variegated thistle forms spiny rosettes up to 1m in diameter that smother pasture plants and prevent access by grazing stock. It can accumulate toxic levels of nitrates and has been known to cause stock losses, especially of cattle. In addition to its actual impacts, it also receives some attention because of its size and spiny, non-native appearance.

Potential distribution

Variegated thistle grows in higher rainfall areas receiving over 450 mm per annum, generally on fertile soils of alluvial or volcanic origin with high nitrogen. It can be expected to occupy these habitats in the southern Eyre Peninsula, Kangaroo Island, Mount Lofty Ranges, Fleurieu Peninsula, River Murray and Limestone Coast. It may also occur in drier areas on road verges and drains without being able to form paddock infestations.

Feasibility of Containment

Control costs

Variegated thistle is relatively easy to control by spot spraying with an appropriate herbicide. However, an integrated management program may be needed to control a large infestation by establishing a strong perennial pasture and strategic use of herbicide.

Persistence

Seeds can germinate at any time of year, but typically establish after rain in summer or autumn. Seedling survival is highest when there is little ground cover or competition from pasture or other plants.

Current distribution

Variegated thistle occurs as scattered infestations on both sides of the Mount Lofty Ranges, extending north to the Lower Flinders region. It is also recorded on Eyre Peninsula, Kangaroo Island, along the River Murray and reaches its greatest densities in the Limestone Coast region. While present in all regions where it can grow, there is scope for local spread.

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	medium 59	high 30	protect sites

Considerations

Variegated thistle is one of the European thistles that became established early in the colonisation of South Australia. It has spread to its limits but remains a problem in certain pastures.

Risk assessment at State level indicates site protection to minimise the impact of variegated thistle on southern permanent pastures. While sale and movement are prohibited uniformly across the State, other actions vary according to regional habitats and presence of the weed. In most regions, control is not enforced but left to the judgement of land owners. The Limestone Coast region contains spread, and the Kangaroo Island region protects sites, using enforced control where necessary. Only limited action is required in the other regions.

Synonymy

Silybum marianum (L.)J.Gaertner, Fruct. & Semin. Pl. 2: 378, t.162 (1791)

Basionym:

Carduus marianus L., Sp. Pl. 2: 823 (1753)

Taxonomic synonyms:

Carduus lactifolius Stokes, Bot. Mat. Med. 4: 141 (1812)

Carduus mariae Crantz, Inst. Rei Herb. 1: 248 (1766)

Cirsium maculatum Scop., Fl. Carniol., ed. 2. 2: 130 (1772)

Silybum maculatum (Scop.) Moench, Methodus (Moench) 555 (1794)

Other common names include blessed milk thistle, bull thistle, cabbage thistle, Gundagai thistle, holy thistle, milk thistle, Our Lady's thistle, spotted milk thistle, spotted thistle, St Mary's thistle and variegated artichoke.

Hon David Speirs MP
Minister for Environment and Water

Date: 28 March 2021