



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.*

### two-leaf Cape tulip (*Moraea miniata*)

Two-leaf Cape tulip is a winter-growing geophyte, introduced as ornamental bulb, and now locally important as a toxic pasture weed in higher rainfall regions of South Australia.

#### Management Plan for two-leaf Cape tulip

##### Outcomes

- Losses to grazing industry from two-leaf Cape tulip minimised.

##### Objectives

- Prevent spread of two-leaf Cape tulip to uninfested pastures.
- Eradicate high priority outbreaks in generally uninfested areas.
- Contain large infestations and reduce their density.

##### Best Practice Implementation

- Regional landscape boards and Green Adelaide to ensure that priority infestations on private or public land are controlled.
- Regional landscape boards and Green Adelaide to control priority infestations on road reserves.
- Promote techniques including rotations and herbicides for the reduction of large two-leaf Cape tulip infestations.
- To assist local control programs, the sale and movement of two-leaf Cape tulip is prohibited.

##### Regional Implementation

Refer to regional management plans for further details:

two-leaf cape tulip policy

| Region                      | Actions                               |
|-----------------------------|---------------------------------------|
| Alinytjara Wilurara         | Limited Action                        |
| Eyre Peninsula              | Monitor                               |
| Green Adelaide              | Destroy infestations                  |
| Hills and Fleurieu          | Destroy infestations                  |
| Kangaroo Island             | Destroy infestations – regional alert |
| Limestone Coast             | Contain spread                        |
| Murraylands and Riverland   | Protect sites                         |
| Northern and Yorke          | Manage weed                           |
| South Australian Arid Lands | Monitor                               |

## Declaration

To implement this policy, two-leaf Cape tulip 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. Green Adelaide and all regional landscape boards except the SA Arid Lands may require land owners to control two-leaf Cape tulip 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.

Two-leaf Cape tulip is declared in category 2 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 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 two-leaf Cape tulip 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 two-leaf Cape tulip. 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 two-leaf Cape tulip 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  | X  | X  | X  | X  | X  | X  |      |
| 194 Recovery of control costs on adjoining road reserves    | X      | X  | X  | X  | X  | X  | 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 two-leaf Cape tulip.

## **Rationale**

The form of two-leaf Cape tulip naturalised in Australia is a sterile triploid that reproduces by large numbers of seed-sized cormils, and has also become a widespread weed within its native range in South Africa.

The discontinuous and scattered distribution within the potential habitat probably reflects its initial dispersal as a garden plant. Cape tulips invade cleared land on soils ranging from sands to heavy waterlogged clays but cannot compete under dense tree or shrub cover, and are poorly adapted to lower rainfall areas.

## **Weed Risk**

### Invasiveness

The weedy form of two-leaf Cape tulip produces hundreds of tiny cormils in the leaf axils. These function like seeds that remain viable for a single year, germinating at the first autumn break after shedding. It has no effective strategy of long-range dispersal, which depends on movement with fodder, soil or machinery.

### Impacts

Two-leaf Cape tulip contains toxic cardiac glycosides; however, poisoning of stock is rare, occurring mainly in hungry cattle lacking experience of the plant. The unpalatability leads to increased abundance under grazing with a corresponding decline in carrying capacity.

### Potential distribution

Its potential distribution extends across the agricultural zone from the west side of Eyre Peninsula to the Limestone Coast including the southern end of the Flinders Ranges. The main sites open to infestation are pasture paddocks on heavy soils.

Because of its slow rate of spread, two-leaf Cape tulip has not reached its ecological limits in this State. It invades cleared land on soils ranging from sands to heavy waterlogged clays but cannot compete under dense tree or shrub cover. It requires winter rainfall, and is poorly adapted to lower rainfall areas. However, as the corms are dormant from December to the autumn break, climate parameters in summer do not influence its potential range.

## **Feasibility of Containment**

### Control costs

Cape tulips are not easily killed by herbicides. Their corms may remain dormant through a whole year, enabling a population to persist even if it were possible to kill all growing plants. A planned program over several years is therefore needed to destroy a population.

### Persistence

The proportion of corms remaining dormant is higher in years when the autumn break arrives late, but can be reduced by burning at this time.

### Current distribution

The distribution of two-leaf Cape tulip is disjunct due to its dependence on accidental transport between properties, but extends from southern Eyre Peninsula, Yorke Peninsula, Hills and Fleurieu to the Limestone Coast with scattered infestations in the lower Flinders ranges and the Murray mallee. It is absent from Kangaroo Island.

### **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:

| <b>Land use</b>     | <b>Weed Risk</b> | <b>Feasibility of control</b> | <b>Response at State Level</b> |
|---------------------|------------------|-------------------------------|--------------------------------|
| Grazing - southern  | high<br>118      | high<br>27                    | contain spread                 |
| Grazing - rangeland | negligible<br>2  | very high<br>2                | monitor                        |
| Native vegetation   | low<br>22        | very high<br>2                | monitor                        |

### **Considerations**

Risk assessment indicates contain spread as the action in southern permanent pastures, and monitoring in other land uses. While sale and movement are prohibited uniformly across the State, regional actions vary according to the land uses in each region.

Two-leaf Cape tulip is localised in the Hills and Fleurieu region, where infestations are prioritised for control and eventual destruction. As this weed is absent from Kangaroo Island, it is treated as a regional alert with any infestations to be destroyed. In the Murraylands and Riverland region, key sites and assets are protected from the weed. In the Limestone Coast region spread is contained by control of infestations. Infestations in the Eyre Peninsula and the SA Arid Lands regions are monitored.

### **Synonymy**

*Moraea miniata* Andrews, Bot. Rep. 6: t.404 (1804).

Nomenclatural synonym:

*Homeria miniata* (Andrews) Sweet, Brit. Fl. Gard. 2: t.152 (1826)

Taxonomic synonyms:

*Homeria albida* L. Bolus, J. Bot. 69: 258 (1931)

*Homeria lineata* Sweet, Brit. Fl. Gard. 2: t.178 (1826)

*Moraea gigantea* Klatt, Linnaea 35: 381 (1867)

*Moraea lineata* (Sweet) Steud., Nomencl. Bot. ed. 2: 2: 160 (1841)

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Other common names include poison tulip, rootulp and wild eschallot.

Hon David Speirs MP  
**Minister for Environment and Water**

Date: 28 March 2021