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.*

Coolatai grass (*Hyparrhenia hirta*)

Coolatai grass is a summer-growing perennial grass that degrades pasture by forming large unpalatable tussocks. It is a major weed in the eastern States and is now becoming established in South Australia.

Management Plan for Coolatai Grass

Outcomes

- Protect pasture and native vegetation from encroachment by Coolatai grass.

Objectives

- Contain and remove priority infestations in the infested regions.
- Prevent establishment of further incursions in other regions.

Best Practice Implementation

- Regional landscape boards and Green Adelaide to monitor further incursions and spread of Coolatai grass in the regions.
- Regional landscape boards and Green Adelaide to ensure that priority infestations on private or public land are controlled.
- Extension to enable landowners to recognise Coolatai grass.

Regional Implementation

Refer to regional management plans for further details.

Region	Actions
Alinytjara Wilurara	Destroy infestations – regional alert
Eyre Peninsula	Destroy infestations – regional alert
Green Adelaide	Destroy infestations
Hills and Fleurieu	Destroy infestations
Kangaroo Island	Destroy infestations – regional alert
Limestone Coast	Destroy infestations
Murraylands and Riverland	Destroy infestations
Northern and Yorke	Destroy infestations – regional alert
South Australian Arid Lands	Destroy infestations – regional alert

Declaration

To implement this policy, Coolatai grass is declared under *the Landscape South Australia Act 2019* throughout the whole of the State of South Australia so that movement of contaminated fodder or machinery can be prevented. Its movement or transport on a public road, by itself or as a contaminant, or sale by itself or as a contaminant are prohibited. Notification of infestations is necessary to ensure these are controlled. Regional landscape boards and Green Adelaide may require land owners to control Coolatai grass plants growing on their properties. These authorities are required to control plants on road reserves in their regions and may recover costs from the adjoining land owners.

Coolatai grass is declared in category 2 under the Act for the purpose of setting maximum penalties and for other purposes. Any permit to allow its 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 Coolatai grass 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 Coolatai grass. 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 Coolatai grass 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									
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	X	X	X	X	X	X	X	X	X
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

Review

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

Weed Risk

<u>Invasiveness</u>

Coolatai grass has high seed production. It spreads readily by seed, which germinates on road reserves after being carried long distances on vehicles. It may also move directly between paddocks in fodder or on vehicles and livestock. Soil movement, slashing and water flow have been found to be the main agents of dispersal along roadsides in other States.

Seed can germinate readily over a wide range of temperatures, light regimes and soil pH levels and under marginal water stress.

Impacts

Coolatai grass makes efficient use of available water in the summer growing season due to its mode of photosynthesis, and has a similar niche to kangaroo grass tending to become dominant in open habitats such as woodlands and grasslands with 400–700 mm annual rainfall. It develops as large tussocks in which the new growth is surrounded by tough, unpalatable older leaves, reducing the cover of useful forage in pasture paddocks, forms a dense cover that excludes native regeneration or growth of more palatable grasses, and carries a heavy load of inflammable older leaf material.

Potential distribution

Coolatai grass could grow in most of the perennial grazing lands in the southern part of state, and in higher rainfall parts of the rangelands. It does not tolerate waterlogging and would be excluded from poorly drained habitats.

Feasibility of Containment

Control costs

Herbicides are most effective for the control of Coolatai grass when used in two carefully timed applications after a pre-application burning. Coolatai grass is therefore perceived by landholders as difficult to control. Burning and mowing may spread an infestation or make it denser if used alone. However, heavy, constant grazing over a few years can provide control. A combination of chipping and spraying is used to control Coolatai grass in native vegetation, allowing native regeneration to exclude the weed.

Persistence

Coolatai grass forms tough long-lived perennial tussocks that resist grazing and resprout after burning. There is likely to be a seed bank formed with seedlings appearing for at least a few years after tussocks are sprayed out.

Current distribution

Established in the Adelaide area where it is invasive on former grazing land in the northern suburbs, and spot infestations have been found on roadsides elsewhere in 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	high 114	high 16	contain spread
Native vegetation	low 20	high 17	monitor
Grazing - rangelands	low 17	very high 4	monitor

Considerations

Coolatai grass was introduced to Australia from the late 1940s to the mid 1960s as a potential pasture plant. It is now an established weed in the summer-rainfall climates of southern Queensland on well-drained soils.

It is related to kangaroo grass (*Themeda triandra*), redleg grass (*Bothriochloa macra*) and lemon scentgrass (*Cymbopogon ambiguus*), all native grasses in the tribe Andropogoneae. It has been sold as a native grass for landscaping, and may still appear in nurseries, possibly mis-labelled as kangaroo grass.

Risk assessment indicates containment as the action at State level to protect southern permanent pastures from Coolatai grass. As it is still absent from some regions, destruction of new infestations in clean areas is the most effective approach to containment. In the Green Adelaide and Hills and Fleurieu regions, priority infestations are targeted for destruction. In other regions where Coolatai grass is rare or absent, infestations are destroyed when found.

Synonymy

Hyparrhenia hirta (L.)Stapf, Fl. Trop. Afr. 9: 315. (1919).

Basionym: *Andropogon hirta* L., Sp. Pl. 1046 (1753).

Nomenclatural synonyms:

Cymbopogon hirtus (L.)Thomson, J. Discov. Source Nile 652. (1863)
Heteropogon hirtus (L.) Andersson, Beitr. Fl. Aethiop. 310 (1867)
Sorghum hirtum (L.)Kuntze, Revis. Gen. Pl. 2: 792. (1891)
Trachypogon hirtus (L.)Nees, Fl. Bras. Enum. Pl. 2: 346. (1829)

Taxonomic synonyms:

Andropogon giganteus Ten., Fl. Napol. 5: 285 (1835)
Hyparrhenia pubescens (Andersson) Chiov., Pl. Nov. Aethiop. 29 (1928)

Other common names include dektamboekiegras, common thatching grass and South African bluestem. It has sometimes been incorrectly called Tambookie grass in SA through confusion with *Hyparrhenia filipendula*.

References

Chejara, V.K., Kriticos, D.J., Kristiansen, P., Sindel, B.M., Whalley, R.D.B. & Nadolny, C. (2010) The current and future potential geographical distribution of *Hyparrhenia hirta*. Weed Research 50: 174-184.

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