Declared Plant Policy

under the Natural Resources Management Act 2004

Government of South Australia

asparagus fern (*Asparagus scandens*)

Asparagus fern is a perennial climbing vine (also known as climbing asparagus), with a scrambling habit and tuberous roots. It is localised in South Australia, where it invades native vegetation understory, smothering shrubs and small trees.

Management Plan for asparagus fern

Outcomes

- Maintain the integrity of native vegetation by minimising invasion and impacts of asparagus fern.

Objectives

- Contain existing infestations to prevent spread into uninvaded areas.
- Eradicate asparagus fern from sites of high conservation significance.
- Destroy priority infestations in accordance with NRM board regional management plans.

Implementation

- Biosecurity SA to publicise the new status of asparagus fern as a declared plant.
- NRM authorities to destroy infestations at high priority sites in accordance with regional management plans.
- Identification and strategic control of outlier infestations
- Prohibition on sale of asparagus fern to be enforced when detected by NRM authorities.

Regional Implementation

Refer to regional management plans for further details.

NRM Region	Actions
Adelaide and Mount Lofty Ranges	Protect sites
Alinytjara Wilurara	Prevent entry or sale
Eyre Peninsula	Destroy infestations
Kangaroo Island	Prevent entry or sale
Northern and Yorke	Prevent entry or sale
South Australian Arid Lands	Prevent entry or sale
South Australian Murray Darling Basin	Protect sites
South East	Destroy infestations

Declaration

To implement this policy, asparagus fern is declared under the *Natural Resources Management Act, 2004* throughout the whole of the State of South Australia. The movement or transport of the plant on a public road, by itself or as a contaminant, or the sale by itself or as a contaminant is prohibited. NRM authorities in the Adelaide and Mount Lofty Ranges, Eyre Peninsula, South Australian Murray-Darling Basin and South East regions, may require land owners to control asparagus fern plants growing on their land. NRM authorities in these regions are required to control plants on road reserves, and may recover costs from the adjoining landowners.

Asparagus fern is declared in category 2 under the Act, for the purpose of setting maximum penalties and for other purposes. Any permit to allow its movement or sale can only be issued by the Chief Officer pursuant to section 188.

The following sections of the Act apply to asparagus fern throughout each of the the NRM regions noted below:

Region / Sections of Act	AMLR	AW	EP	KI	NY	SAAL	SAMDB	SE
175(1) Prohibiting entry to area	X	X	X	X	X	X	X	X
175(2) Prohibiting movement on public roads	X	X	X	X	X	X	X	X
177(1) Prohibiting sale of the plant	X	X	X	X	X	X	X	X
177(2) Prohibiting sale of contaminated goods	X	X	X	X	X	X	X	X
180 Requiring notification of infestations								
182(1) Landowners to destroy the plant on their properties								
182(2) Landowners to control the plant on their properties	X		X				X	X
185 Recovery of control costs on adjoining road reserves	X		X				X	X

Review

This policy is to be reviewed by 2020, or in the event of a change in one or more regional management plans for asparagus fern or a change in its status as a Weed of National Significance.

Weed Risk

Invasiveness

Asparagus fern is an aggressive plant that produces tubers which form dense impenetrable mats. It can grow in dense shade in undisturbed and disturbed forests and damp to dry open woodlands. Asparagus fern tolerates frosts, drought and saline soils.

Birds are major contributors to the dispersal of seed. Foxes and rabbits may also contribute to the dispersal of seed. Water borne seed dispersal also occurs along creeks and in swamps. Dense germinations can occur at the high water mark where seed is deposited with debris.

Asparagus fern can also spread vegetatively, through rhizome fragments, via machinery and the dumping of garden waste into bushland. In some instances plant exchanges via gardeners may also contribute to its spread.

Impacts

Asparagus fern can form curtains up to 3 metres high that smother the understory. It can prevent the regeneration of shrubs and ringbark the plants that it twines up. Dense infestations can form impenetrable thickets that limit movement through bushland.

Asparagus fern forms masses of tuberous roots below the ground and possibly alters soil biota. In mature plants the roots contribute to approximately 90% of the total mass.

Its shade tolerant nature and dispersal ability allows asparagus fern to invade intact native vegetation, as well as disturbed sites, such as roadsides and cleared areas.

Potential distribution

Climate suitability modelling indicates asparagus fern has not reached its potential distribution. Further spread is possible throughout most of the Eyre Peninsula, Kangaroo Island, Adelaide & Mount Lofty Ranges, Northern and Yorke and South-East regions, and the southern part of the SA Murray-Darling Basin region.

Feasibility of Containment

Control costs

Control by herbicides is labour-intensive, especially in less accessible sites. It is difficult to avoid some off-target damage to native vegetation as asparagus fern grows entwined amongst native plants. Digging the tuberous roots is only effective in small isolated infestations or after several years of herbicide treatment on larger infestations. Despite extensive research no known biological control options have been found for this species.

Persistence

Asparagus fern does not persist under grazing but regenerates readily from tubers after fires. Seed production is less abundant compared to some asparagus weeds, such as bridal creeper and bridal veil. Seed is not likely to persist for long periods, but seedlings can be difficult to spot, making thorough control and/or eradication difficult.

Unlike other asparagus weeds asparagus fern does not die back during summer. It continues to grow throughout the year and ripe fruit and seeds can remain on the plant from one season to the next.

Current distribution

Asparagus fern infestations are located in the Adelaide Hills, on the Fleurieu Peninsula and near Millicent in the South East of SA. Plants are numerous on private properties and along roadsides in the suburbs of Crafers, Stirling and Aldgate in the Adelaide Hills.

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
Native vegetation	high	high	contain spread

	138	30	

Considerations

Asparagus fern is one of the species in the group of asparagus weeds listed as Weeds of National Significance, and subject to a national strategic plan.

Biological control agents released for the control of bridal creeper have no effect on Asparagus fern.

Asparagus fern is a relatively common garden plant found in suburban Adelaide. As such it is not likely to be viewed as weedy by many people. Education and awareness activities will be needed to support the regional and state management goals of preventing entry and spread into new areas.

Asparagus fern poses a risk where it is found within proximity to native vegetation in parks and reserves and along dispersal routes such as roadsides. The continued dispersal of asparagus fern by humans can be reduced by encouraging good hygiene practices for the use of machinery and vehicles, reducing the dumping of garden waste into roadside vegetation and increasing awareness of gardeners using multiple media.

Synonymy

Asparagus scandens Thunb., Prodr. Pl. Cap. 66 (1794).

Nomenclatural synonyms:

Asparagopsis scandens (Thunb.) Kunth, Enum. Pl. 5: 78 (1850).
Myrsiphyllum scandens (Thunb.) Oberm., Bothalia 15: 86 (1984).

Taxonomic synonym:

Asparagus pectinatus DC., Liliac. 7: t. 407 (1813)

Other common names include climbing asparagus, myrsiphyllum and snakefeather (NZ).

References

Timmins, S.M. & Reid, V. 2000, Climbing asparagus, *Asparagus scandens* Thunb: a South African in your forest patch, *Austral Ecology*, vol 25, pp. 533-538.

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