

Declared Plant Policy

under the Natural Resources Management Act 2004



Government
of South Australia

cutleaf mignonette (*Reseda lutea*)

Cutleaf mignonette is a deep-rooted perennial weed of rotational broadacre cropping and pasture. It is widely scattered in southern South Australia but does not occur in all areas suitable for its establishment.

Management Plan for Cutleaf mignonette

Outcomes

- Minimise losses to agriculture due to cutleaf mignonette.

Objectives

- Control and contain cutleaf mignonette infestations in accordance with NRM board Regional Management Plans.
- Prevent the spread of cutleaf mignonette into uninfested areas of the State.
- To prevent the reinfestation of areas cleaned of cutleaf mignonette

Implementation

- Landowners to control infestations on their lands.
- NRM authorities to control infestations on road reserves.
- NRM authorities to enforce control where necessary to protect agricultural land from local spread of cutleaf mignonette.
- To assist local control programs, the sale and movement of cutleaf mignonette is prohibited.

Regional Implementation

Refer to regional management plans for further details.

NRM Region	Actions
Adelaide and Mount Lofty Ranges	Manage sites
Alinytjara Wilurara	Destroy infestations – Regional alert
Eyre Peninsula	Contain spread
Kangaroo Island	Destroy infestations - Regional alert
Northern and Yorke	Manage weed
South Australian Arid Lands	Limited action
South Australian Murray Darling Basin	Destroy infestations
South East	Protect sites

Declaration

To implement this policy, cutleaf mignonette 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 all regions may require land owners to control cutleaf mignonette plants growing on their land. NRM authorities are responsible for the control of infestations on road reserves and may recover costs from the adjoining land owners.

Cutleaf mignonette 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. Under the *Natural Resources Management (General) Regulations 2005*, the transport or movement of grain for milling or wool for cleaning is exempt from the operation of sections 175 and the sale of wool or grain is exempt from section 177(2) if at the time of the sale the person believes on reasonable grounds that the purchaser will remove the plant from the wool or grain before any re-sale.

The following sections of the Act apply to cutleaf mignonette throughout each of the NRM regions noted below:

Sections of Act	Region							
	AMLR	AW	EP	KI	NY	SAAL	SAMDB	SE
175(1) Prohibiting entry to area								
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	X	X	X	X
185 Recovery of control costs on adjoining road reserves	X	X	X	X	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 cutleaf mignonette.

Weed Risk

Invasiveness

Cutleaf mignonette produces large amounts of seed that remain viable for 3-4 years and are spread in agricultural produce, vehicles, machinery, livestock and fodder. The extensive roots are succulent and are able to regenerate from fragments when spread by cultivation. It can establish in vigorously growing crops and pastures

Impacts

Cutleaf mignonette is an effective competitor in cereal crops, and can severely reduce yields and the cost of control is expensive. A heavy infestation in a cereal crop can reduce yield by up to 60%. It has been estimated that the cost to the South Australian grains industry due to cutleaf mignonette infestations is approximately \$2.2million per annum.

cutleaf mignonette policy

The seed is an unwanted contaminant of broad acre crops and hard to clean from harvested grain. Crops contaminated with cutleaf mignonette can be downgraded in quality resulting in economic losses.

It also acts as an alternative host of the watermelon mosaic virus and the cucumber mosaic virus.

Cutleaf mignonette is of some use as fodder on land that is too poor for sown pastures to be economically viable. However, it is unpalatable and is only grazed when no other feed is available.

Potential distribution

Cutleaf mignonette grows in areas receiving between 225 mm and 625 mm of rainfall annually, surviving droughts and the levels of frost found in SA. It is able to grow on a range of soil types from deep sands to mallee clay loams and is well adapted to calcareous soils with a pH of 8 or higher. These conditions prevail throughout much of the cereal growing areas of South Australia.

Feasibility of Containment

Control costs

Some chemical control methods are available for cereal crops and pastures. Shoots of cutleaf mignonette are easily killed, but translocation of herbicides through the root system is limited and regrowth from the roots occurs. In heavily infested paddocks, the best available herbicide treatments only suppress the weed and yield reduction occurs until the infestation is controlled by repeated spraying. Grazing and mowing are not successful in controlling this weed because it can regrow from the deep root system.

Persistence

The root system of cutleaf mignonette typically extends 2 m deep. This enables established infestations to survive through drought years, and spread within a paddock by root fragments if cultivated. Plants emerge from mid to late winter, flower in spring but often remain green into summer as they tap water from the subsoil.

Current distribution

Cutleaf mignonette is widely naturalised in the cereal growing belt and southern regions of 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-south	Medium 39	High 30	Protect sites
Crop-Pasture rotation	High 162	Medium 42	Protect sites
Grazing-rangeland	Negligible 2	Very High 2	Monitor

Considerations

Cutleaf mignonette occurs on coastal vegetation in Europe and the Mediterranean, and was brought to SA in ships' ballast. Its present distribution in South Australia reflects opportunities for seed transport rather than its ecological limits. It has a potential to become a significant economic problem for primary production and sustainable land use for agriculture in areas where it is not yet established.

Risk assessment indicates site protection as the action in rotational cropping and southern permanent pastures. While sale and movement are prohibited uniformly across the State, regional actions vary according to the land uses in each region.

Cutleaf mignonette is absent or localised in the Alinytjara Wilurara, Kangaroo Island and South Australian Murray Darling Basin regions, where infestations are destroyed. In the Eyre Peninsula region, spread is contained by control of infestations. In the South East region, sites are protected and in the Northern and Yorke region the weed is managed. This species is less significant in the Adelaide and Mount Lofty Ranges region, where sites are managed, and the South Australian Arid Lands where only limited action is necessary.

Synonymy

Reseda lutea L., Sp. Pl. 1:449 (1753)

Taxonomic synonyms:

- Reseda benitoi* Sennen, Bol. Soc. Arag. 15: 263 (1916)
- Reseda clausa* Muell.-Arg., Bot. Zeit. 14:39 (1856)
- Reseda difformis* Moench, Suppl. Meth. Pl. 22 (1802)
- Reseda fluminensis* Simonkai, Magyar Nov. Lapok 12:19 (1888)
- Reseda gracilis* Tenore, Fl. Neapol. Prodr. App. V : 15 (1826)
- Reseda macedonica* Formánek, Verh. Naturf. Ver. Brünn 34: 332 (1895)
- Reseda mediterranea* L., Mant. Alt. 564 (1771)
- Reseda mucronata* Tineo, Cat. Pl. Hort. Panorm. 280 (1827)
- Reseda nainii* Maire, Bull. Soc. Hist. Afr. Nord 14:126 (1923)
- Reseda neglecta* Muell.-Arg., Mon. Res. : 178 (1857)
- Reseda othryana* Form., Verh. Naturf. Ver. Brünn 35: 190 (1897)
- Reseda podolica* Rehm., Verh. Naturf. Vereins Brünn 10: 55 (1872)
- Reseda ramosissima* Pourr. ex Willd., Enum. Pl. 1: 499 (1809)
- Reseda truncata* Fisch. & C.A.Mey., Index Seminum [St. Petersburg] 4: 45 (1838)
- Reseda vinyalsi* Sennen, Diagn. Nouv. Pl. Esp. Mar. 302 (1936)
- Reseda vivanii* P.Monts., Bull. Soc. Bot. France 120: 47 (1973)
- Reseda vulgaris* Mill., Gard. Dict. (1798)

Other common names include gelbe wau, wild mignonette and yellow mignonette.

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Conservation

Date: 28 July 2014