

Declared Plant Policy
under the Natural Resources Management Act 2004



muskweed (*Myagrum perfoliatum*)

Muskweed is an annual winter weed of broad acre crops, in which it is significant as a seed contaminant. It has a limited distribution in South Australia.

Management Plan for muskweed

Outcomes

- Minimise losses to cereal, grain legume and canola production from muskweed.

Objective

- Prevent further spread of muskweed between properties as a seed contaminant.

Implementation

- NRM authorities to prevent movement of contaminated seed as detected in accordance with NRM board regional management plans.

Regional Implementation

Refer to regional management plans for further details.

NRM Region	Actions
Adelaide and Mount Lofty Ranges	Monitor
Alinytjara Wilurara	Limited action
Eyre Peninsula	Prevent entry or sale
Kangaroo Island	Prevent entry or sale
Northern and Yorke	Contain spread
South Australian Arid Lands	Limited action
South Australian Murray Darling Basin	Prevent entry or sale
South East	Prevent entry or sale - Regional alert

Declaration

To implement this policy, muskweed 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, its entry to South Australia, or sale by itself or as a contaminant are prohibited.

Muskweed is declared in category 3 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

muskweed policy

by the regional NRM Board 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 muskweed 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	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								
185 Recovery of control costs on adjoining road reserves								

Review

This policy is to be reviewed by 2020 or in the event of a change in one or more regional management plans for muskweed.

Weed Risk

Invasiveness

Muskweed is an annual and is spread as seed, primarily in seed of annual winter crops for sowing. Its seed production is low, compared to other annual crucifer weeds.

Impacts

Muskweed competes strongly with cereals and winter annual broadleaf crops such as chickpeas, canola, lupins, faba beans, field peas and lentils, reducing yields by up to 50%. It is also a contaminant reducing value and marketability of seed and hay, and may cause blockages of machinery during harvest.

Potential distribution

Muskweed is adapted to alkaline clay soils, where it can become the main crucifer weed in a crop, analogous to the role of wild radish on lighter soils. Its potential range would include the southern half of the arable farming zone in SA, southern Eyre Peninsula, Yorke Peninsula, the mid-north and the South East.

Feasibility of Containment

Control costs

Muskweed can be difficult and expensive to control once established in cropping land, where both an early post-emergent spray and late selective spray-topping may be necessary each year. There are few herbicides registered for cereals or fallows and it is tolerant to many herbicides commonly-used in these situations. There are no herbicide registrations for selective control in broadleaf crops.

Persistence

The seedbank of muskweed lasts up to 10 years with seed being found up to 40 cm deep in self-mulching soils. It has staggered germination throughout the growing season, allowing it to re-establish after early post-emergent herbicide treatments. The weed is easily recognised but late germinations may not be noticed in a standing crop.

Current distribution

Muskweed is scattered in the Northern and Yorke and the South East regions, and also recorded from Eyre Peninsula. It is not present on most properties in these regions.

State Level Risk Assessment

Assessment using the PIRSA Weed Risk Assessment protocol 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
Crop-pasture rotation	medium 45	high 18	protect sites

Considerations

Muskweed is native to Europe, north Africa and western Asia. It is also established in Victoria, and has been recorded from NSW and the Queensland border.

Sale of seeds of muskweed, as a contaminant of seeds for sowing, was prohibited under the former *Seeds Act, 1979*. When this Act was repealed in 2002, the prohibition was continued under section 54 of the former *Animal and Plant Control (Agricultural Protection and Other Purposes) Act, 1986* and subsequently under section 177 of the *Natural Resources Management Act, 2004*.

Risk assessment indicates protect sites as the management action; this is implemented by containing spread through the prohibition on movement and sale.

Synonymy

Myagrum perfoliatum L., Sp. Pl. 2: 640 (1753).

Nomenclatural synonym: *Rapistrum perfoliatum* (L.) Bergeret, Phyt. 3: t. 167

Taxonomic synonym: *Crucifera myagrum* E.H.L.Krause, Deutschl. Fl. (Sturm), ed. 2. 6: 122. (1902)

Other common names include birds-eye cress and mitre cress.

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Conservation

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