

Weed Sheet

Declared weed sheet : Silverleaf Nightshade



Government of South Australia
South Australian Murray-Darling Basin
Natural Resources Management Board

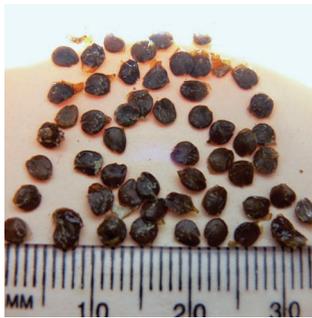
Silverleaf Nightshade

(Solanum elaeagnifolium)

Silverleaf nightshade is a 'difficult to kill' perennial plant that spreads by seeds and root fragments. It reduces crop yields and is poisonous to stock.



Silverleaf Nightshade



What is it?

Silverleaf nightshade, once established, is very difficult to control. The plant's extensive root system can reach a depth of more than 2metres. The plant is moderately tolerated by stock and seed can be spread in animal faeces.

What does it look like?

Growth: Perennial herb up to 800mm tall, mainly growing in spring and summer, while being semi dormant during winter. It has the capacity to grow in high and low rainfall and in all soil types. All parts of the plant are toxic.

Leaves: Leaves are silver-green and have approximately 4mm long yellow prickles on the undersides which are also present on the stems.

Flowers: Flowering occurs from November to February. The flowers are up to 35mm in diameter with 5 fused purple petals and prominent yellow anthers.

Fruit: Fruit are round and berry like and change in appearance from green stripes to motley yellow and orange when mature and contain up to 150 seeds.

Root: Root system can penetrate to a depth of 2metres; localised spread is achieved from lateral (horizontal) roots up to 3m from the parent plant.

Why is it a problem?

Silverleaf nightshade is not easily controlled by herbicides or standardised management practices. It can reduce the yield of wheat crops by 50% and competes effectively with winter and perennial grass pastures by taking water and nutrients during the preceding summer. Sheep can carry the seed in their digestive tract for several weeks without affecting the germination capability of the seed. Root fragments are easily spread by cultivation or disturbance.

Affected land uses : Cropping/grazing, Rangeland Grazing, Pasture land uses are affected by the presence of this pest plant.

Where is it found?

Silverleaf nightshade has been recorded in all Australian mainland states and territories. In South Australia, Silverleaf nightshade can be found extensively across the Murray Mallee and Northern and Yorke Peninsula agricultural regions, and in smaller scattered and isolated infestations in the South East and on the Eyre Peninsula.

How is it spread?

Machinery, particularly cultivation equipment, aids in the transport of root fragments from which new plants can arise. The fruits and seeds are consumed and spread by birds and livestock and can be transported as a contaminant of hay and fodder products or spread via floodwaters.

How do we control it?

Prevention:

Ensure that machinery, hay and livestock purchases are weed free. New livestock should be 'emptied out' by confining to one paddock for several weeks. Ensure control measures are implemented on all roadside infestations to prevent entry onto your property.

Physical control:

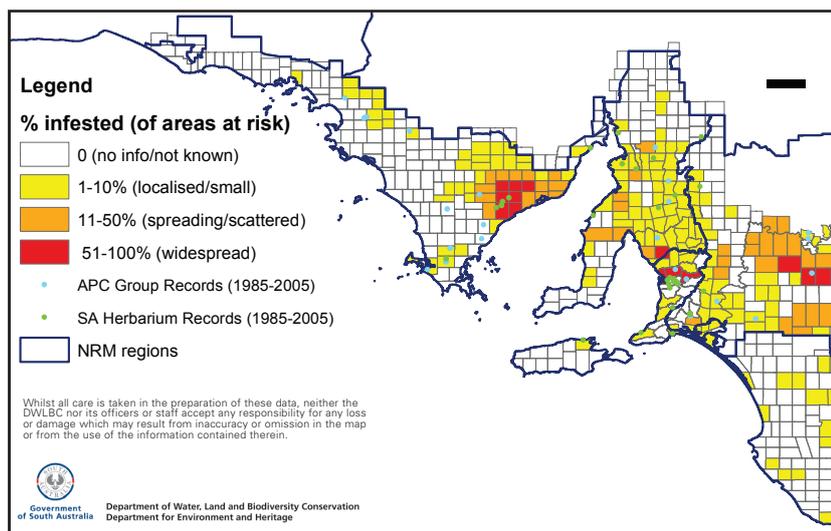
Suppress Silverleaf nightshade during summer to reduce seed set and plant vigour, suppression may be achieved by mowing or through the use of knockdown chemicals prior to the formation of mature berries e.g. Glyphosate. The allelopathic (growth inhibiting) nature of eucalypt species are being investigated to manage roadside infestations of Silverleaf nightshade.

Chemical control:

Isolated plants may be treated with Picloram or mixtures of Picloram and 2-4D. Picloram is a soil active herbicide and should be used with care. Ensure that label directions are read and followed prior to application.

Biological control:

Due to Silverleaf nightshade being closely related to tomatoes, eggplants capsicum and tobacco, biological agents are not considered an option.



Infestation Level of SILVERLEAF NIGHTSHADE (*Solanum elaeagnifolium*) by 100s in the State of South Australia*

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		X	X								

X denotes root growth only, aerial growth remains standing

Yearly Weed Life Cycle of SILVERLEAF NIGHTSHADE (*Solanum elaeagnifolium*) in the State of South Australia

 Germination	 Active growth
 Flowering	 Fruiting

For more advice on recognising and controlling Silverleaf nightshade, contact your local Natural Resources Management Board Officer.

References

Animal & Plant Control Commission of SA (2000) Weed Identification Notes – Silverleaf Nightshade. Available online http://www.dwlbc.sa.gov.au/biodiversity/pests/weeds/plant_id.html

North West Weeds, Noxious weed control unit for Gwydir and Inverell shires, Silverleaf nightshade. Available online http://www.northwestweeds.nsw.gov.au/Silverleaf_nightshade.pdf

Parsons, W.T., Cuthbertson, E.G. (2001) Noxious Weeds of Australia, 2nd Ed. CSIRO Publishing. www.publish.csiro.au

Weeds CRC, Silver-leaf Nightshade http://www.weeds.crc.org.au/main/wom_silverleaf_nightshade_1004.html



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Legislation

Silverleaf nightshade is declared under the Natural Resource Management (NRM) Act 2004.

Declared Plant Class: 2a
Declared Plant Category: 2

The following provisions of the NRM Act 2004 are to be applied to the whole of the State:

175(2) - relates to the movement of plants on public roads within a control area.

177(1)(2) - relates to the sale of plants, produce or goods carrying plants.

180(1) - relates to the notification of the plant's presence to a relevant NRM authority.

182(2)(3) - relates to the obligation of an owner of land to control and keep controlled the plant and take any measures prescribed by the relevant authority.

185(1) - relates to the ability of the NRM authority to recover the costs of control on roadsides from adjoining landholders.

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