



Government  
of South Australia

## Plant Policy

### Slender Thistle (*Carduus tenuiflorus*)

Slender thistle is an annual weed with a scattered distribution in the southern part of South Australia.

#### **Weed Risk**

##### Invasiveness

Slender thistle spreads for medium distances by wind-dispersed seed, which can also be carried longer distances as a contaminant of produce. Birds eat the seed but do not distribute it. Seed production can be high in dense infestations, but there is no means of vegetative spread.

Seed germinates after the autumn break and establishes on bare and disturbed sites including annual pastures that have died off to leave bare ground at the end of summer. The seedlings remain in the rosette stage over winter and flower in September before dying in December.

##### Impacts

Slender thistle is a competitor of improved pastures in high rainfall areas of the eastern States as it outgrows subterranean clover and ryegrass, but even in that situation its presence varies from year to year. It is not highly competitive in most pastures in this State and is easily controlled. Infestations are found mainly on roadsides, stockyards, sheep camps, rabbit warrens and heavily grazed annual pastures.

It is avoided by stock because of its spines, but is potentially toxic if eaten in large quantities as it accumulates nitrate. Spiny fragments of the plant can contribute to vegetable fault in wool.

Slender thistle is not a weed of cereal crops in South Australia. It is easily controlled by cultivation, and by herbicides in lupins, peas and most broadleaf crops.

##### Potential distribution

Slender thistle is native to the Mediterranean basin, extending as far north into Europe as Belgium and Ireland. It is weedy on moderate to highly fertile soils that receive more than 500 mm rainfall per year. Like most thistle species, it has a high requirement for soil nitrogen.

#### **Feasibility of Containment**

##### Control costs

There are many low-cost herbicides used to treat spot infestations of slender thistle and other thistles.

Any extensive infestations should be treated as part of pasture improvement programs, integrating herbicide treatments with replanting and careful management.

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### Persistence

Slender thistle may be abundant at a site in a wet year, and be replaced by other weeds in drier years. It does not form a large seed bank in the soil, with seeds generally remaining viable for less than 10 years even if most of them do not germinate in a wet autumn.

### Current distribution

Slender thistle is scattered through the agricultural regions of South Australia. It is common in all the higher rainfall grazing areas, including the Lower South East, Adelaide Hills and Lower Eyre Peninsula, but more widely scattered in the Mid North and on Kangaroo Island.

### **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:

<b>Land use</b>	<b>Weed Risk</b>	<b>Feasibility of control</b>	<b>Response at State Level</b>
Crop/pasture rotation	low 20	very high 8	monitor
Grazing - southern	medium 45	low 61	manage sites
Irrigated pastures	medium 63	medium 45	manage sites
Vegetables	low 20	high 23	monitor
Perennial horticulture	low 13	medium 51	limited action

### **Considerations**

Slender thistle was established in South Australia before 1881, when it was recorded as growing along roadsides, waste places and to a lesser extent on cultivated ground. It was declared under the *Noxious Weeds Act 1932* for certain areas of the Murray Reclaimed Swamp areas in the District Council of Mobilong in 1940, at the request of local landholders. It was declared for other areas following further requests from councils.

Over the last 30 years, local control programs have been aimed at treating conspicuous dense infestations to prevent seed spread in hay or airborne seed. At the 1991 review of plant proclamations, some Animal and Plant Control Boards on Eyre Peninsula and the Mount Lofty Ranges kept the option of enforcing control in certain local government areas but the statewide prohibitions on sale and transport were dropped.

Control of slender thistle is of little value if it is not followed by the development of a dense pasture. Slender thistle is managed in pastures as needed by the owners. The seed industries in the South East prevent slender thistle establishing in their crops as driven by their production needs. None of the NRM Boards now require enforced control of slender thistle to implement their weed management plans.

Therefore, slender thistle is not declared under the *Natural Resources Management Act 2004* in South Australia.

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### **Synonymy**

*Carduus tenuiflorus* Curt., Fl. Lond. 6: t.55 (1789).

Nomenclatural synonym:

*Carduus pycnocephalus* var. *tenuiflorus* (Curtis) Ball, J. Linn. Soc., Bot. 16: 521 (1878).

Taxonomic synonym:

*Carduus microcephalus* Gaudin, Fl. Helv. 5: 168 (1829).

Other common names include rabbit thistle, sheep thistle, slender-flowered thistle, and winged slender thistle.

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Conservation

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