

# Chilean Needlegrass (*Nassella neesiana*)

November 2015



Image credit: Kate Blood

Chilean Needlegrass seed heads

Chilean Needlegrass is an unpalatable invasive grass, which severely reduces pasture productivity and invades native grassland. The sharp seeds cause damage to the skin, fleece and eyes of stock.

It is a declared weed under the *Natural Resources Management Act 2004* (NRM Act).

## Description

Chilean Needlegrass is a tufted perennial grass that grows in clumps over 1 m tall, and up to 1.5 m when in seed, but locally may be smaller

Leaves are mid to dark green, mostly hairless, flat or slightly inrolled, up to 30 cm long and 5 mm wide. The leaves are harsh to touch due to their strong ribs and short marginal hairs.

Flowering occurs in spring and early summer, but plants will flower at other times if conditions are suitable. The flowering head is a loose panicle up to 40 cm long with purplish spikelets.

Chilean Needlegrass produces two kinds of seed. Normal seeds are produced by fertilisation in the flowers. The normal seeds are 1 cm long with a 6 to 9 cm long awn (tail). The awns often twist together at maturity to form clumps of seeds. Stem seeds are produced at the leaf junctions and do not need to be fertilised. Infested areas can accumulate thousands of viable seeds per square metre.

Seeds germinate mainly in spring and autumn.

When grazed the plant tillers profusely, producing many shoots that become a wide untidy tussock. Vegetative spread occurs mainly in autumn, winter and spring.

## Impacts

Chilean Needlegrass is considered one of Australia's worst weeds of native grasslands and pasture. If allowed to spread unchecked it is likely to have major environmental and economic costs.

Chilean Needlegrass reduces stock carrying capacity due to the production of masses of unpalatable flower stalks. It provides very little leaf material during the warmer months and displaces desirable pasture species during spring and summer.

The sharp needle-like seed readily penetrates wool, skin and underlying muscle of grazing animals resulting in injury, infection and the downgrading of wool, hides and carcasses. Seeds have been known to blind livestock.

In native grasslands, Chilean Needlegrass displaces native forbs and grasses such as kangaroo grass and spear grass.

## Distribution

Chilean Needlegrass is native to South America. It has a limited distribution in the Mount Lofty Ranges with significant infestations at Kangarilla, One Tree Hill and Wirrina Cove.

There is significant potential for further spread.

Seed generally falls within a few metres of the parent plant and the rate of spread around established infestations is slow, resulting in distinct clumpy patches.



Government of  
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Adelaide and Mt Lofty Ranges



Image credit: Donna Smithyman Chilean Needlegrass thick in paddock

Dispersal by machinery, animals and water are important in establishing new infestations. Seeds can be carried distributed by grazing animals and in their fur and fleeces.

Seeds are readily dispersed by cultivation during pasture renovation and in straw from infested paddocks. Contamination of hay, seed or grain and soil can lead to the development of new infestations.

Native grasslands are most vulnerable when native plant cover is disturbed by soil disturbance, over-grazing or slashing.

### Hygiene practices

Infestations should be identified and contained to prevent spread of plant material by stock or machinery.

### Control methods

Chilean Needlegrass closely resembles native spear grasses (*Stipa* spp). The identity of an infestation should be confirmed before a control program is begun.

Control programs should be planned over several years to manage ongoing germination.

Control involves a combination of physical removal, herbicide application and the maintenance of competitive pasture cover.

For advice on chemical control techniques contact your nearest Natural Resources Centre. Please refer to the *Weed control handbook for declared plants in South Australia* for advice on chemical control. You can find it on Biosecurity SA's website at [www.pir.sa.gov.au](http://www.pir.sa.gov.au)

### What to do

If you suspect that you have Chilean Needlegrass on your land, place a sample of the seed head in a sealed bag and take it to your nearest Natural Resources Centre or local council office for identification.

This is a free service and they will also provide you with information on current control techniques.

### Declarations

The following sections of the NRM Act apply to Chilean Needlegrass in the Adelaide and Mount Lofty Ranges region:

- 175 (1) Cannot import the plant into South Australia**
- 175 (2) Cannot transport the plant, or any material or equipment containing that plant, on a public road**
- 175 (3) Cannot transport the plant within or between properties**
- 177 (1) Cannot sell the plant**
- 177 (2) Cannot sell any produce / goods carrying the plant**
- 180 (1)(2)(3) Infestations must be reported to the NRM board**
- 182 (1) Landowner must destroy the plant on their land**
- 185 (1) NRM authority may recover costs for control of weeds on roadsides from adjoining landowners**

### More information

Please contact your local Natural Resources Centre for further information, advice and assistance in controlling Chilean Needlegrass.

#### Black Hill

115 Maryvale Road, Athelstone 5076  
T: 08 8336 0901

#### Gawler

8 Adelaide Road, Gawler South 5118  
T: 08 8523 7700

#### Willunga

5 Aldinga Road, Willunga 5172  
T: 08 8550 3400

