

Weed Sheet

Declared weed sheet : Chilean Needle Grass &
Texas Needle Grass



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

Chilean Needle Grass & Texas Needle Grass

(*Nassella neesiana*) & (*Nassella leucotricha*)

Chilean and Texas needle grass are unpalatable invasive grasses, which can severely reduce carrying capacity of pastures and cause damage to the skin, fleece and eyes of stock. They are easily spread by attachment to livestock, clothes and machinery.



Chilean Needle Grass & Texas Needle Grass

What are they?

Chilean and Texas needle grass were first discovered in 1934 at Northcote, Melbourne, Victoria. Chilean needle grass was introduced from South America and Texas needle grass from North America where they occur naturally.

What do they look like?

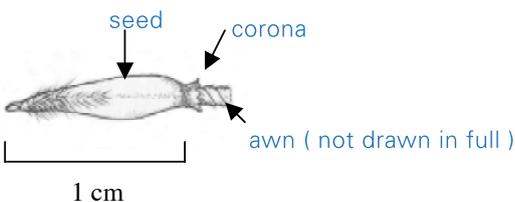
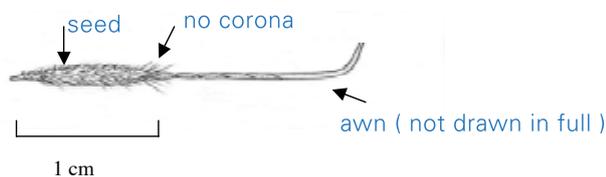
Growth habit: Perennial tussocks forming grasses that are similar in appearance to many native spear grasses (*Austrostipa* species). A mature plant grows to approximately 1m high.

Leaves: Mid to dark green leaves up to 5mm wide and a ligule to 3mm long. Hairs along the leaf surface and a small tuft of hairs at the junction of the leaf blade and sheath are distinctive features.

Flowers: The flowers are in the form of a branched flower stem (panicle) up to 400mm long. The main flowering period for both Chilean and Texas needle grass throughout South Australia is from September to December.

Seed: The most distinctive feature commonly used to identify both Chilean and Texas needle grass is the corona (a swollen crown) at the join between the seed body and the awn. The corona of the Texas needle grass contains long fine hairs, compared to that of Chilean needle grass in which the hairs are absent. Chilean needle grass also possesses self-fertilised stem seeds called cleistogenes.

Australian Speargrass (*Austrostipa* spp.) Native grass



Chilean Needle Grass

Leaves - 1-5 mm wide and up to 30 cms long.
Flowers - drooping flowerheads up to 40 cms long.
Seeds - 8-10 mm long, 1 mm corona and a 60-90mm long awn which is bent twice.

Why are they a problem?

Chilean and Texas needle grass are both highly unpalatable to stock and have the ability to greatly reduce carrying capacity and decrease pasture productivity by 50% in summer. Long sharp seeds have the ability to damage the fleece, skin and eyes of livestock.

Heavy infestations have the potential to reduce biodiversity and scenic amenity through high levels of competition with native grasses and other flora.

Widespread occurrences of needle grasses could also potentially increase the price of meat and wool products.

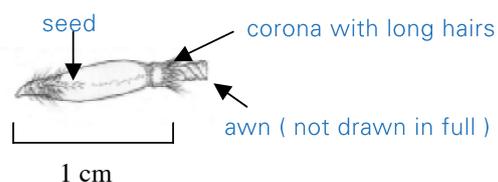
In addition to the normal flower seeds, Chilean needle grass has hidden seeds formed in the nodes and bases of the flowering stems. These seeds are self-fertilised enabling the plant to reproduce despite pressures from grazing, slashing or fire.

Affected Land uses: Non-arable grazing, native vegetation/grasslands and crops/pasture land uses are affected by the presence of these pest plants.

Where are they found?

Both Chilean and Texas needle grass can be found in isolated patches within several Hundreds of the Mount Lofty Ranges. Other infestations in South Australia have been reported near Jamestown in the Mid-North and Lucindale in the South-East, while in Victoria infestations can be found near Geelong, Melbourne and Ballarat.

Both needle grasses primarily occur in temperate regions with rainfall of more than 500mm and mainly occur in pastures, roadsides and on public land.



Texas Needle Grass

Leaves - 1-5 mm wide and up to 30 cms long.
Flowers - drooping flowerheads up to 25 cms long.
Seeds - 6-9 mm long, 1 mm corona with long hairs, and a 35-60 mm long awn which is twisted and bent.

How are they spread?

Seeds are spread via a number of vectors including attachment to machinery, clothes or livestock resulting in movement from an infested area to a non-infested area. Harvesting of hay and the movement of water can also disperse seeds long distances from their source.

Seed is also dispersed by wind although the distances travelled are much shorter compared to other vectors.

How do we control it?

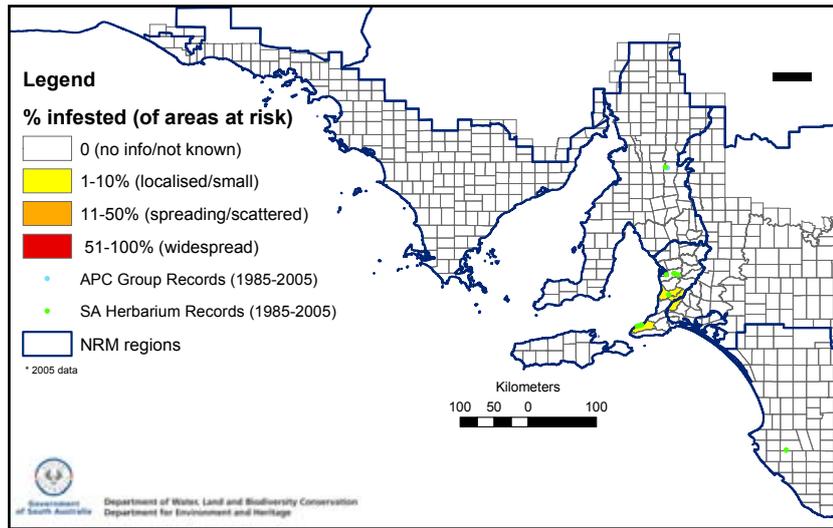
Prevention: Once established both Chilean and Texas needle grass are very difficult to control, hence preventing establishment through careful management is strongly recommended. Carefully monitor stock movements and do not sell or move hay or machinery from infected properties.

Physical control: Physical control of Chilean and Texas needle grass includes actions such as hand weeding, digging out or spot spraying when found in small infestations, however a combination of crop rotation, pasture sowing, slashing and strategic grazing management is most suitable for larger infestations.

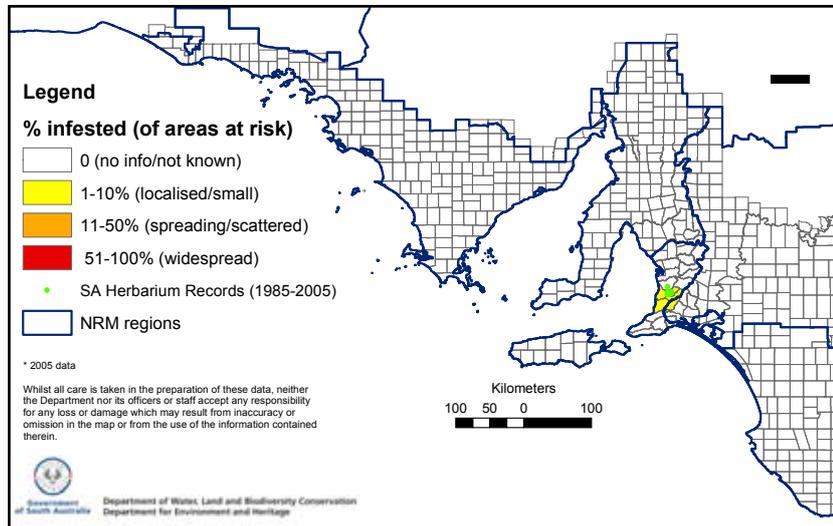
Chemical control: Research suggests that populations of Chilean needle grass have the ability to build up resistance to Group N herbicides and such chemicals would therefore not be recommended as an option for control. Registered herbicides include Glyphosate, Flupropanate, 2,2-DPA and Hexazinone.

Biological control: Three rust fungi have been identified as potential biological control agents for *Nassella tussock* grasses. A detailed host specificity-testing program is underway and is expected to be complete in 2008 by the Victorian Department of Primary Industries.

For more advice on recognising and controlling Chilean and Texas needle grass, contact your local Natural Resources Management Board Officer.



Infestation Level of Chilean Needle Grass (*Nassella neesiana*) by hundreds in the State of South Australia*



Infestation Level of Texas Needle Grass (*Nassella leucotricha*) by hundreds in the State of South Australia*

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

Yearly Weed Life Cycle of Chilean Needle Grass (*Nassella neesiana*) & Texas Needle Grass (*Nassella leucotricha*) in the State of South Australia

- Germination
- Active growth
- Flowering
- Seed set

Contact us



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References

www.weed.crc.org.au
www.dpi.vic.gov.au
www.dwlbc.sa.gov.au/biodiversity/pests/distribution.html

Environmental and Biodiversity Services (2004),
Chilean and Texas Needle Grass: Management,
Hygiene and Identification, EBS, Adelaide.

Legislation

Chilean needle grass is recognised as a Weed
of National Significance (WoNS).

Chilean and Texas needle grass are declared
under the Natural Resource Management
(NRM) Act 2004.

Declared Plant Class: 2L
Declared Plant Category: 2

The following provisions of the NRM Act 2004
are to be applied to the whole of the State:
175(1)(2) - relates to the movement of plants
into a control area or on public roads.
177(1)(2) - relates to the sale of plants, or
produce or goods carrying plants.
180(1)(2)(3) - relates to the notification of a
plants presence to a relevant NRM authority.



Natural Heritage Trust

Helping Communities Help Australia

An Australian Government Initiative

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