

What is Chilean needle grass?

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Introduction

Chilean needle grass (CNG; *Nassella neesiana*) was introduced into Australia from South America about 70 years ago. Only recently, though, has this species been recognised as posing a significant risk to high-value indigenous and agricultural grassland communities in many regions of Australia. Identification of CNG can be difficult, and consequently hinder management. The information presented below may assist land managers to accurately identify this Weed of National Significance.

Impacts

Some of the reasons the Australian Government proclaimed CNG as one of the twenty Weeds of National Significance are as follows:

- It is potentially the worst environmental weed of indigenous grasslands and other natural ecosystems that are among the most threatened in Australia.
- Primary production may be reduced by up to 50% where dense infestations occur. Large amounts of unpalatable flower stems with little leaf material are produced in the warmer months.
- The sharp awns penetrate and damage the fleece, skin and eyes of livestock, reducing the quality and value of agricultural products.
- It has potential social impacts, such as reduced natural attraction of the landscape.

Identification

When not in flower, CNG may be identified by its vegetative features. It is a perennial grass up to 1.2 metres high. CNG does not have a pronounced tussock habit, rather it tillers profusely, producing many shoots from the base that become a wide untidy tussock excluding other plants. Leaves are sparsely hairy and flat or somewhat inrolled, to 30 cm long and 5 mm wide. They are harsh to touch, particularly in one direction, due to the short marginal hairs. At the junction of the leaf blade and leaf sheath, is a 3 mm long smooth membranous ligule, which extends across the leaf base and is bordered by two small tufts of erect hairs either side that are visible when the leaf is pulled away from the stem.

The easiest time to identify CNG is between October and April when it is flowering and setting seed. Two types of seeds are produced during this period; panicle (normal seeds) and cleistogenes (stem seeds). Stem seeds are produced on tall panicles that have a distinct purplish colour. The awns of CNG are 60 to 90 mm long and become twisted together at maturity to form a tangled mass. At the junction of the awn and the seed head is a characteristic raised crown, 1 to 1.5 mm long, with small teeth, known as a corona, encircling the base of the awn. Cleistogenes are formed at the base of the plant and at the nodes. Nodes are swellings along the stem that give rise to leaves, and are covered by the leaf sheaths of the flowering stems.

Distribution

First recorded in Melbourne in 1934, CNG is now widespread in southeastern Australia, particularly New South Wales, the Australian Capital Territory, and Victoria. Limited infestations also occur in Queensland, South Australia and Tasmania. However, CNG has the potential to occupy a much greater range. Using bioclimatic modelling, the potential distribution of the weed in Australia has been estimated to be more than 40 million hectares.

Acknowledgments

The National CNG program is supported by the Natural Heritage Trust of the Department of Agriculture, Fisheries and Forestry Australia.

References and further information

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Visit the Weeds Australia website

www.weeds.org.au/WoNS/Chileanneedlegrass/CNGAbout.htm