

## An overview of Chilean needle grass: a Weed of National Significance

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### Introduction

Chilean needle grass (*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, hence its proclamation as a Weed of National Significance.

### Identification

Chilean needle grass is a perennial, up to 1 m high, often forming a wide untidy tussock. The easiest time to identify Chilean needle grass is between October and April when it is usually setting seed. Two types of seed are produced. 'Normal' seeds are produced on the flowering stems, which have a distinctive purplish colour. At the junction of each awn is a characteristic raised crown of small teeth (corona). Stem seeds (cleistogenes) are formed at the base of the flowering stem and at the nodes (swellings along the stem that give rise to leaves). Cleistogenes allow the plant to reproduce even if flowering has been inhibited.

### Distribution

First recorded in Melbourne in 1934, Chilean needle grass 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, Chilean needle grass 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 ha.

Humans are largely responsible for distributing the weed, with seeds readily attaching to machinery and clothing, as well as livestock. Contaminated products (e.g., hay and soil) and floodwaters have also been implicated in its dispersal.

### Impacts

The Commonwealth Government proclaimed Chilean needle grass as one of twenty Weeds of National Significance. Why then is this weed considered a national priority for control?

- It is potentially the worst environmental weed of indigenous grasslands and other natural ecosystems that are among the most threatened in Australia.
- Primary production has been reduced by up to 50% where dense infestations occur, as 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.

### Related reading

Agriculture and Resource Management Council of Australia and New Zealand, Australian and New Zealand Environment Conservation Council, and Forestry Ministers. 2001. Weeds of National Significance: Chilean needle grass (*Nassella neesiana*) strategic plan. National Weeds Strategy Committee, Launceston, Tasmania.

Gardener, M. 1999. Landcare notes: Chilean needle grass identification. Keith Turnbull Research Institute, Frankston, Victoria.