

# CNG News

Edition 4, January 2006

## Welcome

Australia-wide, CNG research and management is indeed moving forward. Each year, a report is compiled and submitted by the National WoNS Coordinators to the Australian Weeds Committee (AWC), on the progress of the National CNG Strategic Plan. The Executive Summary of the reports also go to all Ministers for Primary Production and the Environment in Australia and New Zealand, irrespective of whether or not the weed is present in their area. Hence, the report is an opportunity for WoNS Coordinators to advertise the good works that their programs are achieving. The Executive Summary of this year's annual report for CNG constitutes the first story in this edition of *CNG News*.

The Australian Government's *Defeating the Weed Menace Programme* has resulted in a number of organisations receiving funds to undertake various CNG activities. The Victorian Department of Primary Industries, with the support of the National CNG Taskforce, was successful in obtaining funding for a national CNG project through the first phase of the program. The project will involve the development of a comprehensive best practice management guide for CNG, applicable across Australia, containing information on its biology and ecology, management options for various situations, and real-life case studies. This will certainly be a great aid to land managers combating this tenacious Weed of National Significance.

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# Review of Progress Against the National CNG Strategic Plan: Executive Summary

(Excerpt from the annual report submitted to the AWC in September 2005)

Highlights of how Chilean needle grass (CNG) activities across Australia have contributed to the fulfilment of the four main goals of the National Strategic Plan are outlined below.

## ***Goal 1: Identify the CNG problem***

- Scoping the CNG problem continues to be carried out throughout Victoria, NSW, ACT and South Australia. New infestations in Queensland and Tasmania have been treated and are being closely monitored to prevent spread (Figure 1).

## ***Goal 2: Development of 'best' management options for CNG control***

- Several weed control techniques are currently being investigated for CNG:
  - Grazing management trials, in combination with other weed control measures, have been established throughout much of the range of CNG. Data collection and analysis from the trials is near complete, with results due to be published in 2006.
  - Chemical control trials undertaken by the Victorian Department of Primary Industries (Vic DPI) have seen the registration of the first herbicide for the control of CNG. Trials continue into the use of other herbicides, with the aim of additional registrations being achieved.
  - A biological control program being undertaken in Argentina is focussed on examining the host specificity and life-cycle of three promising agents. These are the rust fungi *Puccinia nassellae*, *P. graminella* and *Uromyces pencanus*.
- 'Tussock Terminators', a forum on the latest research for the control of CNG and other unpalatable grasses will see the outcomes of the above research reported, discussed and incorporated into a best practice management guide in development for CNG.

## ***Goal 3: Prevent, contain, and rehabilitate CNG infestations.***

- Prevention, containment and rehabilitation are 'key messages' identified in the National Communication Plan for CNG, produced by the National CNG Taskforce in 2005. The Plan also outlines the rationale, tools, timeframe, audience and responsibility for effectively conveying each 'key message'.

## ***Goal 4: Develop appropriate extension packages***

- A national best practice management guide for CNG is currently being developed. The guide will be comprehensive and contain information on the plant's biology and ecology, options for management in various situations, and real-life case studies of land managers who have achieved success by implementing a management regime.

## Tussock Terminators

Much research into the management of serrated tussock (*Nassella trichotoma*) and Chilean needle grass (*Nassella neesiana*, CNG) has occurred and continues to occur in recent years. Serrated tussock and CNG are proclaimed as two of the twenty Weeds of National Significance (WoNS). Both grassy weeds originate in South America, and threaten agricultural land and indigenous grasslands in Australia. More recently, weedy sporobolus grasses (*Sporobolus* spp.) have also presented a serious threat to such environments in Australia.

The aim of the Tussock Terminators Research Forum was, therefore, to bring together researchers from around Australia to update progress being made toward the management of these weeds. The two day forum was held on the 2<sup>nd</sup> and 3<sup>rd</sup> of November, 2005 at the Lake Hume Resort, Albury (NSW). Approximately 80 people attended the forum, including researchers, agronomists and onground land managers (both public and private) from across Australia.

Day one focussed on presentations. Fourteen presentations were given from those leading research into a range of management options across Australia. Dr David McLaren, Charles Grech, David Officer, Warwick Badgery, and Assoc. Prof. Ann Lawrie were among those who presented outcomes from their research activities. Day two of the forum required the participation of all, as it focussed on workshopping best-bet management options for serrated tussock and CNG.

The papers and outcomes of the workshops will feed into best-bet management guides for these species. In fact, the first comprehensive management guide for CNG is due to be published in late 2006. Proceedings of the forum are available on the Weeds Australia website ([www.weeds.org.au](http://www.weeds.org.au)). Simply follow the links to 'Weeds of National Significance', 'Chilean needle grass', and 'Proceedings of the Tussock Terminators Research Forum at Lake Hume Resort Albury NSW 2<sup>nd</sup> - 3<sup>rd</sup> November 2005'. Any further updates on outcomes of the forum will be also placed on this website.



Photo: Presentations were given on day 1 of the Tussock Terminators forum.

## How to identify CNG when not in flower

The easiest time to identify CNG is between October and April when it is flowering and setting seed. Edition 2 of this newsletter contained an article on identifying CNG when flowering. However, when not in flower, CNG may still be identified by other characteristic features.

Chilean needle grass (*Nassella neesiana*) is a perennial **up to 1.2 m high**, often producing many shoots from the base that form a **wide untidy tussock** excluding other plants.

The leaves of CNG are hairless or sparsely hairy, flat or somewhat inrolled, to 30cm long and 5 mm wide, and **harsh to touch**, due to their strong ribs and short marginal hairs.

At the base of each leaf is a 3 mm long smooth membranous appendage known as a **ligule** (Figure 1). It extends across the leaf base and is bordered by two small tufts of erect hairs either side that are easily seen when the leaf is pulled down from the stem.

Even after CNG has set seed as a result of flowering, stem seeds, also called **cleistogenes**, may be evident. Cleistogenes are formed at the nodes. These nodes are swellings along the flowering stem and at the base of the plant which give rise to leaves. The stem seeds or cleistogenes are covered by the leaf sheath, which has been removed in Figure 2.

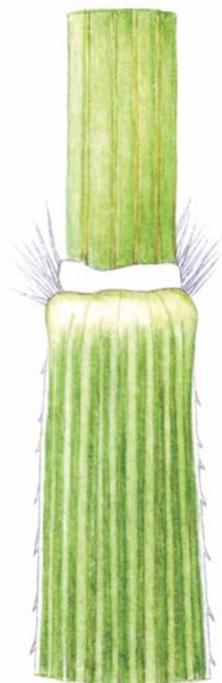


Figure 1: Ligule of CNG, with characteristic tufts of erect hairs either side of the stem.



Figure 2: Stem seeds or cleistogenes are concealed by the leaf.

Illustrations by Enid Mayfield.

## CNG Emergency Response Program in QLD

CNG was first identified at Felton in the eastern Darling Downs region in Queensland in 1998. Seasonal surveys in 2004 resulted in additional plants being discovered at the Felton site, and also in the Clifton, Cambooya and Warwick Shires.

The primary infestation of the CNG appeared to be located in the township of Clifton, and most likely spread from the township along roadsides by slashers. Extremely dry conditions have prevailed since CNG was first detected, however above average rainfall over the region in October 2005 ensured favourable conditions for CNG to flower and set seed. Once the plants began flowering, it was realised that CNG was more wide spread than previously thought.



Photo: Lightly grazed CNG going into flower adjacent to the banks of the Condamine River, near Felton.

As a result, Queensland Department of Natural Resources and Mines (DNRM) staff initiated a state-wide emergency response on CNG in early November 2005 to undertake a broad survey and initiate control of all known infestations. Staff believed that there was a short window of opportunity to do this work while the plant was flowering. Additional staff from around the state were brought in to assist the DNRM Land Protection officers and Local Government officers to undertake surveys and control all known plants while these favourable conditions existed.

Roadside infestations and associated areas around townships were treated using glyphosate. Some areas around the Clifton Showground were treated using TASKFORCE® (active ingredient flupropanate). TASKFORCE® is also being considered for use later in the season by the Queensland Department of Main Roads (DMR). DMR are hoping that the TASKFORCE® treatment

will prevent the emergence of CNG seedlings. Residue problems in cattle is a big concern in the region, as there is a nil tolerance for dairy cattle.

The response from the affected Shires was exceptional with CNG being treated with the same rapid response as other serious weeds such as Parthenium weed. The overall emergency response program cost approximately \$5,670 (excluding salaries). DNRM believe there has been a high return on the funds invested in terms of both staff awareness and on-ground surveys and control. This should ensure the region is in a better position to take on the management of these infestations at the local level.

Surveillance by DNRM and LG staff will continue and follow up spraying will be done as required. Such emergency response exercises will be undertaken on an "as needs basis" in the future to ensure we are able to maintain an eradication focus on CNG in Queensland.

For more information contact Philip Maher of the DNRM via phone (07) 3405 5530 or email [Philip.Maher@nrm.qld.gov.au](mailto:Philip.Maher@nrm.qld.gov.au)



Photo: CNG growing on new housing allotments in the township of Clifton.

## Upcoming Events

### *Clifton Pest and Weed Show - Queensland (8<sup>th</sup> March 2006)*

Central Downs Landcare Group is holding a field day at the Clifton Show Ground. The show will exhibit the latest technology, research and directions for animal, plant, people and land health solutions and entry is free! Further information is available from Megan Brady on 0407 152 755 or [cpaws@icr.com.au](mailto:cpaws@icr.com.au).

### *Seminar of the Weed Society of Victoria - Knoxfield (9<sup>th</sup> March 2006)*

The Weed Society of Victoria is presenting a seminar entitled 'Interactions between weeds and animals' at the Victorian Department of Primary Industries Knoxfield Centre. For more information or to register, contact Ros Shepherd via email: [secwssv@surf.net.au](mailto:secwssv@surf.net.au).

### *15<sup>th</sup> Australian Weeds Conference - South Australia (24<sup>th</sup> - 28<sup>th</sup> September 2006)*

The Weed Society of South Australia will be hosting the 15<sup>th</sup> Australian Weeds Conference in Adelaide, South Australia. The theme of the conference is 'Managing weeds in a changing climate'. Register electronically on [www.plevin.com.au/15AWC2006](http://www.plevin.com.au/15AWC2006).

## Envirofund

Envirofund is the local action component of the Australian Government's \$3 billion Natural Heritage Trust. It helps empower communities to undertake local projects aimed at conserving biodiversity and promoting sustainable resource use. Community groups, as well as individuals, can apply for grants of up to \$50,000 (GST inclusive) to carry out on-ground work such as tree planting, weeding, fencing and seed collecting to target local problems.

**Round 8 will open for applications in February 2006.** Register to receive a copy of the Australian Government Envirofund Guide and Application Form for Round 8 when it becomes available on [www.nht.gov.au/envirofund/](http://www.nht.gov.au/envirofund/), or phone 1800 303 863.

## Defeating the Weed Menace

The Australian Government has committed \$40 million over four years, from 2004-08, for national action on the nations most threatening weeds through the Defeating the Weed Menace Programme. The Programme will fund strategic on-ground control and eradication at the regional level, research into cost-effective management techniques and biological controls, and awareness raising campaigns.

Applications for the 2005-06 round of funding closed on 4 November 2005. All applicants will be notified in the very near future regarding the outcome of their application.

Further information is available from [www.daff.gov.au](http://www.daff.gov.au), or [nht.weeds@daff.gov.au](mailto:nht.weeds@daff.gov.au).