

# CNG News

Edition 1, July 2004

## Welcome

Much has been accomplished since the publication of the *Weeds of National Significance Chilean needle grass (Nassella neesiana) Strategic Plan* in 2001. Indeed, it is a testimony that weed-related strategic plans can achieve their goals when resources, in the form of people, time and funds, are committed to the tasks at hand. This newsletter contains articles on some of the progress being made to combat this nationally significant weed of roadsides, pastures and indigenous grasslands.

The following is primarily directed at those involved in the management of Chilean needle grass or 'CNG', as it is often abbreviated. Information focuses on management, as little published advice is presently available. Established research trials, such as the herbicide and best practice management research outlined in this issue, will see the development of tried-and-tested tools for land managers to utilise in the near future.

I also hope you find this newsletter inspiring, by way of the good-news stories from those not giving into this tenacious pest plant that is threatening to take over in some areas. The success of controlling CNG lies in not giving in, as highlighted by the activities of Hume City Council and Indigo Shire Council in Victoria. May our motivation likewise be strong, so as to ensure the protection of our valuable natural and agricultural resources.

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## Herbicide Research

No registered herbicides for the control of CNG are currently available. This poses as a barrier to management in some situations. For instance, state and territory government officers are unable to pass on any chemical recommendations to those members of the public that inquire on the matter. Although in some jurisdictions special permits or 'off-label' advice from a legally authorised government officer may be obtained.

Before registration can occur, the optimum herbicide at the optimum rate must be scientifically determined. The Victorian Department of Primary Industries (DPI) is working to achieve this end in the Natural Heritage Trust (NHT) supported project titled *Helping the community control CNG by investigating new herbicide options*. Trials using different herbicides, at different rates, by different application methods and at different times are to determine the means by which: to give complete control of plants; to arrest replenishment of the soil seedbank; to allow for grazing by preventing both aerial and cleistogene seed production; and to spot treat sporadic infestations. Trials were first carried out throughout Victoria in 2003, and will be repeated in 2004.

DPI has had discussions with major chemical companies, who have indicated their willingness to put CNG on their labels once the necessary data have been generated.

For further information on the project, contact Shiv Gaur at the DPI Frankston site on (03) 9785 0111 or via email [Shiv.Gaur@dpi.vic.gov.au](mailto:Shiv.Gaur@dpi.vic.gov.au).

## Regional Best Practice Management Research

Grazing management to control CNG is being applied in two projects supported by the NHT titled *CNG regional best practice management* and *Grazing management for long-term utilisation and control of CNG*. Research for both projects is being incorporated into a PhD study, which commenced during 2003.

The former has seen the establishment of five demonstration sites throughout the Australian range of CNG; located at Greenvale (VIC), Toolleen (VIC), Majura (ACT), Goulburn (NSW) and Glen Innes (NSW). Treatments designed to explore the value of grazing management, soil fertility management, herbicide application, adding competitive pasture species and cropping, were devised in consultation with local land managers to reflect district practices. The basic philosophy used in the design of the experiment is to reduce grazing selectivity and thereby promote competition from desirable species. Once completed, best-bet management guides for the control of CNG in pastures will be produced for each region.

The second NHT project focuses more closely on grazing management. Research involves investigating the optimum stock class (i.e. sheep verses cattle) and grazing regime (i.e. set stock verses rotational) for CNG control, the use of spray topping (herbicide application at sub-lethal rates) after grazing to limit the production of panicle seeds, and the use of seasonal burns to reduce the soil seedbank. Feed evaluation trials will also be carried out to quantify the nutritional value of CNG. Both grazing management projects have commenced data collection, however limited data are available for analysis at this stage. Conclusive results, with published studies, are not expected until 2006.

For further information on these project, contact Charles Grech at the DPI Attwood site on (03) 9217 4200 or via email [Charles.Grech@dpi.vic.gov.au](mailto:Charles.Grech@dpi.vic.gov.au) .



*Seed drilling treatment being applied at the Toolleen trial site.  
(Photo: C. Grech).*

*DPI researchers and extension officers having a tour of the Greenvale trial site.  
(Photo: C. Grech).*



## Preventing Weed Spread by Slashers

CNG is very difficult to control once established, so the maxim of 'prevention is better than cure' applies when it comes to the management of this Weed of National Significance (WONS). People are primarily responsible for its spread, through use of contaminated equipment and materials and the movement of livestock from infested to clean areas. Slashers in particular are implicated in weed spread along roadsides (which is coincidentally where most CNG is known to occur), through their frequent use in routine maintenance and fire management activities.

The Royal Melbourne Institute of Technology (RMIT) recently undertook a NHT supported project titled *Reducing CNG spread through improved slasher hygiene* to tackle the issue. A virtual slasher model (based on a simplified Computer Assisted Design model) was developed to determine what happens during the slashing process and how the design of slashers influences the dispersal of CNG. Model generated data was validated by a comparison with data obtained from slashing actual infestations. Results demonstrate that the majority of CNG seed falls on the slasher deck, inevitably dropping off the deck and being dispersed.

Modifications to existing slashers have been devised to minimise this collection and dispersal process. Front shields attached to the slasher deck were shown to reduce accumulated seed by about one-half. A more substantial reduction has been realised through the development of a novel slasher cover, with the number of accumulated seeds being reduced by less than one percent of seed normally collected. Widespread use of such a cover would significantly minimise the spread of all weed species occurring in the slashers pathway. RMIT, in conjunction with DPI, are currently investigating means of delivering the slasher modifications to the community.

For further information on the project, contact Professor Aleksandar Subic at RMIT on (03) 9925 6080 or via email [aleksandar.subic@rmit.edu.au](mailto:aleksandar.subic@rmit.edu.au).

*LOTS of CNG seeds  
accumulated on a slasher  
without modifications  
during a trial.  
(Photo: D. Smithyman).*



## Councils Advancing CNG Management

### 1. Indigo Shire Council

Back in 2000, the north-eastern Victorian community of Indigo alerted the local Council that many roadsides in the Shire were infested with CNG. Then in 2001, a rough map produced by Council with community support, revealed CNG infestations occurring on more than 37 such roadsides. Indigo Shire Council subsequently undertook a WONS project funded through the NHT to address some of the issues at hand.

Council staff and contractors expressed concern that maintenance activities were contributing to the spread of CNG. The solution came from Greening Australia (TAS) with the introduction of their Enviromark system. Enviromark has enabled Council to:

- Install markers at the start and end points of each infestation, so that appropriate management (eg. hygiene procedures) is carried out in such zones.
- Develop a CNG management specification for road maintenance activities.
- Hold CNG specific training sessions for staff.
- Improve mapping of infestations.

Another aspect of the NHT project involved community-focused management trials, undertaken in partnership with the DPI, Country Fire Authority, Victorian Farmers Federation, Landcare and Greening Australia. A roadside with dense CNG was chosen and a variety of plots were marked out to display possible management techniques, which included chemical application, burning, replacement with native tubestock, replacement with hand broadcast native seed, combinations of the above, and no treatment at all. Whilst not providing scientific outcomes, the trials have increased community involvement in the project and given land managers the confidence and skills to manage CNG on their own properties.

For further information on the project, contact Karen Jones at Indigo Shire Council on (03) 5728 1000 or via email [kjones@indigoshire.vic.gov.au](mailto:kjones@indigoshire.vic.gov.au).

*Enviromarker for CNG  
along a roadside in Indigo Shire.  
(Photo: K. Jones).*



## 2. Hume City Council

Hume City Council, located on the north-western fringe of Melbourne, commenced development of the *Hume Needle Grass Action Plan* in October 2002 with the roadside mapping of CNG and Texas needle grass. The mapping program highlighted that needle grass species had spread significantly since previous mapping in 1997, and consequently occurred on most slashed roadsides in Hume. Yet, approximately 25 kilometres of 'control zones' (ie. roadsides with low and patchy infestations) were identified, as well as needle grass 'free zones' (ie. roadsides with no infestations).

These 'control' and 'free' zones were the focus of management, remapping and extension works in the following years. Management involved patches within control zones being spot sprayed with a non-selective herbicide in Autumn 2003, and later sown with a dryland turf seed mix. Infestations previously mapped in 'control' and 'free' zones were remapped in Spring 2003, and the revised boundaries of each zone marked with a 'wash down point' sign. Slashing contractors directed to brush down machinery at these signs. Adjoining land holders were also informed of the needle grass threat and management options.

Later inspection of needle grass patches treated in 2003 revealed minimal germination of the sown grasses, and instead saw the establishment of seedlings from surrounding grass species. So the patches were re-sprayed with a different herbicide in Autumn 2004 and continue to be monitored. Whatever the outcome, the Hume City Council's *Sustainable Land Management Strategy* directs that the *Hume Needle Grass Action Plan* continue to be implemented in order to manage the spread of needle grasses in Hume City. Ongoing implementation of the plan will draw on evaluation of its own program and wider needle grass management research.

For further information on the project, contact Katrina Roberg at Hume City Council on (03) 9205 2465 or via email [KatrinaRo@hume.vic.gov.au](mailto:KatrinaRo@hume.vic.gov.au) .



*Roadside spraying of needle grass 'control' zones in Hume City. (Photo: K. Roberg).*

## Upcoming Events

### **14<sup>th</sup> Australian Weed Conference (6<sup>th</sup> - 9<sup>th</sup> September 2004)**

The conference, hosted by the Weed Society of NSW Inc., is to be held at Charles Sturt University, Wagga Wagga, New South Wales.

For further details visit [www.csu.edu.au/special/weedsconference](http://www.csu.edu.au/special/weedsconference) .

### **Weeds Society of Victoria Seminar (5<sup>th</sup> October 2004)**

The seminar, titled *Urban grasslands, their management and restoration*, will be held at Melton Shire Council's Community Hall, and include a bus tour of the local grasslands.

For further details contact Ros Shepherd on [secwssv@surf.net.au](mailto:secwssv@surf.net.au) .

### **Weedbuster Week (18<sup>th</sup> - 24<sup>th</sup> October 2004)**

Find out what activities are occurring in your local community during this week, register an activity, or nominate someone for an award.

For further details visit [www.weedbusters.info](http://www.weedbusters.info) .

## Publications

### **WONS Management Guides**

The CRC for Australian Weed Management has produced a series of colour brochures covering each of the twenty WONS species. The guides are available as pdf files at [http://www.weeds.crc.org.au/publications/weed\\_man\\_guides.html](http://www.weeds.crc.org.au/publications/weed_man_guides.html) .



*The new Weed Management Guide for CNG is a six page colour brochure that contains information under the following subheadings:*

- *The problem;*
- *The weed;*
- *How it spreads;*
- *Where it grows;*
- *What to do about it;*
- *Control options; and more.*