Environment Canterbury Regional Council
Kaunihera Taiao ki Waitaha

Nassella News

SPRING 2020

Working together in uncertain times

COVID-19 has left many people struggling to find work. Ross Bowman took the opportunity to help his local community while completing his annual nassella control programme at Redcliffs Station, in the Rakaia Gorge.

Ross explains: “My wife Jess and I were looking to find ways to support the local community, many of whom have suffered the economic impact of COVID. Nassella control was an obvious choice, given the hours involved. We posted on the local Methven Community page and had several good applicants. We took on two people who had been made redundant from the tourist industry due to COVID. Both were really quick learners when it came to identifying nassella, and one is now keen to make a career in weed control.

We also had interest from our local high school, Mount Hutt College, with students looking to fundraise for a trip to Auckland. Several students have come to work for us over a couple of weekends.”

Matthew Smith and Tom Robin of the biosecurity team visited the groups on site and provided some context around why and how the community controls nassella. Ross says: “In both cases Environment Canterbury staff were supportive and helped us to get the casual employees and students identification skills up to standard. This is key to ensuring we pass inspection the first time.”

The biosecurity team can help to provide training and advice on best practice to any land occupiers who may be interested in taking a similar approach. “We would recommend others try doing it this way, as there is little downside.”

Photo above: The team at work – Redcliffs Station
Photo inset: The team getting their nassella identification skills up to standard

Changes ahead

This season our biosecurity team is running two parallel nassella tussock work streams. First, our standard inspection process remains in place, whereby we contact you prior to coming out to your property and looking at the level of control work. We will help to identify plants or patches that you may not have known about or have missed, and arrange for additional time to get these plants controlled. We want to work with you to ensure that the best possible control job is carried out on your property, ensuring that plants don't seed onto your or neighbouring properties.

At the same time, we are extending our grading pilot from last year (more below). We will be working with four additional cluster groups to gauge their views on the grading concept. Will it encourage people to do a thorough control job? Is it deemed to be useful by the community? These are just two of the questions that the clusters will help us to answer.

You will also have seen that this year we have gone electronic, moving our paper-based compliance returns to an online system. A link to your nassella tussock management plan will have been sent to you via email or text. Click through to see details for your individual property and to submit additional information. If you are having any problems, please contact **biosecurity@ecan.govt.nz** so we can help. If you don't have access to the internet, you can still submit via paper.

Photo above: Alex Joyce of the Northern team almost obscured by a large nassella tussock.

Grading system pilot

The grading system was created as a result of an internal workshop, the purpose of which was to identify how we could work differently with land occupiers affected by nassella tussock. Relevant positive behaviours and criteria were discussed, developed and assigned point values, with the aim of accurately gauging land occupier effort, in conjunction with actual compliance outcomes. This culminated in a final grade within an A – D range, as below:

How does it work?

D

- Costs of repeat inspections
- Repeated control work cost
- High chance of Action on Default and Environment Canterbury - contractors
- Chance of Compliance Order for next season
- Definite reinspection next year and first on inspection roster

C

+ No Action on Default
+ No Environment Canterbury - contractors
+ Less chance of Compliance Order

- Costs of repeat inspections
- Repeated control work costs
- Definite reinspection next year and first on inspection roster

B

+ No notice on property so no costs incurred
+ Low chance of reinspection if evidence of compliance filed later
+ Property may not be inspected next year (TBC)

- May still be inspected next year
- Repeated control work costs

A

+ No Inspection for 2-4 years
+ Grade can be used for property sale value
+ Recognised as having a good control programme
+ No costs incurred

Raise grade by:

› Grub early › Compliance return on time › Agree to management plan › Follow the plan › Develop plan for following year

Biocontrol: exploring what's possible

Seona Casonato from Lincoln University is leading the three-year Sustainable Farming Fund project to investigate the potential of a biocontrol agent for the control of nassella tussock. She is a plant pathologist with 25 years' experience and is undertaking the project in collaboration with colleagues in Australia and Argentina.

Seona and her team – Amber Brooks of Landcare Research, Jenny Brooks and Michal Kuchar from Lincoln University – began site visits in early 2020, intensively surveying areas of nassella infestation for potential fungal biocontrol agents that may be developed as part of a biological control programme. The survey results will help to determine if any fungi is present that can hinder the growth and reproduction of nassella tussock.

Coordinated by Matthew Smith (Environment Canterbury), multiple sites throughout Banks Peninsula, North Canterbury and Kaikoura have been surveyed. Despite some very dry conditions, numerous fungal isolates have been found on nassella plants that are exhibiting unusual symptoms such as:

- ease of pulling from the ground
- multiple flushes of seeds
- foliage that is dying back
- stunted plants, surrounded by plants that are substantially larger.

It was with great excitement that they found the fungus Dinemasporium, which has been found in Australia where it exhibited some biological control capacity. In addition, they have also found thick, white mycelium (vegetative part of a fungus) growing at the base of some plants, making them extremely easy to remove from the dirt.

Other fungi causing such things as blight, seed abortion and cellulose degradation have been isolated and are awaiting confirmation. They will be returning to many of the sites throughout the year, as different weather conditions could see likely biocontrol candidates emerge.

If you wish to know more about this project or wish to offer your property as a survey site, you can contact Seona at **Seona.Casonato@lincoln.ac.nz** or **0221676290**.

Photo above: Amber Brooks (left) from Landcare Research and Michal Kuchar from Lincoln University survey nassella in the Kaikoura District

Update on other grasses

MEXICAN FEATHER GRASS

Mexican feather grass (*Nassella tenuissima*) is a densely tufted, perennial tussock grass that grows up to 70cm tall. It flowers between October and December, with erect feathery flower heads when young and weeping when mature. Each mature plant can produce thousands of rough-coated seeds. It prefers a dry, temperate climate. It is most likely to invade pastures, grasslands, grassy open woodlands, disturbed sites, roadsides and waste areas. It can become dominant under continual heavy grazing pressure.

While Mexican feather grass has similar traits to nassella tussock, internationally it is estimated to have a far greater potential climatic range and will tolerate soils and sites of extreme variability. It is climatically very well matched to the dry Canterbury conditions and its similarity to nassella tussock makes this species a potential disaster for agriculture and the environment.

Mexican feather grass had been widely sold in garden centres as an ornamental grass until it was banned from sale and propagation in the mid-2000s. However, there are still populations growing in Canterbury and we expect that there are infestations we don't know about. If you think you have seen this pest please contact the biosecurity team.

Photo right: Mexican feather grass

CHILEAN NEEDLE GRASS

The biosecurity team has worked hard with land occupiers to keep the infestation and spread of Chilean needle grass (CNG) (*Nassella neesiana*) to a minimum in the region. CNG reduces pasture and crop yields, livestock carrying capacity and causes livestock health and welfare issues leading to a reduction in productivity. Here is a CNG update for Canterbury as it currently stands:

- Climate modelling shows most of Canterbury provides optimal or suitable conditions for the establishment of CNG.
- There are currently 25 properties known to be actively managing CNG.
- The 25 properties are spread across six localities: West Melton, Omihi, Waipara, Parnassus, Cheviot and Spotswood.
- All properties with CNG receive guidance from Environment Canterbury and undertake an annual control programme prior to seeding.
- We believe there are likely infestations of CNG in our region that we don't know about.
- We are extending our surveillance and investigations to assist with search for low incidence pests including CNG.
- CNG is spreading rapidly in the Hawkes Bay and Marlborough Regions. Marlborough is of concern given we share a regional border.

Canterbury had a scare with CNG recently (more in "Farm biosecurity - buyer beware!' in Biosecurity Bites). The movement of stock, potentially contaminated with CNG highlighted how quickly and easily this pest can be spread around our communities.

Please be vigilant and keep an eye out for CNG; for more information including how to identify it please visit **www.facebook.com/chileanneedlegrass**, or contact us on **0800 324 636** or **biosecurity@ecan.govt.nz**.

Photo right: Chilean needle grass

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