

Nassella News

September 2011

Big changes in the Northern Biosecurity Team

Two staff members have recently changed roles and three new staff members joined the team in July.

Laurence Smith, who has been the Team Leader since 1996, is now Environment Canterbury's Principal Biosecurity Advisor for the Canterbury region. This role has a primary focus on Biosecurity at a regional level and carries delegated responsibility from the Regional Manager to oversee and co-ordinate the work of the three Biosecurity team Leaders and the Biosecurity Advisor - Special Projects.

Leanne Lye has been appointed Team Leader of the northern Biosecurity team. Leanne has been working at the Amberley office for the past eight years as Biosecurity Support Officer. Leanne is looking forward to the challenges of her new role and leading the team forward.

Leanne's former role has been filled by **Stephanie Schwabe**. Stephanie has been in the aviation industry for the past 22 years, working in various roles with a number of airlines. Most recently she has been with Pacific Blue in their Safety Department as an Auditor and also dealing with company and regulatory requirements.

Steve Palmer has recently rejoined Environment Canterbury. He has been appointed Biosecurity Advisor - Special Projects, based in Cheviot. Steve's primary focus is rabbit co-ordination, wilding conifer operations and the implementation of the Chatham's Islands Regional Pest Management Strategy. Steve has been carrying out the role of Rabbit Coordinator and will be a familiar face to many in the northern area from his time in that position and also from his many years in the field of animal pest control.

Two Biosecurity Officer positions became vacant following the retirement and resignation of two staff members earlier this year. These vacancies have been filled by **Cameron (Cam) Doake** and **Robin Harrison**. Cam has been working with the Amberley team as a casual employee over the past 2 years carrying out old mans beard control, nassella tussock search and a variety of other tasks.

Raised and educated in Rangiora, Cam has recently completed his commercial pilots licence and enjoys cricket, water-skiing and trail bike riding. Robin has been working recently in Christchurch on demolition and earthquake clean up. Prior to that he worked with Target Pest and has also spent time in the police force.

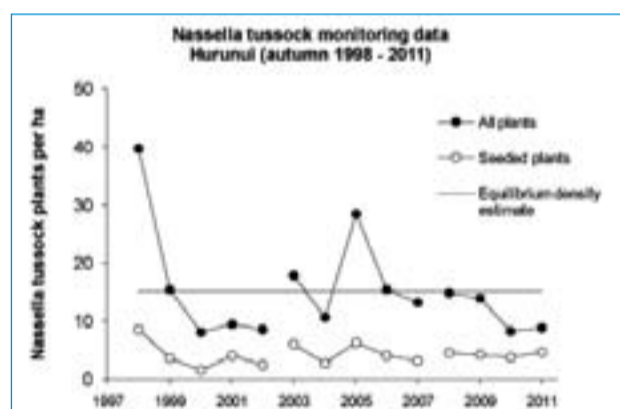


Back row from left - Steve Palmer, Leanne Lye and Robin Harrison. Front row from left - Laurence Smith, Stephanie Schwabe and Cam Doak.

Another Rangiora local for most of his life, Robin enjoys jet-boating and water sports and working on the land. Cam and Robin are both looking forward to working with the Biosecurity team and the community on pest issues.

The Northern Biosecurity Team covers the area from the Waimakariri River to the Marlborough boundary (north of Kekerengu) with Officers based in Amberley, Cheviot and Kaikoura.

Monitoring the trends



Monitoring the effects of any Regional Pest Management Strategy (RPMS) is a requirement of the Biosecurity Act 1993. The objective for nassella tussock in Canterbury's RPMS is to progressively reduce the plants population over the duration of the Strategy. Comparison between monitoring data from a number of years is used to determine whether such a reduction is occurring.

AgResearch scientist Dr Graeme Bourdôt and Dave Saville of Saville Statistical Consulting Ltd developed the annual sampling programme that estimates the size of the nassella tussock population (the average number of plants per hectare) on properties throughout Canterbury. Each year Environment Canterbury Biosecurity Officers walk 30 minute transects from preselected points on randomly chosen properties counting live nassella tussock as they go. This information is passed to Graeme and Dave who apply the mathematical formulae which then provides an assessment of the average number of plants per hectare. Monitoring results can be seen in the graph.

While plant numbers fluctuate from year to year, it appears that they are neither progressively declining nor increasing. Instead, it seems that nassella tussock is maintaining an equilibrium density of about 16 plants per hectare (averaged over all infested properties in the Hurunui District).

Please don't forget your Compliance Return

The compliance return is an integral part of managing nassella tussock in the Hurunui District. The return form should be filled in after the control work on your property is finished. The completed form explains what you have done on your property to comply with nassella control requirements. Please do not forget to complete your compliance return and send it in. The information provided by you helps to select which properties need to be inspected; it lets Biosecurity staff know when your work is finished and your property ready to be checked. If no return is received then it is assumed that the work has not been done, and an inspection is needed.

Please remember to get your return in to the Amberley Office as soon as your control work is completed.



Hurunui Nassella Tussock Pest Management Liaison Committee member, Graham Uren comments

Hurunui District farmers have come a long way over the past 50 - 60 years of controlling nassella tussock. The Nassella Tussock Board of yesteryear would be pleased to know that nassella tussock is still being given a priority as a pest in the District. Although the days of Board control are long gone, the Hurunui District Nassella Tussock Pest Management Liaison Committee still has a fair say in how nassella tussock is managed in Hurunui.

The current committee of 13 people is right behind Environment Canterbury implementing the Region's Regional Pest Management Strategy. The large majority of farmers take pride in doing a good job of nassella control while a small number fail to make the grade. The committee's expectation is that Ecan's Biosecurity team will ensure all farmers carry out a competent job of removing nassella tussock plants before they seed in November.

Members of the committee take their role seriously and expect that if there are issues raised by individuals in the community during the compliance process, they may be called upon to assist in resolving these in collaboration with Environment Canterbury Biosecurity staff. Utmost in committee member's minds will be the objective of the RPMS; reducing the density of nassella tussock throughout the District. We can all achieve this if we grub nassella tussock plants before the seed is viable.



MAF Sustainable Farming Fund Projects

In 2007 the Hurunui Nassella Tussock Pest Management Liaison Committee (PMLC) obtained Ministry of Agriculture and Forestry's Sustainable Farming Fund funding to undertake three experiments aimed at building on the results of the nassella tussock ecology study undertaken by AgResearch.

The main objective of the project was to give farmers the information they need to make better decisions on nassella tussock control.

In the Project team were farmers David Hyde (Project Supervisor), Stuart Gibb, Ross Little and Graham Uren, scientists Graeme Bourdôt (AgResearch) and Dave Saville (Saville Statistical Consulting Ltd), and Laurence Smith (Project Manager) and Leanne Lye (Financial Manager) both of the Environment Canterbury Biosecurity team.

EXPERIMENT 1

How does the time of grubbing (in spring) affect the number of new plants successfully establishing as a result of a grubbed plant being left lying on the ground?

Interim results have found that only a small number of new plants arose from the grubbed plants, 46 plants in 2.5 years. Of the new plants only six established in plots associated with the earliest grubbing dates. As further data become available it is hoped to define a 'cut-off' in the growing season beyond which grubbing fails to prevent population increase.

EXPERIMENT 2

How does the intensity of grubbing (in hectares per hour) affect the rate of population change and how does the seasonal timing of grubbing affect the rate of population change?

Interim results suggest that autumn grubbing is just as effective as spring grubbing when similar hours are spent grubbing. However further data are required to confirm this.

EXPERIMENT 3

How fast does nassella tussock grow and how does soil fertility and/or applied fertiliser affect this?

Interim results have shown plants in Year 1 plots grew 28mm in the first year and a further 22mm in the second year. Plants in Year 2 plots grew 20mm in the first year. The application of fertiliser had no effect on the growth rate of nassella tussock.



Left: Biosecurity Officer Noel Crump photographs a plant for the growth rate experiment. Right: Dave Saville of Saville Statistical Consulting Ltd sets up an experimental plot.

While there are some useful preliminary results from this project more time is needed to truly realise the project objectives. Experimental projects like this can be long term due to the biological nature of the plant.

The Project Team has been successful in obtaining 3 years of funding for another project which commenced on 1 July this year. The new project will expand on the work of the three experiments above, and will also evaluate the newly registered herbicide, flupropanate (Taskforce) imported specifically for the control of nassella tussock and Chilean needle grass. Ben Minehan, Senior Biosecurity Officer with Marlborough District Council, has joined the Project Team for the term of the project.

Computer simulation to aid search for the best grubbing strategy

AgResearch scientists are continuing to develop a computer simulation model for nassella tussock in the Hurunui district. Estimates of the distribution of plants in the district (plant numbers) come from Environment Canterbury compliance records and monitoring data and are the starting point for the simulations.

It is important that the simulation picks up the key points of the nassella plant ecology for example plant growth, mortality, seed production and viability, dispersal, seedbank survival and seedling recruitment. These parameters often depend on the size of the plant. Luckily nassella is well studied and 12 years of experimental data are helping scientists to estimate model inputs for each plant size class.

The analysis of experimental data is ongoing and has sparked a lot of constructive debate among scientists and Environment Canterbury Biosecurity staff. Some inputs are easily determined (for example seed production), while others are more difficult (for example seedbank numbers) and a few are near impossible to measure (for example long distance dispersal).

For this reason the simulation cannot be expected to predict the future but can be used to compare nassella tussock management strategies over time in the Hurunui district.



Your representatives

The purpose of the Hurunui Nassella Tussock Pest Management Liaison Committee is to support Environment Canterbury in the implementation of the communities' Regional Pest Management Strategy and make recommendations that will help Environment Canterbury manage nassella tussock in the Hurunui District. The current committee was elected for a 3 year term in August this year.

Your representatives on the Committee are:

Simon Chapman , Scargill <i>Chairperson</i>	03 314 3730
Graham Uren , Waipara	03 314 6893
David Hyde , Scargill	03 314 3894
Graham Grigg , Rotherham	03 315 6052
Alan Lowry , Omihi	03 314 5893
Stewart Gibb , Greta Valley	03 314 3893
Bruce McLachlan , Omihi	03 314 5869
Danny Spencer , Cheviot	03 319 8878
Fiona White , Cheviot	03 319 8878
Julia McCombe , Greta Valley	03 314 3440
Russell Hansen , Cheviot	03 319 8668
Bev Todd , Culverden	03 315 8128
Ross Little , Omihi <i>(HDC Representative)</i>	03 314 5841



Keep up the good work

Overwhelmingly, the greatest majority of land occupiers in the Hurunui District who have nassella tussock on their property do a good job of controlling the plant each year. For most of the 897 properties on the nassella database it is an annual task, planned for and carried out thoroughly well before flowering. Last year 455 properties were inspected by Biosecurity staff and of these 392 complied on first inspection. Just under half of those who were asked to carry out more control work were sent a letter deviating from the enforcement process because the problem was of a minor nature.

Remember to be methodical and thorough as you go about your nassella tussock control work. For those of you who are doing a good job, keep up the good work.

Environment Canterbury Biosecurity Staff

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Lance Smith	Biosecurity Officer
Lindsay Scott	Biosecurity Officer
James Kilgour	Biosecurity Officer
Terry Charles	Biosecurity Officer
Cam Doake	Biosecurity Officer
Robin Harrison	Biosecurity Officer
Stephanie Schwabe	Biosecurity Support Officer

Cheviot Office: Phone 03 319-8614
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