

Theme

were initially confident that the north island kaka will not be at risk from the self resetting possum trap when cinnamon bait is used. Ongoing field studies of native bird interactions with the traps will be included as part of the other established field trials.

Goodnature's automatic possum trap is available for purchase by the public.

Note

You can read the National Animal Welfare Advisory Committee guidelines at <http://www.biosecurity.govt.nz/animal-welfare/nawac/policies/guideline09.htm>. A trap deemed humane by this standard makes the animal irreversibly unconscious within 3 minutes. The A Class standard is irreversibly unconscious within 30 seconds. All possums in the Goodnature automatic trap trial were deemed instantly killed.



Education

The NZ School of Forestry

How we fared in the earthquake

Dr. Bruce Manley, (Head of School)

We have been very fortunate at the School of Forestry – we have been relatively unaffected by the earthquakes. The Forestry Building suffered minimal damage – we lost a few thousand dollars worth of glassware in the labs. Despite the disruptions caused by the University being closed because of earthquakes and snow we have been able to run our full programme of courses. Unlike most other departments, we did not have a single student leave because of the earthquakes. In fact we had three new PhD students, two from Germany and one from Malaysia start with us in June.

Student numbers

We have a total of about 90 Forestry Science students and 25 Forest Engineering students. A positive feature of the intake for 2011 has been the number of children or siblings of previous graduates from the School. Families include Brown, McKenzie, Saathof, Slui and van Haandel. The final year classes are small – just 15 in Forestry Science and 4 in Forest Engineering. Their job prospects are very good – most received a number of offers and have accepted positions for next year. We continue to have a strong postgraduate programme. We have a total of 28 postgrads – 14 from New Zealand with the other 14 from 11 different countries.

Research activities

Developing an Erosion Susceptibility Classification (ESC) for NZ Plantation Forests

The ESC was commissioned by the Ministry for the Environment, and was a joint effort between three School of Forestry staff (Mark Bloomberg, Justin Morgenroth and Rien Visser), in conjunction with Tim Davies from the University of Canterbury Department of Geological Sciences. It also involved numerous collaborators outside the University, including Regional Councils, and land management and forestry consultants.

The objective of this study was the development of an erosion susceptibility classification (ESC), which will be used to analyse the risks of erosion, sedimentation and environmental harm associated with plantation forestry activities in New Zealand. The ESC is a classification system where land is categorised as low, moderate, high or very high erosion susceptibility, denoting increasing risks of erosion.

The susceptibility of the land to erosion is one of several key factors in a proposed National Environmental Standard (NES) for plantation forestry. Regulation of forestry activities under the proposed NES would be partially driven by the ESC. For example, harvesting in a low ESC area may be a permitted activity whereas harvesting in a high ESC area may



Final year students on the North Island field trip

be a discretionary activity.

A further task was to analyse the associated risks of erosion and sedimentation of various plantation forestry activities in each ESC zone. These activities included afforestation; harvesting both ground based and hauler systems; earthworks including roading, tracking and skid site formation; and mechanical land preparation and quarrying. The study was completed in May this year, although the School staff have been involved in follow-up work arising from the main project.

Wood quality

Since 2007 the School (John Walker, Luis Apiolaza) has led the Compromised Wood Quality (CWQ) research project—funded by FRST and with the participation of domestic and international partners—which looks at developing tools and techniques for very early screening for wood quality. Following promising initial results for both wood stiffness and dimensional stability, this year we have established a new genetic trial in Christchurch (see Figure X). This trial, established in collaboration with the Radiata Pine Breeding Company and other companies that market genetic material, is looking at operationalizing the research developed by the CWQ project.

In two years time we will separately evaluate normal and compression wood properties for 3,000 trees with known genetic identity, including open- and controlled-pollinated material as well as clones. In fact, we will be screening material from seed orchards and clonal deployment populations, giving industry the opportunity to eliminate the clones with worst wood properties from seed and cuttings production.



Quantum leap forward: 3,000 seedlings and clones from the Radiata Pine Breeding Company and Forest Genetics Ltd deployment populations will be screened for wood quality in 2013. The worst performers will be identified and culled from seed orchards and clonal programs.