

NZDFI ANNUAL REPORT

Over the past twelve months new central government funding and industry support has been secured for NZDFI's R&D programme. This includes a new seven year MBIE research partnership led by Future Forests Research (FFR). The partnership involves FFR funding research contracts with the University of Canterbury (UC) and the Marlborough Research Centre (MRC) for delivery of the NZDFI's durable eucalypt research programme. It will deliver a huge boost to NZDFI's durable eucalypt research programme as the combined annual allocation to UC and MRC is a total \$500,000 per annum. The new partnership commenced on 1 July.

Excellent growth continues within some of NZDFI's breeding populations with further assessments of growth and form having been completed followed by marking up poorer performing trees, low pruning trees to be retained and then thinning those that are marked.

Early Scion selections of the best performing families have been successfully grafted and will be planted in the first seed orchard in spring 2015. UC has made progress on research of heartwood formation and the chemical basis of natural durability using discs cut from some of the felled stems of the breeding populations that were thinned. In addition, a suitable increment corer is under development that can be used to research superior trees with abundant heartwood that is rich in extractives.



Figure 1: Early selections of E. bosistoana that have been grafted onto root stock for planting into the first of NZDFI's seed orchards

Figure 2: The UC research team testing new coring equipment (left to right): Yanjie Li; Gayatri Mishra;(kneeling with corer); Clemens Altaner; Euan Mason and Lan Lengoc

Under NZDFI's SFF project, nine new landowners planted over 15,000 durable eucalypt seedlings in 10 new trial sites in the last two planting seasons with six of these planted this past season. These landowners are located in the North Island regions of Waikato, Hawkes Bay, Horizons and Wairarapa with new South Island landowners located in Marlborough, Nelson and north Canterbury. Sites planted in the North Island have included those in colder locations and/or higher rainfall and varying soil types including one in Lake Taupo Forest Trust's estate in pumice soils; also a high rainfall Nelson site with granite soils while a site in north Canterbury is located on a dairy farm. The plantings significantly extend the overall range of climatic conditions and soil types under which NZDFI's durable eucalypt species are being trialled.



Figure 3: A summer view across the new trials planted at Waihapua forest by Hawkes Bay Regional Council last year. While there is a lot of 'flea-bane' weed around the eucalypt seedlings, this has served as a nurse crop and now died back over winter leaving the eucalypt seedlings clear.



Figure 4: Geoff Thorpe with a 7 month old E. bosistoana seedling in the new Lake Taupo Forest Trust trial planted last year in pine cutover and pumice soils.

The upgrade of the NZDFI website has continued with some landowners who host NZDFI trials now having their own page and several short videos uploaded that cover eucalypt establishment techniques in grassland and pine cutover.

Presentations were given to the Marlborough Regional Forests Committee, at Hawkes Bay Regional Council's Field day at Waihapua forest and to the Primary Production Committee at Parliament House.

The NZDFI won the Supreme Award at the 2015 Cawthron Marlborough Environment Awards (CMEA) dinner on 13 March in Blenheim. The judges were "impressed by the well thought through strategic and collaborative approach to the project development which combines grassroots, commercial and scientific elements".

On 12 May the CMEA Trust and NZDFI held a combined evening seminar at the Marlborough Research Centre preceded by a field trip. This event was attended by 58 people and included a visit to Marlborough Lines workshop to see and hear about the company's use of hardwood cross arms in their electricity network.



Figure 5: Gerald Hope, Paul Millen and Shaf van Ballekom (centre of photo) at Parliament House with members of the Primary Production Committee following a presentation about NZDFI.



Figure 6: Geoff Hoare talking to attendees about the use of hardwood cross arms in Marlborough Lines electricity network.

There was a NZDFI field trip and seminar on 3 June in and around Martinborough in southern Wairarapa that was attended by over 40 people with an interest in sustainable land use, including vineyard owners/managers, organic farmers and farm foresters.



Figure 7: NZDFI's Extension team chair Clive Paton speaking to attendees of seminar on 3 June about the use of naturally durable *E. cladocalyx* strainer posts and stays in his vineyard near Martinborough.



Figure 8: Members of the Extension Team visit on 11 November to JNL's mill waste water treatment site, Masterton, planted with ground-durable species in 2011.

An AGMARDT grant awarded to the University of Canterbury combined with funding by NZDFI partners is paying for the NZ School of Forestry to undertake a three year research project aimed at matching two NZDFI durable species (*E. bosistoana* and *E. globoidea*) to dry land sites in Marlborough.

Last summer two University of Canterbury summer scholarship students working on this project were able to re-measure most of NZDFI's existing PSPs and to establish another 27 new PSPs bringing the total to 129. Data was successfully recorded by the students using a new ipad mini throughout the summer.

Meetings of NZDFI's executive management team were held on 26 November 2013, 4 February 2015 and 29 June 2014. The two milestone reports were submitted to MPI for the SFF 13-024 project and two project updates were circulated by email to all those on the NZDFI contact list.

Annual report prepared by
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