

## Project Update - July 2014 – November 2014

### NEWS FROM THE PAST FEW MONTHS –

#### Forest Operational Research and Extension Programme - SFF 13-024 project: Enabling growers to maximise value from planting durable eucalypts

- **New trial sites planted**

Six landowners have planted a total of 8 new trial sites this past spring. These add to NZDFI's regional scope along with the new trials planted last year, with a range of new sites in both the North and South Islands. Some new trials are in cold locations with higher rainfall and varying soil types. These new trials significantly extend the overall range of climatic conditions and soil types under which different species are being trialled by NZDFI. The map below following page shows the location of all the trials planted in the past two seasons. Thanks to the following landowners for enabling NZDFI to increase the range and diversity of trial sites.

- Lake Taupo Forest Trust, Mission Bay, Taupo.
- NZ Redwood Company, Okota forest, Manawatu and Paparoa forest, Taumaranui.
- Hawkes Bay Regional Council, Waihapua forest, Hawkes Bay.
- Ed Saathof, Crownthorpe, Central Hawkes Bay.
- Roger Clifton, Motueka Valley, Nelson.
- Robb MacBeth, Waiau Valley (two sites), Nth Canterbury).



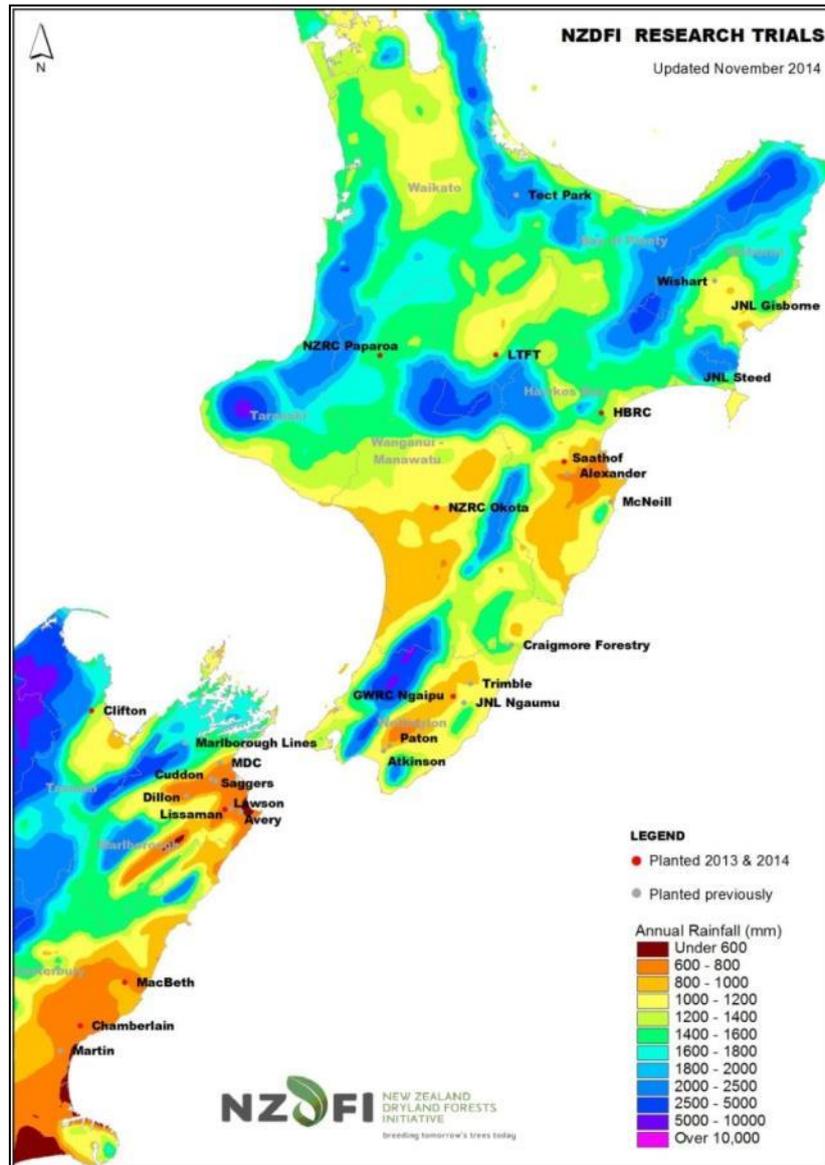
*A new trial being planted at Rob MacBeth's Phoebe Plains property in the Waiau valley near Cheviot in North Canterbury. Robb wants to evaluate if the eucalypts will intercept nitrates that result from his dairying operation.*



*Lake Taupo Forest Trust trial being planted in pine cutover and pumice soils in late September.*

All trials were planted with tree stocks, grown by Morgans Road Nursery in Blenheim, and included *E. bosistoana*, *E. camaldulensis*, *E. cladocalyx*, *E. globoidea*, *E. longifolia*, *E. macrorhyncha*, *E. quadrangulata* and *E. tricarpa*.

If further sites are offered for new trials we will target different site types to broaden the data for growth models. The biggest geographical gap is in the eastern Horizons area.



### AGMARDT project: Matching elite high value eucalypts to productive drylands

An AGMARDT grant to the University of Canterbury combined with funding by NZDFI partners is paying for Euan Mason and Justin Morgenroth of the NZ School of Forestry to undertake a 3 year research project aimed at on matching two NZDFI durable species (*E. bosistoana* and *E. globoidea*) to dry land sites in Marlborough.

As a part of the initial set up for this project, four meteorological stations in Marlborough were relocated onto new sites within enclosures. Euan is designing the monitoring system, providing oversight, and help with installations and Ash Millen will handle the local monitoring, inspection and maintenance. Two stations are still to be relocated in the southern North Island, and that will be completed in January 2015.



*The relocated weather station at the Dillons site in Marlborough.*

Two University of Canterbury students have also started working over summer in Marlborough paid under the AGMARDT project to re-measure most of NZDFI's PSP's in Marlborough and to establish new PSP's at Avery's site. In January they will travel the North Island to measure PSPs at Atkinson's and Trimble Foundation's Rewanui Farm Park both in Wairarapa. Then they move on to measure PSP's at Alexander's in Hawkes Bay and Wisharts in Gisborne.

Data is being recorded by the students using a new i pad mini that is allowing real time data entry alongside records of the last measurements as well as easy access to GPS and GIS based maps that the students can use to navigate to and around the PSP sites. Also a direct link for e mail communication using the e mail address [nzdfi@outlook.com](mailto:nzdfi@outlook.com) so send them a message if you like!



*University of Canterbury School of Forestry student Kathryn Gordon (on left) holds NZDFI's new i pad mini for data collection in NZDFI's PSP's while classmate Jack Burgess holds the pencil and clip board to be retained in the event of an IT breakdown!*

Their work to re measure our PSP's will significantly contribute to improving the outcomes from our SFF project as well as Scion's SLMACC project.

### Other work completed

- Proseed's new propagation facility at Amberley is open for business. The large indoor facility provides huge potential for more controlled propagation of all specie including ground-durable eucalypts.



*Shaf van Ballekom, Proseed's CEO checks on newly germinating seedlings in the new propagation house. These are being grown for root stock that will be grafted up with NZDFI's early selections over this summer.*

- Scion has already started re-measuring older E.globoidea PSPs in North Island under their SLMACC hardwood productivity research project.
- NZDFI team members have been working with Scion, the University of Canterbury and other partners to prepare a bid for MBIE funds under the leadership of Russell Dale, NZ Forest Owners Association Research Manager. If successful, \$1.2 million/year will finance seven years of diverse species research (Douglas-fir, cypresses and eucalypts including substantial funds available for the NZDFI research programme. However, further industry co funding is being sought in the New Year to ensure that full delivery of the planned programme is possible.
- NZDFI has submitted a SFF bid in collaboration with the SFF Trees for Bees project team. The outcome of this bid will be known in March 2015.
- University of Canterbury has also submitted a SFF application for a project titled 'Making eucalypts easy to cut' that is supported by NZDFI and others interested in sawmilling of plantation eucalypts including non-durable species.
- Branding –there has been work on developing the concept of the XyloGene brand which will be used to market NZDFI breeding stock and to collect a royalty.

## IN THE PIPELINE - NZDFI activities 2015

- **NZ Forest Growers Levy Trust Funding for four new PhD scholarships**

The University of Canterbury's School of Forestry forest growers levy funding of \$50,000 per annum has allowed the recent selection of four new PhD scholarships that will contribute significantly to NZDFI research programme. The students and their research projects are:

### **PhD project 1 – Selecting superior trees with abundant heartwood rich in extractives**

Yanjie LI from China was awarded the scholarship for this project. Yanjie commenced his PhD study in November 2014.

### **PhD project 2 – Heartwood formation and the chemical basis of natural durability**

Gayatri Mishra from India was awarded the scholarship for this project. She commenced her PhD study in October 2014.

### **PhD project 3 – Variation in tree growth between and within sites**

Serajis Salekin from Bangladesh was awarded this scholarship. He will commence his PhD study in February 2015.

### **PhD project 4 – Influence of temporal differences in insect attack and severity on the growth and recovery of naturally durable eucalypt species.**

Huimin Lin from China was awarded the scholarship for this project. She commenced her PhD study in November 2014.

- **Technology transfer planned over the next 6-12 months**

- Making a short video on establishment techniques.
- continuing to develop the website – check the changes already made [www.nzdfi.org.nz](http://www.nzdfi.org.nz)
- A durable eucalypt workshop – most likely in South Wairarapa in June 2015. The workshop will be aimed at wine growers, farmers and others interested in sustainable and organic land management.

## **A final word from Paul....**

There's been a **big push by all the new landowners** who planted new trials this year.

Your support, interest and enthusiasm will significantly extend NZDFI's research.

With Christmas almost upon us, I want to wish you all the best for the festive season and for the New Year!

**Anyone wanting further information and you can encourage others to contact:**

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SUPPORTERS:

