

## Project Update - November 2012 to February 2012

(This project update is a summary of the NZDFI SFF progress report to MAF for this period.  
A full copy of this report is available on request.)

### Durable eucalypt trial establishment/management

The *E. bosistoana* breeding populations planted in 2012 at McNeill's in Hawkes Bay were released in December with Ngaumu and Dillon's sites not requiring releasing as there has been little weed regrowth over the long dry summer. All these sites will be assessed for early survival in April/May.



**Figure 1: View over part of the well established 18 month old *E. globoides* in the NZDFI breeding population planted in 2011 at 'Wharerata' in south Wairarapa.**

There has been some follow up release spraying needed in a number of the 2011 trials including at Wishart, Rewanui Farm Park, Atkinson and Cuddon while some further weed control was required in 2010 *E. bosistoana* planted at Cravens Road. Unfortunately, the trial at JNL's Totara forest in Gisborne has been badly damaged by deer and goat browse.

**SUPPORTERS:**



## **Mapping and assessment programme for 2011 trials.**

Mapping of all trials has been continuing. The assessment procedure and data management for both NZDFI's breeding populations and species demonstration trials is being finalised with the assessment programme planned to be largely undertaken in April and early May. Results will be collated, analysed and reported as key milestone for the completion of our current SFF project.



**Figure 2: Heather Atkinson stands amongst some exceptional 18 month old *E. globoidea* in the NZDFI breeding population planted at Wharerata in 2011 and due to be assessed in April.**

## **Seed collection/acquisition.**

For the first time in 5 years there was sufficient seed of *E. quadrangulata* to allow Proseed to coordinate a collection in Australia this summer. 75 single parent collections have been made across the natural range in New South Wales. The collection will be available for a spring sowing at Morgans Road Nursery, subject to funding being available to pay for planting in 2014. Once established, NZDFI's base breeding populations will include 95 families of this species.

## **Sites being planted in 2013.**

5,000 *E. cladocalyx* nursery stock have been propagated from ALRTIG/CSIRO seed orchard seed and are planned for planting in a mass selection trial with the NZ Redwood Co. site near Hunterville, later this year.

In addition, 10,000 *E. camaldulensis* nursery stock have been propagated from WA Forestry Products Commission seed orchard stock and are planned for planting in a mass selection trial by Juken NZ Ltd (JNL) at Ngaumu forest at a site alongside the existing NZDFI trials. These will complement the 5 hectare waste water irrigation area planted with 13,500 *E. camaldulensis* by JNL last year alongside their mill in Masterton.

### **SoF Wood quality study at Harewood.**

160 *E. bosistoana* seedlings (16 families, 8 reps) and 40 *E. argophloia* seedlings (5 families, 8 reps) that were planted in September 2010, were felled in December 2012 for wood quality assessments. The assessments have been completed with the data still under analysis.

The stumps have coppiced profusely: at the end of February 2013, only 17 of the 160 *E. bosistoana*; and 8 out of 40 *E. argophloia* failed to develop coppice. Patrick Milne (Southern cypresses) and Paul Schroeder (Proseed) have been testing taking cuttings from the coppicing stumps and report reasonable success with striking these.

### **Climate stations established**

Four weather stations have been set up over December & January, all at Marlborough sites including Lawsons, Avery, Dillon and Cuddon. The two remaining stations will be set up in the near future at Ngaumu forest and at McNeill's.



**Figure 3: Ruth McConnochie finalising set up of new weather station in well established 18 month old *E. globoidea* breeding population on Poverty Knob (Avery's property) with Lake Grassmere behind.**

### **NZDFI Regional Field Day/Workshops**

Two more of NZDFI's regional field days were held; one in Gisborne on 14<sup>th</sup> November 2012 and the other in Wairarapa on 13<sup>th</sup> February 2013.

The Gisborne event was held Bob Wishart and Meg Gaddum's property, Te Koawa and was co ordinated by the Gisborne Farm Forestry Association. There were 34 attendees.

Presentations were given in the Te Koawa woolshed by:

Paul Millen – 'Do current markets for durable hardwood justify investment in planting new eucalypt forests?'

Ian Nicholas – 'Selecting eucalypt species with promising potential for NZ drylands'.

This was followed by lunch then an afternoon walk around the NZDFI's demonstration trials planted on the property. Thanks to Bob and Meg and the local committee for planning and co ordinating the day.



**Figure 4: Paul Millen (standing on left) delivers his presentation in Te Koawa woolshed to attendees of the Gisborne field day.**



**Figure 5: Sean McBride (at centre) talks about Juken NZ Ltd's durable eucalypt programme and their support for NZDFI to attendees of the Wairarapa field day.**

The next Wairarapa regional field day was held on 13<sup>th</sup> February 2013 with the co ordination of the day assisted by Wairarapa farm Forestry Association, Juken NZ Ltd and Sustainable Wairarapa.

The field day started at Wainuioru Hall where presentations were given by:  
Paul Millen – 'Do current markets for durable hardwood justify investment in planting new eucalypt forests?'  
Heather Atkinson – 'Over the Fence Post – demand for ground durable posts from organic farmers.'

This was followed by a visit to Juken NZ's Ngaumu Forest to inspect NZDFI's eucalypt trials that have been planted over 2011 and 2012. Sean McBride of Juken's Wairarapa team outlined JNL's interest in growing durable timber and their work with NZDFI. Also the need to undertake a high standard of pre plant weed control and spring planting to ensure successful establishment of eucalypts.

After the Ngaumu visit there was a final stop at the Homebush durable eucalypt trial established in 2008 near Masterton. On behalf of Sustainable Wairarapa, Don Bell (Carbon Natural Ltd) led a walk through trial to look at and discuss silviculture that had been completed.

Thanks to all those involved for making this a successful day.

The next NZDFI regional workshop and field day is in Canterbury and will be held on 25th May 2013. The programme is shown in Appendix 1.

NZDFI's durable eucalypt species leaflets have been completed and are now available 'on line'.  
[http://www.nzdfi.org.nz/whats\\_new.php](http://www.nzdfi.org.nz/whats_new.php)

### **New linkages with other projects or research programmes**

Juken NZ Ltd has completed a sawing study at their mill in Gisborne of young *E. quadrangulata* logs grown by Ben McNeill at Waimarama. Andy Costello of JNL will be reporting on this in due course.

### **Project Expenditure**

Over the past four months there have been costs for the monitoring and maintenance of the breeding populations of *E. bosistoana* planted 2012 as well as some of the 2011 trials.

There have also been the costs for the planning and delivery of two regional field days.

Expenditure for the Nov 2012 to Feb 2013 period was a total of \$30,073. There has been co funding received from NBFFF of \$8000 and SoF contributed an additional \$2500. The balance of these costs has been requested from SFF.

### **Future funding of NZDFI**

At the time of writing this report, we have just received notice from the Sustainable Farming Fund that we have been successful with our application that was submitted by Marlborough Research Centre Trust on behalf of NZDFI to the Ministry of Primary Industries on 26<sup>th</sup> October 2012.

This is very good news and ensures that we can continue our operational research and extension. This programme will engage new growers in learning successful establishment and effective early silviculture to manage durable eucalypts to maximise crop value either for posts and poles, sawlog and carbon options. We will record species growth, form, health and survival so as to measure gains in productivity and value and for future development of growth and yield models for post and pole wood production.

The proposed programme will broaden the number of people actively involved with NZDFI's programme including North Island landowner reps governing the programme and meetings to be held in Masterton. Also new landowners planting more demonstration trials in new regions as well as new support for NZDFI from Horizons Regional Council.

To ensure effective continuity of NZDFI's separate tree improvement programme, we have also been working on an application to Ministry of Building Innovation and Employment's Biological Industries portfolio. This application is being lodged this week by University of Canterbury in collaboration with FFR & SCION.

More details on this will be released in once the application has been finalised and lodged.

Anyone wanting further information should contact Paul Millen, NZDFI Project Manager 03 574 1001 or [p.millen@xtra.co.nz](mailto:p.millen@xtra.co.nz)

## Appendix 1: Canterbury workshop and field day programme



**NZ Farm  
Forestry  
Association**  
Canterbury  
Branch



### ‘Durable eucalypts for NZ drylands’

#### Workshop/Field Trip on Saturday 25<sup>th</sup> May 2013

- 9.50am Gather at School of Forestry, University of Canterbury.
- 10.00am Welcome and introduction. *Shaf van Ballekom, Chairman NZDFI (Proseed)*
- 10.10am Current markets for durable hardwood justify investment in planting new eucalypt forests. *Paul Millen, NZDFI Project Manager*
- 10.30am Breeding tomorrow’s trees today – an overview of NZDFI’s durable eucalypt breeding programme. *Luis Apiolaza, School of Forestry, UC*
- 10.50am Collecting the seed for a durable eucalypt tree breeding programme. *Shaf van Ballekom, Chairman NZDFI (Proseed)*
- 11.10am The adaptability and early growth of durable eucalypt species in NZ drylands. *Ruth McConnochie, NZDFI Tree Breeder*
- 11.40am Discussion
- 12.00am Lunch (included in \$10 registration fee)
- 1.00pm Early screening of individuals for low growth-stress, high stiffness and physical characteristics. *Clemens Altaner, School of Forestry, UC*
- Selection for improved heartwood and durability. *Justin Nijdam, Chemical & Process Engineering, UC*
- Visit of laboratory. *Monika Sharma, School of Forestry, UC*
- 2.00pm Depart UC for Harewood Nursery (239 Sawyers Arms Road, 20 mins from UC and 10 mins from the airport) to view durable eucalypts for coppicing and wood quality research.
- 3.00pm Field day ends.

Please bring **\$10 registration fee in cash** to pay for lunch. Bring raincoat if wet weather.

RSVP to [info@nzdfi.org.nz](mailto:info@nzdfi.org.nz)