NZDFI NEW ZEALAND DRYLAND FORESTS INITIATIVE
breeding tomorrow's trees today

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Project Update - July 2011 to October 2011

(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 breeding population establishment

Planting of all our new durable eucalypt breeding populations was completed August - October.
30,000 *E. globoidea* seedlings have been planted at 3 sites.
9,000 *E. quadrangulata* seedlings have been planted at 4 sites.
4,000 *E. argophloia* seedlings have been planted at 3 sites.
1,500 *E. tricarpa* seedlings have been planted at 3 sites.

This was achieved using the excellent planting stock produced by Grant and Donna Robinson, and their team at Morgans Road Nursery, and Ruth McConnochie, our hard working 'tree breeder', who coordinated the huge task of labelling, sorting and successfully getting all these seedlings planted.

There have also been serveral teams of contractors, as well as many of the landowners involved in getting the seedlings all planted. So a big thanks to the contractors and again to all the landowners!

Finally, thanks to Paul and Raewyn at the Akura Conservation Centre in Masterton who assisted with the storage and dispatch of the seedlings that were planted in the Wairarapa.

Photo: *E. globoidea* seedlings destined for planting at Ngamu Forest are loaded by Grant Robinson at Morgans Road Nursery.

SUPPORTERS:


LH Photo (above): Ruth McConnochie getting prepared for planting E. globoidea breeding population on Poverty Knob at Avery's property in South Marlborough.
RH Photo (above): Ruth and Tony Pruden's gang planting Poverty Knob.


LH Photo (above): *E. globoidea* seedlings await the start of planting at JNL's Ngamu forest.
RH Photo (above): JNL gang planting *E. globoidea* breeding population at Ngamu forest.

Sites where these breeding populations have been planted are located in Hawkes Bay, Wairarapa, Marlborough and Canterbury.
(Refer: Appendix 1 – NZDFI Site Location Map and Appendix 2 – NZDFI 2011 Trial Establishment Programme)

Durable eucalypt breeding population assessment

The report on early adaptation by *E. bosistoana* based on survival and height growth of the three breeding trials planted in 2009 is attached as a separate PDF to the email sent out with this update.

These early results have directed further seed collection in southern regions of Victoria where this species grows in natural stands. An additional 85 family seedlots of E. bosistoana have been collected by Proseed NZ and this is planned for propagation and planting in 2012.

Demonstration trial establishment

Planting of over 18,000 seedlings is completed of 13 regional demonstration trials that include from 3 up to 10 different species of durable eucalypts.

Once again, thanks to all those involved that have assisted with planting these trials.

LH Photo: Demonstration trial seedlings (including radiata pine seedlings) are packed into wine boxes ready for planting.
RH Photo: Demonstration trial being planted at Dillon property.

Sites for these demonstration trials have all been secured with landowners located in NZ's east coast regions of Bay of Plenty to North Canterbury.
(Refer: Appendix 1 – NZDFI Site Location Map and Appendix 2 – NZDFI 2011 Trial Establishment Programme)

Trees being grown for wood quality study at Harewood nursery

There were some challenging winter conditions in Christchurch with two snow falls that covered the trees at Harewood nursery in a blanket of snow!

Photo 4: P.radiata (foreground) and *E. bosistoana (along back)* seedlings at Harewood nursery following a winter snow fall.

Despite this, only 3 suffered broken tops. However, subsequent frost damage did result in crown die bark of a few individuals. Many of these are now coppicing from the top of their lignotubers.

Photo: Coppice shoots on top of lignotuber of *E. bosistoana* seedling damaged by frost at Harewood nursery.

E. globoidea and E. bosistoana coppice/vegetative propagation research

SCION have been continuing their work on 5 year old E. bosistoana and E. globoidea coppice regrowth that is being tested for vegetative propagation with the support of FFR.

Extension programme

The NZDFI Science Team met with the Honourable Wayne Mapp, Minister of Science and Innovation when he was visiting the region on 19th October 2011. The minister expressed interest in the potential for NZ to produce naturally durable timber and was impressed by the trees that he was shown at the 2009 E. bosistoana breeding population planted on Marlborough District Council river reserve land at Cravens Road.

Over 60 people attended the NZDFI/School of Forestry professional workshop and field trip on 'Developing a Eucalypt Resource' that was held 3rd & 4th November 2011 at the Marlborough Research Centre in Blenheim. As this was held in November, this has not been included in our SFF progress report for this period. However, it was very successful with 13 Australian eucalypt scientists and other experts delivering excellent papers on a wide range of matters to do with growing eucalypts. There will be more details in the next NZDFI update.

The Workshop Proceedings are available for anyone who was unable to be there. These can be read online or a hardcopy (an A5 size paperback, 158 pages) is available for $25 including postage and GST.

To check this out go to http://www.nzdfi.org.nz/workshop.php

Forestry student research projects

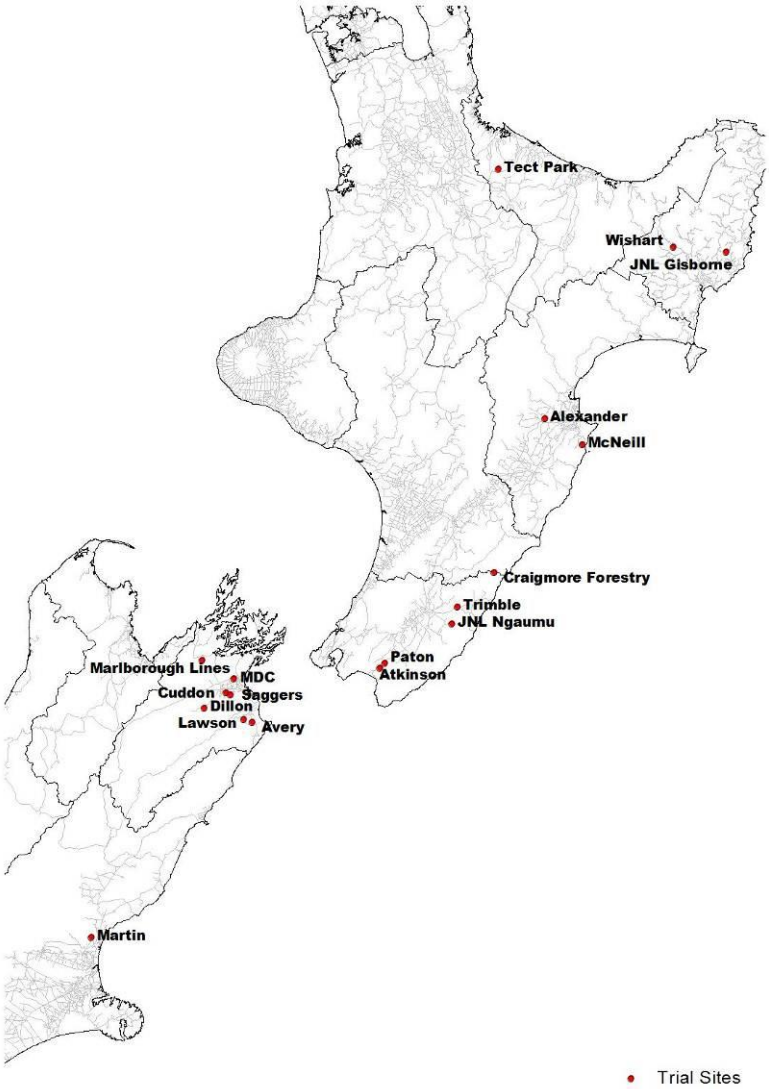
This year, the University of Canterbury are supporting three School of Forestry students with scholarships to undertake research work linked to the NZDFI programme.

One masters student is working on tree physiology including studying the effects of chilling as well as researching optimal temperatures for photosynthesis for a number of diverse forestry species including a number of NZDFI species.

An under graduate student is working on the development of growth and yield models with the objective of producing individual tree models for *E. globoidea* and *E. bosistoana,* while the third student is evaluating heartwood content and stiffness of *E. bosistoana* from discs and cores.

NZDFI will assist the students in planning and undertaking a sampling programme in 5-8 year old trials of *E. bosistoana* and *E. globoidea* in Marlborough.

Appendix 1. NZDFI Site Location Map



Appendix 2. NZDFI 2011 Trial Establishment Programme

Region	Main Breeding Populations		Other		Demo Trial	Planting
	E.globoidea 2011	E.quadrangulata 2011	E.tricarpa 2011	E.argophloia 2011	2011	Completed
Wairarapa	Heather Atkinson, JNL	Trimble	Trimble	JNL	Trimble, JNL	BPs 29 Sept to 3 Oct. Demos 27-28 Oct
Wairarapa					NZ Forestry	26-27 Sept
Hawkes Bay		Ben McNeil			McNeill, Alexander,	10-Oct
Marlborough	Avery		Avery			29-30 Aug
		Cuddons		Cuddons		20-Sep
			Dillons	Dillons	Dillons	BPs 20 Oct. Demo planned 8 Nov
					Saggers, Marlborough Lines	12-Sep
Canterbury		Martin*			Martin	27-28 Oct
Gisborne					Wishart, JNL	5 Sept & 16 Sept
Bay of Plenty					Tect Park	19-Sep