

July to October 2010 Project Update

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

Durable eucalypt breeding population establishment

Three additional blocks of *E. bosistoana* were planted in October to add to the breeding populations of this species that were established in 2009.

One of these was planted alongside the trees planted last year on the Marlborough District Council river reserve site on Cravens Road with another on the Martin's property in North Canterbury and, one new site planted at the Avery's property in South Marlborough (see photo one below).



Figure 1: Newly planted *E. bosistoana/argophloia* site on Avery property, Bonavaree at Grassmere, Marlborough

A total of 104 families of *E bosistoana* have now been established in the last two years.

This year, a small block that includes 15 families of *E. argophloia* was also planted at the Avery's site. This is the first block of this species with more planned for planting next year.

Seed to propagate seedlings for planting breeding populations next year has been obtained of *E. globoidea*, *E. quadrangulata*, *E. tricarpa* and *E. argophloia*. Much of this has been sown by Morgans Road Nursery with a report on the success of propagation in February.

In total, fourteen sites for planting breeding populations next year have been visited in the last month. These have been offered by interested landowners wanting to support NZDFI.

At this stage, nine sites have been selected from across Hawkes Bay, Wairarapa, Marlborough and Canterbury regions for planting next year with a further site to be finalised in Canterbury.

Final selection of all sites is planned for confirmation in February.

Demonstration trial establishment

Three demonstration trials were planted by landowners in September & October. These are located at Bob Wishart and Meg Gaddum's property north of Gisborne, Clive Paton's property south of Martinborough in Wairarapa and the Avery's property in south Marlborough. (*Thanks to these landowners for the time, resources and commitment they made for getting these trials planted.*)

Seed has also been obtained and sown to propagate seedlings for planting up to ten demonstration trials next year. These trials are being planned to include all the NZDFI breeding species plus up to another seven more durable eucalypt species (refer to Table one below). *Pinus radiata* seed has also been sown to be planted as a control within the demonstration trials.

Table One: NZDFI Demonstration trials species sowing list for planting 2011

NZDFI Field Code	Species	Source		
		Supplier	Provenance	Parents
995	<i>E. argophloia</i>	CSIRO	SSO Narromine	42
996	<i>E. bosistoana</i>	FSeed Aust,	FNSW	50
993	<i>E. camaldulensis</i>	WAFPC	WAFPC SO	
801	<i>E. cladocalyx</i>	CSIRO	SSO Hamilton VIC	59
802	<i>E. eugenioides</i>	Australian	Sydney district	
803	<i>E. globoidea</i> 2 seedlot mix	CSIRO	Cann River	10
		CSIRO	Yadboro SF	10
804	<i>E. longifolia</i>	Proseed	Kerikeri	
992	<i>E. macrorhyncha</i> 3 seedlot mix	Proseed	Gunning NSW	4
		CSIRO	Stromlo Forest	5
		CSIRO	Uriarra Road	10
805	<i>E. notabilis</i>	CSIRO	Lake Burragorang	
998	<i>E. quadrangulata</i>	Proseed	Mt Skanzi	
994	<i>E. tricarpa</i> 2 seedlot mix	CSIRO	Tucker Box	11
		CSIRO	Martins Creek	11



Figure 2: Newly germinated *E.camaldulensis* seedlings at Morgans Road Nursery

Most of the demonstration trials are now planned to be planted adjacent to breeding populations that are being planted in all regions except Gisborne, where a 'stand alone' demonstration trial is planned.

Extension work

A successful field day attended by over 40 people was held in Marlborough on 10th September to view the *E. bosistoana* breeding population planted at Lawson's property in 2009. (Field day notes were emailed to members & supporters following this.) Early survival and growth of the trees at this site look particularly promising.

Consultation is continuing with the five regional councils involved and with several of the local NZFFA branches to help find planting sites and discuss regional workshops/field days that are planned in 2012/13.

Research and drafting of the NZDFI durable eucalypt leaflets is underway. In addition, regional crop suitability mapping for all NZDFI selected durable species is now planned that will provide an additional resource of information to support the leaflets. This will be a set of digital maps covering the five dryland regions involved in the project, which will show those areas in each region that could be suitable for establishing the five NZDFI durable eucalypt breeding species.

The date for the NZDFI/SoF professional seminar on durable eucalypts has been set for 27/28th October 2011 and will be held at Marlborough Research Centre in Blenheim. A draft seminar programme is under preparation.

Heartwood study

Seedlings have been bagged up and are being grown on at the Harewood nursery by the School of Forestry for the pilot wood quality evaluation that is planned in 2012 using these two year old *E. bosistoana* (200 seedlings) and *E. argophloia* (40 seedlings).



Figure 3: Bagged up *E. bosistoana* seedlings that are being grown on for two years at Harewood Nursery in Christchurch for use in early wood quality study by the School of Forestry.

An additional heartwood study has been planned to assess early heartwood across three separate provenances of five year old *E. globoidea* that are growing in trials planted in the Marlborough Regional Forests in October 2005.

A sample of at least 30 trees from each provenance will be selectively felled and assessed.

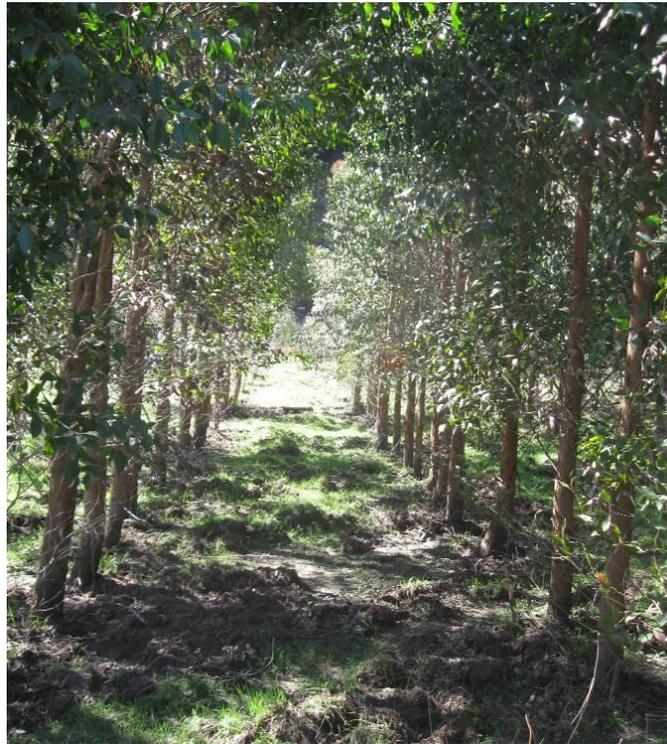


Figure 4: Five year old *E. globoidea* growing in the Waikakaho Valley, Marlborough Regional Forests that will be selectively felled to sample early heartwood development.

This study will demonstrate the genetic variability across the species for early heartwood formation. The study will also assist with developing the methodology and procedures for future early heartwood studies across all the NZDFI breeding populations.

FRST-FFR study by Scion on *E. bosistoana* vegetative propagation

Work will continue with collecting coppice growth from five year old *E. bosistoana* this summer to send to SCION for vegetative propagation research funded by FRST-FFR.

This work started last year with research being conducted in tissue culture and cutting propagation by rooting coppice in the nursery and stool plant management.

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