

Performance of Native Plant Species in South Australian Woody Crop Trials – FloraSearch 4

DEWNR Technical report 2014/15



Government of South Australia
Department of Environment,
Water and Natural Resources

Performance of Native Plant Species in South Australian Woody Crop Trials – FloraSearch 4

Trevor J. Hobbs, Craig R. Neumann, Merv Tucker,
Richard Mazanec, Mike Bennell and David McKenna

Department of Environment, Water and Natural Resources

August, 2014

DEWNR Technical report 2014/15



Government of South Australia
Department of Environment,
Water and Natural Resources



Department of Environment, Water and Natural Resources

GPO Box 1047, Adelaide SA 5001

Telephone National (08) 8463 6946

 International +61 8 8463 6946

Fax National (08) 8463 6999

 International +61 8 8463 6999

Website www.environment.sa.gov.au

Disclaimer

The Department of Environment, Water and Natural Resources and its employees do not warrant or make any representation regarding the use, or results of the use, of the information contained herein as regards to its correctness, accuracy, reliability, currency or otherwise. The Department of Environment, Water and Natural Resources and its employees expressly disclaims all liability or responsibility to any person using the information or advice. Information contained in this document is correct at the time of writing.



This work is licensed under the Creative Commons Attribution 4.0 International License.

To view a copy of this license, visit <http://creativecommons.org/licenses/by/4.0/>.

© Crown in right of the State of South Australia, through the Department of Environment, Water and Natural Resources 2014

ISBN 978-1-922255-06-8

Preferred way to cite this publication

Hobbs T J, Neumann C R, Tucker M, Mazanec R, Bennell M, McKenna D, 2014, *Performance of Native Plant Species in South Australian Woody Crop Trials – FloraSearch 4*, DEWNR Technical Report 2014/15, Government of South Australia, through Department of Environment, Water and Natural Resources, Adelaide & Future Farm Industries Cooperative Research Centre, Perth.

Download this document at: <http://www.environment.sa.gov.au>

Foreword

The Department of Environment, Water and Natural Resources (DEWNR) is responsible for the management of the State's natural resources, ranging from policy leadership to on-ground delivery in consultation with government, industry and communities.

High-quality science and effective monitoring provides the foundation for the successful management of our environment and natural resources. This is achieved through undertaking appropriate research, investigations, assessments, monitoring and evaluation.

DEWNR's strong partnerships with educational and research institutions, industries, government agencies, Natural Resources Management Boards and the community ensures that there is continual capacity building across the sector, and that the best skills and expertise are used to inform decision making.

Tim Goodes
ACTING CHIEF EXECUTIVE
DEPARTMENT OF ENVIRONMENT, WATER AND NATURAL RESOURCES

Acknowledgements

The authors would like to acknowledge the South Australian and Western Australian Governments, Future Farm Industries Cooperative Research Centre (CRC), Rural Industries Research and Development Corporation (RIRDC) and Joint Venture Agroforestry Program (JVAP) for funding this project. Many thanks to the SA Government for the provision of land for trial sites at Murray Bridge and Monarto, the University of Adelaide for access to land at Roseworthy, and Ian James for access to "Cooranga" near Lucindale.

The input and helpful advice of project collaborators and interested supporters of the woody crops program is gratefully appreciated. This includes Kirsty Bevan, Jason Emms, Glen Gale, Brendan George, Brenton Gear, Tim Herrmann, Steve Hughes, Brenton Lewis, Lisa Mensforth, Keryn Paul, Phil Pisanu, Dan Rogers, Simon Sherriff and Susan Sweeney. The high quality of field surveys, trial site management, databases, and administrative support would not have been possible without the support of Peter Ciganovic, Kellie Neumann, Rodney Neumann, Anthony Trussell and Richie Van Beukering.

Many thanks to Andrew McGrath of Flinders University's Airborne Research Australia group for the provision and interpretation of 3-dimensional LIDAR data for the Murray Bridge and Monarto sites.

We wish to thank Phil Pisanu, Dan Rogers and Susan Sweeney for their reviews of this report.

Contents

Foreword	i
Acknowledgements	ii
Summary	v
1 Introduction	1
1.1 Background	1
1.2 Aims/Objectives	3
2 Methodology	4
2.1 FloraSearch woody crop trials	4
2.2 Species trials (8-9 years old)	5
2.3 Provenance trials (7 years old)	5
2.4 High priority species: provenance by family trials	6
2.4.1 2006 <i>Atriplex nummularia</i> trial	6
2.4.2 2010 <i>Eucalyptus loxophleba</i> trial (3 years old)	6
2.5 Harvest and regrowth studies	6
2.5.1 Murray Bridge woody crop coppice experiment	6
2.5.2 Fodder shrub grazing simulation experiment	7
2.6 Growth assessments	7
2.6.1 Field assessments	7
2.6.2 LiDAR height and crown assessments	8
2.7 Biomass productivity and carbon sequestration	8
3 Results	10
3.1 Overview	10
3.2 Species trials (8-9 years old)	10
3.2.1 Short cycle plots	10
3.2.2 Long cycle plots	10
3.3 Provenance trials (7 years old)	11
3.4 High priority species: provenance by family trials	11
3.4.1 2006 <i>Atriplex nummularia</i> trial	11
3.4.2 2010 <i>Eucalyptus loxophleba</i> trial (3 years old)	11
3.5 Harvest and regrowth studies	13
3.5.1 Murray Bridge woody crop coppice experiment	13
3.5.2 Fodder shrub grazing simulation experiment	14
4 Conclusions	16
5 References	17
6 Appendix A – Field trial plans	20
7 Appendix B – Field trials detailed results	35

List of Figures

Figure 1.1 Study area and trial sites established by FloraSearch and the Field Trials of Woody Germplasm projects. 2

List of Tables

Table 2.1 Summary details of FloraSearch and Woody Crops field trials established in South Australia (2004 - 2010)	4
Table 3.1 The best performing short cycle species and provenances within FloraSearch field trials in South Australia	12
Table 3.2 Comparisons of initial growth and regrowth of coppicing woody crop species at Murray Bridge	14
Table 3.3 Comparisons of initial growth and regrowth of Oldman Saltbush fodder shrubs in South Australia, including harvest season influences on regrowth at Murray Bridge	15
Table 7.1 Performance of FloraSearch woody crops field trials and regrowth experiments established in South Australia	36

Summary

A series of FloraSearch woody crop field trials were established between 2004 and 2010 in South Australia by the Department of Environment, Water and Natural Resources (DEWNR) to evaluate the potential of native plants species to produce biomass for wood fibre, bioenergy, eucalyptus oil, fodder and carbon sequestration industries. Sites were established at Murray Bridge, Roseworthy and Lucindale in 2004-2005 to undertake preliminary species performance evaluation and limited experiments to evaluate the influences of planting density and harvesting on regrowth. This work was conducted in partnership with allied government departments in Western Australia, Victoria and New South Wales, CSIRO and the Future Farm Industries Cooperative Research Centre (CRC) as part of a national network of woody crop trial sites.

In 2006, more detailed studies commenced at the Monarto Research Site to establish germplasm collections of most prospective species, including a national collection of the fodder shrub Oldman Saltbush *Atriplex nummularia* and suite of prospective FloraSearch "development" species in provenance trials. The best performing Oldman Saltbush plants were selected from this site for clonal propagation and development as commercial cultivars by the South Australian Research and Development Institute (SARDI), CSIRO and DEWNR as part of research activities funded by the Future Farm Industries CRC. In 2010, an extensive selection of germplasm from an oil mallee (*Eucalyptus loxophleba*) were established on the site by DEWNR in partnership with WA Department of Parks and Wildlife under a woody crop development project funded by the Future Farm Industries CRC. The best selections of these oil mallees are intended to be maintained as a seedlot orchard for future biomass industries in Australia.

The following report provides a summary of 2013 performance evaluations of native woody crop species and provenances established across four trial sites in South Australia under the DEWNR's FloraSearch woody crop program.

1 Introduction

1.1 Background

The clearing of native vegetation systems for agricultural use has altered the natural hydrology, soils and ecology of many landscapes in southern Australia. These changes have led to the emergence of many natural resource management issues, including increased rates of landscape salinisation, reduced groundwater and stream water quality, soil erosion, depleted environmental carbon stores and the loss of biodiversity. More recently the recognition of carbon emissions and the consequences of climate change have emerged as an important national and global issue. This has led to great public interest in the emerging opportunity to re-establish woody perennial plants into our agricultural landscapes to provide economic outcomes, adapt to changing markets and environments, and reduce greenhouse gases climate change impacts through renewable bioenergy industries and carbon sequestration from revegetation. The targeted reestablishment of woody perennial plants in the 250–650mm/year winter dominated rainfall zone (Figure 1.1) can provide economic and environmental benefits and help alleviate the scale of detrimental effects on our natural resources (Bartle et al. 2007, Hobbs et al. 2009c), however to do this on the scale required, woody perennials must be economically viable and must either complement, or provide a commercial alternative to current land uses (Bennell et al. 2008, Stirzaker et al. 2002).

Commercial sawlog and pulpwood forestry in southern Australia is mainly limited to higher rainfall regions (650 - 1000mm mean annual rainfall, MAR). These industries are typically based on long cycle rotations (>20 years) to grow large diameter logs which are transported to centralised processing facilities (Zorzetto et al. 1999). In medium to lower rainfall regions sawlog harvest cycles are even longer (Harwood et al. 2005) due to reduced water availability and slower growth rates. Recent rainfall trends and climate change predictions suggest that these long cycle systems are likely to become progressively less viable in many regions.

To support the development of an alternative to long cycle forestry species, a significant investment has been made into developing short cycle native species as woody crop options in lower rainfall regions, by the State Governments of South Australia, Western Australia, New South Wales and Victoria, and the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and Australian Government. Past investigations into the use of native species as woody crops indicated significant potential for development of these crops in the wheatbelt regions of Australia (Bartle and Shea 2002, Bartle et al. 2007). The research and development work on native species for new industries commenced in Western Australia in the 1990's (Bartle and Shea 2002, Enecon 2001). An expanded focus of this work and diversification of potential industries led to the development of 'WA Search' (Olsen et al. 2004a,b) and later the 'FloraSearch' projects (i.e. *FloraSearch 1* - Bennell et al. 2008, Hobbs and Bennell 2008, Hobbs 2008; *FloraSearch 2* - Hobbs et al. 2008; and *FloraSearch 3* - Hobbs et al. 2009a, Hobbs et al. 2009b, Hobbs 2009) to systematically screen Australian native flora for their potential as new woody crops. These alliances between state and federal government researchers were supported by the Cooperative Research Centre (CRC) for Plant-based Management of Dryland Salinity, Future Farm Industries CRC, Joint Venture Agroforestry Program (JVAP) and Rural Industries Research and Development Corporation (RIRDC).

The resulting woody crop projects have made significant advances in developing novel crop options for the dryland agricultural region of southern Australia. These project have integrated scientific advances in the biology of native plant species with agriculture and economics to demonstrate that woody crops have potential within the wheat/sheep regions. As a result of a detailed process of product testing, screening, bioclimatic modelling and industry evaluations, a number of Australian plant species have been identified that have potential for agroforestry development in lower rainfall regions (Olsen et al. 2004a,b, Hobbs et al. 2006, Bennell et al. 2008, Hobbs and Bennell 2008, Hobbs 2008, Hobbs et al. 2008, Polglase et al. 2008, Neumann et al. 2011, Polglase et al. 2013). Many of the species identified have seldom been trialled or commercially grown within the targeted region and therefore little information on their suitability or productive capacity in that region previously existed.

The lack of productivity and yield data hindered early attempts to evaluate the potential of biomass industries in southern Australia's medium to lower rainfall regions. In the 1990's several trial sites were established as part of the Australian Low Rainfall Tree Improvement Group program (ALRTIG) containing a limited number of species and provenances of predominantly high rainfall sawlog species (Harwood et al. 2005, Fairlamb and Bulman 1994; Rural Solution SA 2003). ALRTIG's published results were mainly limited to survival and height data. Despite some limitations ALRTIG suggested that the use of suitable

improved genetics with the potential to reliably provide high quality feedstock for large-scale local processing industries was vital to the successful establishment of both a regional plantation resource and the industries it would support. Further, they recognised that 'the development of regional plantation estates sufficient to supply local processing industries will be vital for the commercial success of low rainfall plantation forestry.'

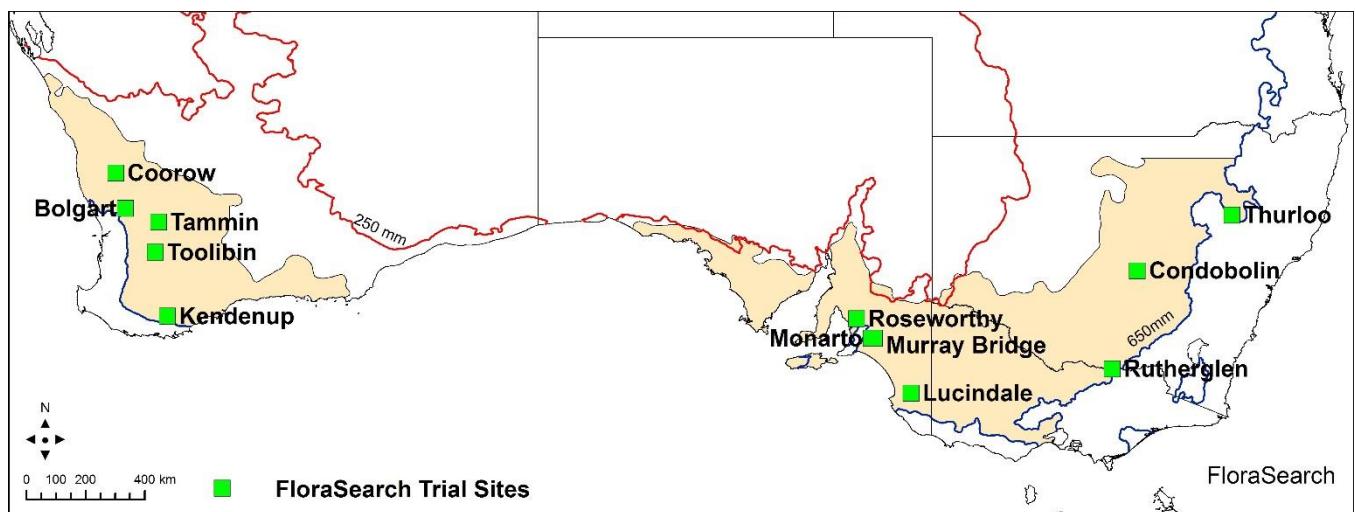
The work of the South Australian Government (led by the Department of Environment, Water and Natural Resources – DEWNR) aimed to build from this limited prior knowledge by collating and re-evaluating existing information, and establishing new woody biomass crop trials to better understand yield from new species and planting systems. Many of these species had not been the subject of previous trials or evaluated beyond survival, height and occasional stemwood volumes.

A key goal of this work was to evaluate, select and develop a suite of improved woody perennial species that could provide valuable planting stock for large-scale, commercially-viable, biomass crops for diverse agricultural landscapes in the lower rainfall regions of southern Australia. To provide new information on the suitability and growth of species targeted for the lower rainfall regions (<650mm MAR), a wide range of "Species" were selected for a series of field trials to be planted 2004 and 2005 across South Australia, Western Australia, New South Wales and Victoria as part of FloraSearch's "Field Trials of Woody Germplasm" project (Hobbs et al. 2008, Hobbs et al. 2009a, Figure 1.1). In 2004, three South Australian (SA) field trial sites (Murray Bridge, Roseworthy and Lucindale) were established as part of the larger national effort. In 2005, the three SA sites expanded to contain additional species and provenances, including a selection of fodder species at Murray Bridge.

FloraSearch and Future Farm Industries CRC Woody Crops Program continued to establish field trials in 2006-2010 with more targeted selections of germplasm for "Provenance" and "Provenance by Family" evaluations across the study region. Sites were chosen across a range of soil types and climatic zones to allow preliminary investigations of germplasm by environment (GxE) interactions of desired species growth and product traits. Gaining a better understanding of each species' GxE interactions improved predictions of suitability and productivity in the broader targeted region (Costa e Silva et al. 2006, Callister et al. 2007). Such understanding enables more confident selections of germplasm for future breeding and development as future woody biomass crops (Eldridge et al. 1993).

The SA Government's Monarto Research Site was established in 2006 by DEWNR. In 2006, trials were established using a range of "Provenance" selections from FloraSearch's 'Development' species (i.e. woody biomass crops), and "Provenance by Family" selections from FloraSearch's 'Focus' fodder shrub species (*Atriplex nummularia*). The South Australia Research and Development Institute (SARDI) and CSIRO commenced in 2006 to undertake further research on fodder shrub species, fodder shrub/forage interactions, grazing preferences and fodder plant breeding trials (i.e. "Enrich" livestock systems and "Oldman Saltbush Plant Breeding" projects) at the Monarto site. In 2010, a further Future Farm Industries CRC Woody Crop Program "Provenance by Family" trial of an oil mallee *Eucalyptus loxophleba* was also established on the site in partnership with WA Department of Parks and Wildlife.

Figure 1.1 Study area and trial sites established by FloraSearch and the Field Trials of Woody Germplasm projects.



1.2 Aims/Objectives

The key objectives of the field trials were to:

- Assess the agronomic suitability of selected native species for cultivation in the wheat/sheep belt including adaptability and productive potential; and
- Evaluate those species with merit for progression as commercial crops and initiate a process for the domestication and improvement of plant species with greatest potential.

This purpose of this report is to document the performance of a wide range of native plant species and provenances planted across four trial sites in South Australia, and the regrowth ability of some of these species when harvested for biomass industries. The report also intends to identify important genetic material (i.e. germplasm) for woody crop and fodder shrub industries which are currently preserved within Monarto research site.

2 Methodology

2.1 FloraSearch woody crop trials

Reviews of native plant species and woody biomass industries by the WA Search and FloraSearch projects (Olsen et al. 2004 a,b, Bennell et al. 2008, Hobbs and Bennell 2008, Hobbs 2008, Hobbs et al. 2008, Hobbs et al. 2009a, Hobbs et al. 2009b, Hobbs 2009) identified a range of species that had potential to produce biomass commodities for wood fibre, bioenergy, eucalyptus oil, livestock fodder and carbon sequestration industries and markets. As new information was gathered the process advanced from a preliminary screening, to targeted species and provenance selections, and later to plant breeding and domestication projects. The four FloraSearch field trials in South Australia (2004-2010) contain plantings that span this continuum of species evaluations, plant breeding and development projects (Table 2.1).

Planting designs were mainly intended to evaluate the performance of "Short Cycle" production systems. For these systems, plantings were established at moderately high stocking rates (i.e. 3m between rows x 1.5m along rows = 2222 plants/ha) in 2004, 2005 and 2006. For a small subset of species the planting densities were halved (i.e. 3m between rows x 3m along rows = 1111 plants/ha) to evaluate the performance of "Long Cycle" systems at the Murray Bridge and Roseworthy sites in 2004. At Murray Bridge in 2004, a further "Planting Density" (i.e. Nelder (1962) design) trial was also conducted to investigate influences of plant spacing on productivity (previously reported in Hobbs et al. 2009a). The 2010 *Eucalyptus loxophleba* "Provenance by Family" trial at Monarto was established at a plant density of 1667 plants/ha (i.e. 3m between rows x 2m along rows).

Most plantings were established to only evaluate their first harvest potential (i.e. for "Phase" production systems) of each germplasm. A subset of the germplasm at each site were also planted in blocks intended to be harvested and their regrowth assessed (i.e. for "Coppice" production systems). The fodder shrub species *Atriplex nummularia* was harvested at Murray Bridge, Roseworthy and Lucindale in 2007-2008 and the regrowth measured in 2013. Woody biomass "Coppice" planting blocks were established at all four trial sites, however, only the Murray Bridge block was subject to harvest treatment in 2009 and re-measured in 2013. Woody biomass "Coppice" blocks on other sites that have not been harvested have been included in evaluations of "Phase" crops within this report.

Table 2.1 Summary details of FloraSearch and Woody Crops field trials established in South Australia (2004 - 2010)

Trial Sites	Latitude (°)	Longitude (°)	Soil group (description)	Average Rainfall (mm/year)	Germ-plasm	Plants	Germ-plasm	Plants
Species Trials				Long-term	2004-2013	Planted 2004	Planted 2005	
Murray Bridge	-35.12	139.24	Tenosol (Red-Brown Earth)	346	379	56	12,868	64
								5,592
Roseworthy	-34.53	138.69	Calcarosols (Sandy clay loam)	444	432	25	2,856	8
								768
Lucindale	-36.79	140.35	Sodosol (Deep white sand over clay)	516	492	20	1,856	56
								3,456
Development Trials				Long-term	2006-2013	Planted 2006	Planted 2010	
Monarto	-35.12	139.14	Red Dermosol (sandy loam over clay)	388	449			
Provenance						87	23,488	
Provenance by Family						528	19,008	210
								4,080

Where trial site space, selection priorities and seedling quantities permitted, each germplasm was planted in 4 replicate "Yield" plots (i.e. 8 x 8 plants per plot, total 256 plants per germplasm) to maximise the reliability and quality of results. In other cases, the germplasm was typically established in 4 replicate "Scanning" plots (i.e. 6 x 4 plants per plot, total 96 plants per germplasm) with slightly reduced confidence in assessments. Rarely, when seedlings or space was scarce the germplasm was planted in fewer replicates or smaller plots for indicative results only. Within each trial block (i.e. Species/Provenance x Woody/Fodder x Yield/Scanning x Short/Long Cycle) the minimum experimental layout incorporated randomised block designs, and where site layouts permitted, latinized and row-column designs were identified using CycDesigN software (Whitaker et al. 2002, CycSoftware 2006) and applied. Trial site plans (see Appendix A) and results within Table 7.1 document the layout of planting blocks, initial planting designs and quantities of germplasm evaluated across the four trial sites. More detailed digital files on all species, provenances and locations of all plants established and measured on these sites are held by DEWNR's Science Monitoring and Knowledge Branch.

2.2 Species trials (8-9 years old)

Several Australian tree and shrub species with potential for development as woody biomass crops were identified by the FloraSearch and WA Search projects (Olsen et al. 2004a,b, Bennell et al. 2007, Hobbs et al. 2007). Germplasm representing the most prospective species (and limited provenances selections) was gathered in 2003 for nursery propagation and trial site establishment in 2004 at Murray Bridge (core site), Roseworthy and Lucindale (Table 7.1 a,b,c). Additional new species and provenances were also selected for planting in 2005 from germplasm that was not available in 2003 or identified as prospective species/provenances in late 2004. This suite of new plantings were extensively planted at Murray Bridge, with a smaller number of germplasm introduced into the areas remaining at the Lucindale and Roseworthy sites.

In 2004, the Lucindale site suffered massive damage from corellas shortly after planting leading to a large section of the original trial being discarded. The extensively damaged site was mostly replanted in 2005 with some sections containing replacement plants grown for planting in 2005 from the original 2004 germplasm (same seed stock as 2004 plants). A trial using a range of fodder shrub species was also established in 2005 on the SA Murray Bridge site with a very small number of these 2005 species also introduced to Roseworthy and Lucindale due to trial site space limitations and limited nursery stock

Of the 2004 plantings Murray Bridge was the most extensive site and contained all 56 germplasm grown in South Australia. Despite poor weather conditions after establishment the mean 3 year old survival rate across all sites was 72%. Initial low survival rates at Lucindale can largely be attributed to the damage caused by the flocks of cockatoos that pulled up large numbers of seedlings shortly after planting. Early growth assessments (i.e. Year 1, Year 3) are reported in Hobbs et al. (2008) and Hobbs et al. (2009a). For a limited number of chosen germplasm additional sets of experimental blocks have been established to study the impact of different silvicultural treatments (e.g. plant density, coppicing, regrowth; see Table 7.1 d,f,g).

2.3 Provenance trials (7 years old)

Building on early field trial results a further "Short Cycle" trial was established at Monarto in 2006 containing germplasm from up to 8 provenances of the most promising species identified in the prior trials. The purpose of this site was to identify superior provenances and then make selections of the best germplasm from within the most promising species to become the basis of commercially-viable woody biomass crops. The Monarto trial contained 23,488 individual plants in total, from 20 species, 36 sub species or varieties, and 87 provenances (Table 7.1 e). These numbers also include 6 individual species plantings of comparison species or species of interest and another 8 clonal hybrids that are not part of the formal provenance trial. In 2007, 2 individual species plantings of species of interest (*Eucalyptus gomphocephala* [Perth ANNG 2007.01], *Atriplex nummularia* ssp. *nummularia* [Lake Galilee]) were added to the site in 2007. The priority species in this provenance trial are:

- *Acacia decurrens*
- *Acacia mearnsii*
- *Acacia retinodes*
- *Eucalyptus aromaphloia*
- *Eucalyptus cladocalyx*
- *Eucalyptus globulus*
- *Eucalyptus occidentalis*
- *Eucalyptus oleosa*
- *Eucalyptus ovata*
- *Eucalyptus petiolaris*
- *Eucalyptus polybractea*
- *Eucalyptus porosa*
- *Eucalyptus viminalis*
- *Viminaria juncea*

2.4 High priority species: provenance by family trials

2.4.1 2006 *Atriplex nummularia* trial

Further to the 2006 provenance work, extensive provenance (i.e. regional) and family (i.e. local population) seed collections have been made for 'focus' species and an extensive trial of *Atriplex nummularia* established in 2006 at the Monarto site. Seed collections were conducted across Australia in late 2005 and early 2006. At the time of collection, no populations of *A. nummularia* ssp. *omissa* had produced seed. As a result this subspecies was not included in the germplasm collections. Each provenance by family seedlot was then sown in the Kalannie nursery in Western Australia in early 2006 and made available for trial sites in June 2006. The final seedlots planted at Monarto consisted of 11 provenances (218 families) of *Atriplex nummularia* ssp. *spathulata* and 16 provenances (310 families) of *A. nummularia* ssp. *nummularia*. All provenances were represented in the trials in Western Australia and at Monarto. The commercially available clone "cv. Eyres Green" was included in the trials as a control and used as buffer rows plants but will not be included in any breeding operations.

Hand planting of 528 families took place at Monarto in early August 2006. All the trials were established as 9 replicate, latinised row-column designs surrounded by a 2 plant buffer on all sides (i.e. CycDesign 3.01; CycSoftware 2006). Families were established in row plots of 4 plants. Spacing was 3 m between rows and 1.5 m within rows (2222 plant/ha). The rows were ripped to a depth of 0.5m at Monarto and the rip lines then compressed with a wheel to remove large air pockets.

See Sections "4. Plant Improvement Strategies" and "5. Breeding and Evaluation Trials" in Hobbs et al. 2009a for more detailed information on these trial sites, selections and evaluations.

2.4.2 2010 *Eucalyptus loxophleba* trial (3 years old)

Another 'focus' species (*Eucalyptus loxophleba*) was established as a provenance by family trials at Monarto in August 2010. Seed collections were conducted in Western Australia in 2009. Each family germplasm was collected from 20 widely spaced individuals within a provenance. Each seedlot was then sown in the Kalannie nursery in Western Australia in mid-2009 for the establishment of trials the following year. The germplasm planted at Monarto consisted of 9 provenances (120 families) of *Eucalyptus loxophleba* ssp. *lissophloia* and 6 provenances (90 families) of *E. loxophleba* ssp. *gratiae*. The Monarto *E. loxophleba* ssp. *lissophloia* trials were established in 4 replicate blocks and the *E. loxophleba* ssp. *gratiae* trials were established in 6 replicate blocks using latinised row-column designs (i.e. CycDesign 3.01; CycSoftware 2006) with 2 plant buffer rows surrounding each block. Rows were located 3m apart and ripped to 0.5m depth with individual plants located 2m apart along rows (1667 plants/ha).

In 2013, the height and maximum crown width in two directions of all trees was measured. Crown Volume Index (CVI) was calculated as the product of the three measurements. Destructive sampling of 60 trees from the buffers surrounding the trial was conducted in order to derive allometric equations relating CVI with whole tree green biomass for each subspecies at each site. Relevant allometric equations were then applied to the data for each trial to gain an estimate of green biomass for each tree. More detailed results from these studies have been reported in Mazanec (2014).

2.5 Harvest and regrowth studies

2.5.1 Murray Bridge woody crop coppice experiment

In 2009, the height, crown area, foliage density, stem areas and stem volumes of all woody crop plants with the Murray Bridge 2004 Short Cycle Coppice Yield experimental block of plants were assessed prior to harvest treatment and destructive measurements. Failed blocks were ignored, as were blocks of *Atriplex nummularia* which were the subject of a separate harvesting experiment. Stem area measurements of each plant were typically taken at 0.5m above ground (i.e. basal area) with additional stem area measurements taken at 1.3m above ground for taller plants to improve stemwood volume estimates. For shrubby and lower growing species (e.g. mallees) basal area was measured at 0.2m above ground. Very small plants did not have trunk measurements taken. Foliage density was also assessed using a visual ranking system of foliage density reference photographs (8 classes). Foliage density classes were expressed as a percentage of maximum density (i.e. very dense 100%, dense 86%, moderately dense 71%, moderate 57%, moderately sparse 43%, sparse 29%, very sparse 14%, no leaves 0%).

Once these measurements were taken 6 plants were cut and weighed from a central row with wood separated from small branches (25mm or less) and leaves and weighed to determine fraction weights. For three of these individuals in species with oil production potential the leaves were also separated from the small branches and weighed separately. All plants were then clear felled leaving a 0.1m high stump and the cut material removed from the site. Wood slices were taken from the sampled plants at 0.5m and half-way height for taller species and 20cm for shorter species. The slices were debarked and the slices and bark's green weights recorded. This material was then saturated with water under pressure for several days before being 'wet' weighed, then oven dried and reweighed to determine wood density (Hobbs et al. 2010, 2013).

In December 2013 the basal area of the regrowth was manually measured at 0.5m from the ground with a tape, while height and crowns were determined using data obtained from the LIDAR flyover (see Section 2.6.2). Regrowth biomass was then calculated using standard allometrics of Hobbs et al. 2013 (see Section 2.7 below).

2.5.2 Fodder shrub grazing simulation experiment

A harvest-regrowth "grazing simulation" experiment for the fodder shrub, Oldman Saltbush (*Atriplex nummularia*) commenced in autumn 2007 aimed at determining standing plant biomass and the ability of the plants to regrow following heavy grazing or mechanical slashing. Individuals that were planted in the FloraSearch trials at Murray Bridge, Roseworthy and Lucindale in 2004 and 2005 were measured (i.e. height and crown area) and destructively sampled (i.e. fresh leaf weight and total above ground biomass) at 2 or 3 years of age. These initial harvest assessments have been previously reported in Hobbs et al. (2009a).

At Murray Bridge Short Cycle Coppice Yield plots with *Atriplex nummularia* provenance "Yando" and the commercial clone, "Eyres Green" were divided into quarters and harvest/coppice treatments applied in the autumn, winter and spring of 2007 and summer early-2008, with the goal of examining seasonal variation in biomass allocation. The height and width along and across the row was measured for the 16 plants in a quadrant of each plot. These plants were then cut back to a height and width of approximately 0.5m and the green biomass (leaf and stems combined) removed from each plant weighed. For two of the 16 plants from each plot of Yando, and for all plants from each plot of Eyres Green, the edible (leaf and fine stem < 3mm) and woody (all material > 3mm) green biomass fractions were subdivided and weighed.

Height and crown area assessments of all treated fodder plants were conducted in 2013 to determine the 3-dimension space occupied by each plant and the above ground biomass of each individual plant estimated from allometric models developed from 125 measured and destructively sampled *Atriplex nummularia* plants (Hobbs et al. 2010; see Section 2.7 below)

2.6 Growth assessments

2.6.1 Field assessments

Survival, height, basal area, stemwood volumes and crown area are commonly used metrics to assess the growth of plants. The 2013 assessment of the FloraSearch field trials includes this series of measurements. The basal area of all persisting individuals within the four trial sites were assessed using flexible tapes to measure the circumference of all plant stems at 0.5 metres above ground. The circular area of each stem was calculated from circumference measurements and summed to a total basal area per plant. Where present (i.e. typically shrubby species), the number of minor stems (8 - 20mm diameter at 0.5m above ground) that could not be easily measured by circumference tapes were simply counted and nominally assigned 1.77cm² per minor stem and included in the total basal area. At Roseworthy and Lucindale sites the maximum plant height and crown widths of all individuals were assessed using a telescopic measuring pole, Vertex, measuring wheel or flexible tape measure. At Murray Bridge and Monarto sites plant heights and crown areas were assessed remotely, using airborne 3-dimensional laser scanning methods (i.e. LIDAR, see Section 2.6.2 below for details) and local calibration data.

Observed plant density was calculated from number of surviving plants divided by the plot area and results standardised to a plants per hectare value. Crown cover (%) for each plot was calculated from the sum of plant crown areas divided by the plot area. Where the total plant crown area was greater than the plot area (due to overlapping crowns or growth beyond plot perimeter) the plot's crown cover value was set to a maximum of 100%. Stem basal areas (at 0.5m above ground) for all plants were summed for each plot area and converted to a standardised basal area per hectare value. The stemwood volume (outer bark) of each plant was calculated from stem height and circumferences (i.e. stem area) using standard forestry formulas for tree volumes of each stemwood section (1. lower section – cylinder volume; 2. mid-section - Smalian's frustum of a paraboloid

volume, and 3. upper section - conical volume). Mean annual increment (MAI) of stemwood volumes (outer bark) were calculated from total stemwood volumes per plot, plot area and age.

2.6.2 LIDAR height and crown assessments

The trial sites at Murray Bridge and Monarto were flown by Dr. Andrew McGrath, Flinders University (FU) - Airborne Research Australia (ARA) aircraft on the 16th June 2013 to collect airborne LIDAR imagery (i.e. Light Detection And Ranging) and digital aerial photography for both sites. LIDAR technology measures distance between the aircraft, ground and plants by illuminating targets with a laser and analysing the reflected light. For solid targets (e.g. ground, built structures) the FU-ARA LIDAR has a height accuracy of less than a few centimetres, for less solid objects (e.g. vegetation) height results are less reliable due to variable return signal profiles of different materials. The accuracy of LIDAR height data for vegetation can be improved if resources permit full-waveform analysis or collection of localised site calibration data. The average surface spatial resolution of the LIDAR data was 23cm (18.7 points/m²). A ground surface model was generated for each site to account for local topography and all LIDAR height data corrected to flat surface projection (i.e. vegetation surface model).

Every plant established on Murray Bridge and Monarto sites has been accurately geo-located to less than 0.5m accuracy. Using a geographic information system (GIS) a 0.5m radius buffer polygon was generated for each living plant. To account for variable growth habits of individual plants (e.g. non vertical growth, or variable growth within crowns) the location of each plant's buffer ring was visually assessed against the LIDAR point cloud height data and corrected to capture the highest LIDAR point within each crown. Uncalibrated maximum height data for each plant was extracted from LIDAR point cloud using the buffer polygons.

The raw LIDAR maximum height of each plant was recalibrated using data from 3455 field measurements of individual plants at the Monarto site to maintain consistency of measurements across sites (N=3455; R² = 0.89; P <0.0001):

$$\text{Plant Maximum Height (m)} = 0.9791 \times \text{LIDAR Maximum Height (m)} + 0.5082.$$

To assess the crown area of each trial plot the LIDAR point cloud data was filtered to remove all points <0.2 metre in height and each point buffered by radius of 0.075 metre using a GIS, and the resulting buffer polygons merged to create a crown area coverage for each plot. Where the plot crown areas of neighbouring plots overlapped these were manually dissected using the GIS and visual interpretation of the LIDAR point cloud data. Any polygon created for non-trial plants on site (e.g. weeds) was deleted from the polygon coverage. The crown area of each plot was extracted to the measurement database, and the total plot crown area proportionally distributed to each plant within each plot based on the ratio of individual stem basal area to the total stem basal area of the plot.

2.7 Biomass productivity and carbon sequestration

Most existing assessments of revegetation (plantation forestry or environmental plantings) productivity are focussed on assessing stem basal area and often height. These measures are suitable for estimating stemwood volumes for classical forestry where the focus is on the recoverable solid timber. For accurate estimates of biomass accumulation and carbon sequestration, biomass industries require whole plant biomass data including branches, bark, twigs, leaves and sometimes roots.

Allometrics is a commonly used technique to non-destructively assay plantation productivity from a limited number of measurements (biometrics). In classical forestry industries, these allometric models are often based on measurements of tree diameter at breast height or basal area calculations (\pm tree height) to determine stemwood volumes or biomass, with models often being species specific (Snowdon et al. 2000, 2002, Grierson 2000, Kiddle et al. 1987). However, allometric models based on high rainfall forestry trees can be unreliable predictors of productivity for the mallee and shrub life forms more suited to lower rainfall regions. In recent years DEWNR staff have destructively sampled a wide range of known age agroforestry and local native species in dryland agricultural regions of South Australia to evaluate relationships between simple plant measurements and above ground biomass in plants (Neumann et al. 2010, Hobbs et al. 2010, Hobbs et al. 2006, and Hobbs & Bennell 2005). A total of 535 individual plants were measured, sampled and weighed from these studies, including the below ground biomass for 41 individual plants (Hobbs et al. 2009a, Hobbs et al. 2013, Paul et al. 2012, 2013).

The above-ground dry biomass of each measured individual (B_{ag} ; kg/plant) was then estimated using a stemwood volume allometric model (Hobbs *et al.* 2013; N = 535; R^2 = 0.95; P < 0.0001; AIC_c = 419.2):

$$\log(B_{ag} + 1) = 0.9161 \times \log(SV + 1) + 0.5444$$

where,

SV = Stemwood Volume (m³/plant × 1000).

For Oldman Saltbush (*Atriplex nummularia*) plantings where a specific allometric biomass model has been developed (Hobbs *et al.* 2010) above-ground biomass was estimated from individual plant volumes (N = 125; R^2 = 0.82; P < 0.0001; AIC_c = 643.3):

$$B_{ag} = 2.6531 \times PV$$

where,

Plant Volume, PV (m³) = Height (m) × Crown Area (m²)

The standing above-ground biomass per plot was determined from the sum of estimated dry biomass of all individuals within each plot. The estimated total standing above-ground biomass for each plot was then converted to an average annual accumulation rate based on plot age and area (dry matter t/ha/year). To convert dry biomass to tonnes of elemental carbon (C t/ha/year) a generic factor of 0.496 was applied (Stein & Tobiasen 2007). Elemental carbon was converted to carbon dioxide equivalents (CO₂-e t/ha/year) using a factor of 3.67 (based on the atomic weights of C and O).

3 Results

3.1 Overview

The performance of all FloraSearch species and provenances surveyed in 2013 are summarised and presented in Table 7.1. The following sub-sections provide concise commentary of key observations from each trial design, location and regrowth study. The reliability of results for each germplasm, site and experiment is strongly linked to increasing number of experimental plot replicates, number of plants established at the beginning of each trial, age and number of plants observed in 2013. Earlier FloraSearch reports (Hobbs et al. 2008, 2009a, 2009b) provide additional information on the purpose of trials, site design and establishment, and early assessments of survival and productivity for most of these trials. The results presented in this report should be read in conjunction with those earlier reports.

More detailed information on these FloraSearch woody crop trial sites (i.e. precise identity and location of all plants and plots, raw observation data) can be found in digital databases and files held by DEWNR's Science Monitoring and Knowledge Branch.

More information on fodder shrub and livestock production system experiments (e.g. Future Farm Industries CRC's Enrich Project), and Oldman Saltbush (*Atriplex nummularia*) plant breeding and commercialisation work conducted on the Monarto Research Site can be found on the Future Farm Industries CRC website (<http://www.futurefarmonline.com.au/>) or by contacting the South Australian Research and Development Institute's (SARDI) Livestock Systems Group.

3.2 Species trials (8-9 years old)

3.2.1 Short cycle plots

Murray Bridge was the driest of the South Australian trial sites, and while all the germplasm planted in the Short Cycle Species trials was represented here, several either died out or displayed restricted growth by 2013 (Table 7.1 a). The larger *Acacia* species in particular had largely failed by the 9 year mark despite impressive early growth over the first four or five years. *Acacia saligna* ssp. *saligna* was the best of these, persisting into the 9th year but not producing large amounts of above-ground biomass (2.5 t/ha/yr). Eucalyptus species generally performed the best at this site (Table 3.1 a) with *Eucalyptus occidentalis* clearly producing the most biomass (11.5 t/ha/yr) followed by *Eucalyptus cladocalyx* from Wirrabara (7.5 t/ha/yr). The *Eucalyptus cladocalyx* from the Lower Eyre Peninsular consistently produced less biomass than its Wirrabara relative on all sites. Of the 2005 plantings at Murray Bridge *Eucalyptus leucoxylon* ssp. *leucoxylon* (6.2 t/ha/yr) and *Eucalyptus gomphocephala* (5.2 t/ha/yr) were the most productive.

At Roseworthy, *Acacia retinodes* var. *retinodes* (hill form) (5.0 t/ha/yr) and *Acacia leucoclada* (4.2 t/ha/yr) not only persisted into 2013 but outperformed *Acacia saligna* ssp. *saligna* (1.9 t/ha/yr) that was also planted on the site (Table 3.1 b). At this site *Eucalyptus occidentalis* (16.9 t/ha/yr) and the Wirrabara *Eucalyptus cladocalyx* (16.2 t/ha/yr) produced the most biomass (Table 3.1 b, Table 7.1 b).

The Lucindale site was the wettest and sandiest of the South Australian trials and produced quite different results (Table 3.1 c, Table 7.1 c). While *Eucalyptus occidentalis* (24.3 t/ha/yr) and the Wirrabara *Eucalyptus cladocalyx* (24.8 t/ha/yr) produced more biomass at this site than at either Roseworthy or Murray Bridge, these species were overshadowed by several other species that failed by 2013 at Murray Bridge. *Eucalyptus dalrympleana* (53.6 t/ha/yr), *Eucalyptus banksia* (41 t/ha/yr), *Acacia mearnsii* (37.8 t/ha/yr), *Eucalyptus viminalis* ssp. *cyanotensis* (37.4 t/ha/yr), *Acacia saligna* ssp. *saligna* (36.3 t/ha/yr) and *Eucalyptus globulus* ssp. *globulus* (31.4 t/ha/yr) all produced impressive amounts of biomass over the growing period.

3.2.2 Long cycle plots

Long Cycle plots exist at both Roseworthy and Murray Bridge sites. The long cycle plots at Roseworthy produced more biomass per hectare than the same plantings at Murray Bridge consistent with expectations based on rainfall and soil quality (Table 7.1 d). But, while in many cases the individual trees were larger, the overall biomass per hectare was reduced when compared with the more densely spaced short cycle plantings at the same site (Table 7.1 a,b).

The best biomass producing species in the long cycle plantings were consistent with the short cycle planting and *Eucalyptus occidentalis* (7.3 t/ha/yr at Murray Bridge, 11.0 t/ha/yr at Roseworthy) and *Eucalyptus cladocalyx* (4.9 t/ha/yr at Murray Bridge and 7.8 t/ha/yr at Roseworthy) were again the most productive at these two sites.

3.3 Provenance trials (7 years old)

Eucalyptus occidentalis and *Eucalyptus cladocalyx* species were very productive at the Monarto Research Site (Table 3.1 d). Performance results and species productivity rankings are consistent with species trial observations at the Roseworthy and Murray Bridge sites. Growth rates can be highly variable within provenances and species (Table 7.1 e) and results from Monarto can provide guidance to improved selections for future woody crop development. The most productive provenances observed at Monarto include *Eucalyptus occidentalis* from Kantanning (16.9 t/ha/yr) and the *Eucalyptus cladocalyx* from the Bundaleer Seed Production Area (12.8 t/ha/yr).

Two Saltgrow hybrid eucalypts lines were included with four clonal lines of each planted for comparison purposes. The *Eucalyptus camaldulensis x grandis* [Saltgrow 18 clone] (12.6 t/ha/yr) proved to be the third best biomass production species on site with similar accumulation rates to *Eucalyptus cladocalyx*. The other hybrid, *Eucalyptus camaldulensis x globulus* ssp. *globulus* also grew well. The best clone of these was [Saltgrow 35] (9.73 t/ha/yr) although some of the other clones of this hybrid [Saltgrow 40] were showing signs of stress in the new growing tips.

Eucalyptus polybractea was the most productive mallee species in this trial with some provenances producing 6.1 t/ha/yr of above ground biomass. Some other mallee species provenances produced similar amounts of biomass (*Eucalyptus loxophleba* ssp. *lissophloia* 5.4 t/ha/yr, *Eucalyptus porosa* 4.3 t/ha/yr).

Acacia retinodes var. *retinodes* (hill form) was the most productive and persistent of the Acacia provenances, but only produced 5.9 t/ha/yr of biomass, which equates to about one-third of the biomass of best *Eucalyptus occidentalis* and *Eucalyptus cladocalyx* provenances.

3.4 High priority species: provenance by family trials

3.4.1 2006 *Atriplex nummularia* trial

Early performance data from these trials was published in "Developing species for woody biomass crops in lower rainfall southern Australia. FloraSearch 3a" (Hobbs et al 2009a). See Sections "4. Plant Improvement Strategies" and "5. Breeding and Evaluation Trials" of that report for more information.

Please contact SARDI (Jason Emms/Steve Hughes) or CSIRO (Hayley Norman) for more information on Oldman Saltbush (*Atriplex nummularia*) clonal cultivars developed from FloraSearch provenance by family collections.

3.4.2 2010 *Eucalyptus loxophleba* trial (3 years old)

The performance of *Eucalyptus loxophleba* provenance by family trials at Monarto are reported in Mazanec (2014). Overall 3-year survival at Monarto was 92%. After 3 years of growth, *Eucalyptus loxophleba* subsp. *lissophloia* provenances produced an average green biomass (i.e. fresh-weight) of 5.4 kg/plant and *Eucalyptus loxophleba* subsp. *gratiae* provenances produced 5.1 kg/plant. Variations in average productivity by provenances were up to 30% of the most productive provenance for *Eucalyptus loxophleba* subsp. *lissophloia* and 26% for *Eucalyptus loxophleba* subsp. *gratiae*. Observed differences in productivity between provenances were greater on another *Eucalyptus loxophleba* trial site established at Condobolin, NSW.

The Monarto *Eucalyptus loxophleba* trials are scheduled to be reassessed in 2017 and thinned to create a seed orchard resource for future biomass, bioenergy and eucalyptus oil industries. For more information on this research and future plant breeding strategies please contact Richard Mazanec, Natural Resources Branch, Western Australian Department of Park and Wildlife.

Table 3.1 The best performing short cycle species and provenances within FloraSearch field trials in South Australia

Trial Type, Year, Site / Taxonomy [seedlot]	Age (years)	Height (m)	Crown Cover (%)	Plant Density (plants/ha)	Basal Area (m ² /ha)	Stem Volume MAI (m ³ /ha/yr)	Above-ground Biomass (t/ha/yr)	Above-ground CO ₂ Seq.(t/ha/yr)
a) Species Trials, 2004-2005, Murray Bridge								
Eucalyptus occidentalis [Redhill SFMB_2004.16]	8.9	7.5	99	2179	19.8	9.1	11.5	20.9
Eucalyptus cladocalyx [Wirrabara SFMB_2004.11]	8.9	5.5	100	2135	16.4	5.7	7.5	13.7
Eucalyptus leucoxylon ssp. leucoxylon [Wirrabara CS20274]	8.9	5.1	76	1910	13.9	4.7	6.2	11.3
Eucalyptus gomphocephala [N_M_2005.03]	7.9	3.3	85	1944	14.6	3.8	5.2	9.4
Eucalyptus petiolaris [Ungarra YS_2004.01]	8.9	4.3	99	2170	12.4	3.5	4.8	8.7
Eucalyptus cladocalyx [Lower Eyre Peninsula TFL_2005.03]	7.9	3.9	91	1759	11.7	3.4	4.6	8.4
Eucalyptus porosa [Laura BSC_2004.10]	8.9	4.5	100	2153	10.6	3.1	4.3	7.9
Eucalyptus porosa [Yorke Peninsula SFMB_2004.17]	8.9	3.8	100	2014	12.4	3.1	4.3	7.8
Eucalyptus camaldulensis [Lake Albacutya CS20561]	8.9	4.8	72	2118	9.2	2.9	4.1	7.4
Eucalyptus porosa [Flinders Ranges TFL_2005.09]	7.9	3.6	100	2130	10.6	2.8	4.0	7.3
Eucalyptus microcarpa [Toll Gate SFMB_2005.26]	7.9	3.4	81	2153	9.5	2.4	3.5	6.4
Eucalyptus leucoxylon ssp. pruinosa [N. MLR TFL_2005.05]	7.9	3.6	65	1620	8.3	2.5	3.5	6.3
Eucalyptus sideroxylon [Gilgandra CS19557]	7.9	3.6	70	1944	8.1	2.3	3.2	5.9
Eucalyptus polybractea [WA CALM_2004.05]	8.9	4.3	85	2092	7.3	2.1	3.0	5.5
Eucalyptus leucoxylon [Adelaide Hills TFL_2005.04]	7.9	3.4	51	1435	8.0	2.2	3.0	5.5
b) Species Trials, 2004-2005, Roseworthy								
Eucalyptus occidentalis [Redhill SFMB_2004.16]	9.1	9.0	100	2060	29.3	16.9	19.8	36.1
Eucalyptus cladocalyx [Wirrabara SFMB_2004.11]	9.1	8.5	100	2037	26.1	13.4	16.2	29.5
Eucalyptus occidentalis [Redhill SFMB_2004.16]	9.1	8.1	94	1875	21.4	11.1	13.4	24.4
Eucalyptus petiolaris [Ungarra YS_2004.01]	9.1	6.0	100	1759	19.9	8.1	9.8	17.9
Eucalyptus camaldulensis [Lake Albacutya CS20561]	9.1	6.2	71	1921	16.0	6.8	8.5	15.5
Eucalyptus loxophleba ssp. lissophloia [Newdegate CLM-11_03-P95]	9.1	7.3	100	2014	13.4	5.9	7.7	14.0
Acacia retinodes var. retinodes (hill form) [Clare/Spalding BSC_2004.03]	9.1	5.6	62.6	796	11.8	4.0	5.0	9.1
Eucalyptus polybractea [WA CALM_2004.05]	9.1	5.2	97	2037	9.5	3.2	4.4	8.0
Acacia leucoclada [ATSC_2004.01]	9.1	4.8	74	1790	9.7	3.1	4.2	7.6
Eucalyptus viridis ssp. viridis [NSWF_2005.09]	8.1	4.3	70	1759	7.7	2.7	3.6	6.6
c) Species Trials, 2004-2005, Lucindale								
Eucalyptus dalrympleana [SFMB_2005.21]	8.2	9.9	100	1852	70.9	49.9	53.6	97.7
Eucalyptus banksii [Tenterfield N_MS_2005.01]	8.2	10.1	100	1852	56.8	36.9	41.0	74.7
Acacia mearnsii [BSC DO 80104P]	8.2	11.4	100	2083	46.1	33.8	37.8	69.0
Eucalyptus viminalis ssp. cygnetensis [Mount Barker SFMB_2005.29]	8.2	10.8	100	2037	44.6	33.6	37.4	68.2
Acacia saligna ssp. lindleyi [Parkeyerring RSU WA CALM_2004.02]	9.2	8.1	100	2176	63.0	33.2	36.3	66.1
Eucalyptus viminalis ssp. viminalis [Cleland SFMB_2005.30]	8.2	10.2	100	2130	42.5	30.5	34.5	63.0
Eucalyptus viminalis ssp. cygnetensis [Williamstown CS16025]	8.2	10.3	99	2130	41.2	29.7	33.7	61.4
Eucalyptus globulus ssp. globulus [SFMB_2005.23]	8.2	12.1	85	1111	33.8	29.8	31.4	57.2
Eucalyptus aromaphloia ssp. sabulosa [Balmoral CS20813]	8.2	10.2	100	2037	36.5	26.6	30.4	55.4
Eucalyptus grandis [NSWF_2005.04]	8.2	11.7	100	1713	34.5	26.9	30.3	55.3

Trial Type, Year, Site / Taxonomy [seedlot]	Age (years)	Height (m)	Crown Cover (%)	Plant Density (plants/ha)	Basal Area (m ² /ha)	Stem Volume MAI (m ³ /ha/yr)	Above-ground Biomass (t/ha/yr)	Above-ground CO ₂ Seq.(t/ha/yr)
d) Provenance Trials, 2006, Monarto								
Eucalyptus occidentalis [Kantanning CS15377]	6.9	7.4	91	2060	21.4	13.1	16.2	29.5
Eucalyptus occidentalis [Gibson CS13646]	6.9	7.2	95	2130	22.4	12.8	15.9	29.1
Eucalyptus cladocalyx [SPA Bundaleer CS20846]	6.9	6.9	97	1968	18.5	10.1	12.8	23.3
Eucalyptus cladocalyx [Flinders Chase NP CS20267]	6.9	6.4	97	2199	18.3	10.1	12.8	23.3
Eucalyptus occidentalis [Truslove CS15416]	6.9	7.0	90	2199	17.7	9.8	12.6	23.0
Eucalyptus camaldulensis x grandis [Saltgrow 18 Narromine T]	6.9	7.3	95	1944	16.5	10.1	12.6	22.9
Eucalyptus occidentalis [Jerdacutup River CS19925]	6.9	7.0	94	2106	17.3	9.8	12.4	22.7
Eucalyptus camaldulensis x grandis [Saltgrow 06 Narromine T]	6.9	7.3	87	1481	16.1	9.9	12.2	22.2
Eucalyptus cladocalyx [Cape Border KI FS_CN493]	6.9	6.6	100	2176	17.6	9.4	12.0	21.9
Eucalyptus camaldulensis x grandis [Saltgrow 13 Narromine T]	6.9	7.8	94	1667	15.5	9.4	11.9	21.6
Eucalyptus occidentalis [Old Newgate Road CS19924]	6.9	6.5	89	2083	17.0	9.3	11.8	21.5
Eucalyptus cladocalyx [Wail DPI Horsham 220007S]	6.9	6.1	92	1968	17.0	8.5	10.9	19.9
Eucalyptus occidentalis [Jerramungup area CS13638]	6.9	6.6	94	2144	15.7	8.3	10.8	19.6
Eucalyptus cladocalyx [SPA Kersbrook CS20845]	6.9	6.1	89	2066	16.1	8.1	10.5	19.1
Eucalyptus camaldulensis x grandis [Saltgrow 21 Narromine T]	6.9	7.3	88	1667	13.9	8.2	10.4	18.9
Eucalyptus camaldulensis x globulus ssp. globulus [Saltgrow 35 Forrest N]	6.9	7.4	66	1759	12.6	7.6	9.7	17.8
Eucalyptus petiolaris [Koppio Hills ENS]	6.9	4.8	94	2199	15.8	6.7	8.7	15.9
Eucalyptus camaldulensis x globulus ssp. globulus [Saltgrow 39 Forrest N]	6.9	7.2	63	1852	11.1	6.5	8.5	15.4
Eucalyptus cladocalyx [Wirrabara CS20389]	6.9	5.4	82	1852	13.3	6.0	7.8	14.3
Eucalyptus petiolaris [Cleve Hills ENS]	6.9	4.9	86	1875	13.5	5.9	7.7	14.1

3.5 Harvest and regrowth studies

3.5.1 Murray Bridge woody crop coppice experiment

Most eucalypts demonstrated healthy early growth, reliably coppiced and regrew between 0.97 and 1.97 (average 1.46) times faster than initial growth rates within this trial. These results demonstrate the strong commercial and productive advantages of using coppicing plant species for producing woody biomass. Acacia species were less productive (*Acacia salicina*) or reliable (*Acacia saligna*). Although some provenances of *Acacia saligna* can readily coppice after harvesting, the subspecies *lindleyii* (Parkeyerring seedlot) failed to coppice successfully at this site.

Eucalyptus cladocalyx and *Eucalyptus occidentalis* the most productive species within this experiment producing on average between 6.38 and 7.94 t/ha/yr of above ground dry biomass between 2004 and 2013 (Table 3.2). Both species produced similar amounts of biomass in the initial 4.8 years of growth, however *Eucalyptus occidentalis* regrowth was 1.97 times faster than its initial growth. *Eucalyptus cladocalyx* regrowth was slightly slower at 1.52 times faster than its initial rate. Overall, mallee species only produced 61% of the biomass of tree species between 2004 and 2013 and regrew only 29% faster than initial growth rates compared with 74% faster for eucalypt tree species.

3.5.2 Fodder shrub grazing simulation experiment

Between 2004 and 2013 Oldman Saltbush (*Atriplex nummularia*) was most productive at the Roseworthy site and generated between 103–148 t/ha of above ground dry matter. On average, Murray Bridge plantings produced 61% of biomass grown at Roseworthy site and Lucindale only produced 25% of the biomass at Roseworthy (Table 3.3). The growth rates of the two saltbush germplasm (i.e. Yando and Eyres Green) were different across the sites, with the Yando provenance typically producing only 64% of the biomass of the Eyres Green cultivar. These differences were greatest at Lucindale (Yando = 20% of Eyres Green biomass), and less at Roseworthy (69%) and Murray Bridge (86%), indicating that the Yando provenance is much less suitable in locations with cooler temperatures and perhaps infertile sandy soils.

The regrowth rates of Eyres Green cultivar was ~49% of initial growth rates on Murray Bridge and Roseworthy sites, and 127% for Lucindale plants. The regrowth rates of the Yando provenance was between 51% and 94% of the initial growth rates across all sites. In the drier Murray Bridge and Roseworthy sites, the initial rapid growth of the Eyres Green cultivar is followed by a much lower regrowth rate. Yando provenances at the Roseworthy and Lucindale sites follow a similar profile where the initial growth rates are around twice as fast as the regrowth rates. However, at the Murray Bridge site the Yando provenance regrowth rate (94%) was nearly the same as initial growth rate.

At the Murray Bridge site, where quarter plots of Eyres Green cultivar and Yando provenance were harvested at different times of the year, the harvest season has no significant influence on regrowth rates for the Yando provenance. However, the regrowth rate of the Eyres Green cultivar is significantly higher after an autumn grazing or harvest.

Table 3.2 Comparisons of initial growth and regrowth of coppicing woody crop species at Murray Bridge

Site / Taxonomy [seedlot]	Initial Growth	Regrowth	Regrowth Rate as Proportion of Initial Growth Rate	Average Growth
	2004-2009 (4.8 years)	2009-2013 (3.9 years)		2004-2013 (8.7 years)
	Above- ground Biomass (t/ha/yr)	Above- ground Biomass (t/ha/yr)		Above- ground Biomass (t/ha/yr)
Coppice Trials, Initial Growth 2004-2009, Regrowth 2009-2013, Murray Bridge				
Acacia salicina [Mambray Creek SFMB_2004.04]	0.59	0.78	1.32	0.68
Acacia saligna ssp. lindleyi [Parkeyerring RSU WA CALM_2004.02]	2.36	0.10	0.04	1.35
Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	3.18	5.46	1.72	4.20
Eucalyptus cladocalyx [Wirrabara SFMB_2004.11]	5.17	7.87	1.52	6.38
Eucalyptus cneorifolia [Kangaroo Island CS20275] #	2.43	3.30	1.36	2.82
Eucalyptus incrassata [Owen BSC_2004.08] #	2.46	2.92	1.19	2.67
Eucalyptus loxophleba ssp. lissophloia [Newdegate CLM-11_03-P95] #	4.35	6.29	1.45	5.22
Eucalyptus occidentalis [Redhill SFMB_2004.16]	5.53	10.91	1.97	7.94
Eucalyptus polybractea [WA CALM_2004.05] #	3.61	5.30	1.47	4.37
Eucalyptus socialis [Chapman Bore SFMB_2004.18] #	3.73	3.63	0.97	3.69
All species (mean)	3.34	4.66	1.30	3.93
Eucalyptus species only (mean)	3.81	5.71	1.46	4.66

Mallee eucalypt species.

Table 3.3 Comparisons of initial growth and regrowth of Oldman Saltbush fodder shrubs in South Australia, including harvest season influences on regrowth at Murray Bridge

Site	Atriplex nummularia [N_TL_Eyres Green]			Atriplex nummularia [Yando SFMB_2004.07]		
	Initial Growth Above-ground Biomass (t/ha/yr)	Regrowth Above-ground Biomass (t/ha/yr)	Regrowth as Proportion of Initial Growth	Initial Growth Above-ground Biomass (t/ha/yr)	Regrowth Above-ground Biomass (t/ha/yr)	Regrowth as Proportion of Initial Growth
Murray Bridge						
Autumn	12.07	8.06	0.67	6.95	6.68	0.96
Winter	15.83	6.03	0.38	8.77	7.87	0.90
Spring	14.59	4.63	0.32	7.38	7.42	1.01
Summer	14.90	6.11	0.41	8.98	8.13	0.90
Roseworthy	23.68	12.88	0.54	16.47	8.92	0.54
Lucindale	5.32	6.77	1.27	1.90	0.98	0.51

4 Conclusions

The four trial sites established in the agricultural regions of South Australia provide new insights regarding the selection of species and provenances that are potentially suitable for a variety of short harvest cycle industries. These include biomass production, wood fibre, bioenergy, eucalyptus oil and carbon sequestration. While the most productive species for these industries vary with rainfall zone and soil type, a few species are productive across a range of environmental conditions. Flat-topped Yate *Eucalyptus occidentalis* and Sugargum *Eucalyptus cladocalyx* are the most consistent performers across the region and produce significant amounts of biomass from coppice regrowth after harvesting. These attributes suggest that these species have the potential to be used for a variety of extractive industries across the region, where total biomass, solid timber or wood fibres are the main commercial interests.

FloraSearch's provenance by family germplasm collections for high priority species on the Monarto Research Site are a valuable genetic and biomass industry resource. Plantings of the fodder shrub Oldman Saltbush (*Atriplex nummularia*) from a nation-wide germplasm collection program (Hobbs et al. 2009a,b) have been used to develop commercial clonal cultivars under projects within the Future Farm Industries CRC in partnership between SARDI, CSIRO and DEWNR. The resulting improved lines of these cultivars have been established and preserved on the Monarto site and are managed by SARDI on behalf of the Government of South Australia. Provenance by family plant breeding trials of oil mallee *Eucalyptus loxophleba* are also present on the Monarto site, and is part of the national oil mallee commercialisation project managed by the WA Department of Parks and Wildlife.

5 References

- Bartle J, Olsen G, Cooper D, Hobbs T (2007) Scale of biomass production from new woody crops for salinity control in dryland agriculture in Australia. *International Journal of Global Energy Issues* **27**, 115-137.
- Bartle J, Shea S (2002) Development of mallee as a large-scale crop for the wheatbelt of WA. In 'Proceedings Australian Forest Growers 2002 National Conference: Private Forestry - Sustainable accountable and profitable. 13-16 October 2002, Albany.'
- Bennell M, Hobbs TJ, Ellis M (2008) Evaluating agroforestry species and industries for lower rainfall regions of southeastern Australia. FloraSearch 1a. Report to the Joint Venture Agroforestry Program (JVAP) and Future Farm Industries CRC. Publication No. 07/079. Rural Industries Research and Development Corporation, Canberra.
- Callister A, Bush D, Collins S, Davis W (2007) Prospects for genetic improvement of *Eucalyptus cladocalyx* in Western Australia. In 'Proceedings Australasian Forest Genetics Conference Breeding for Wood Quality, 11-14 April 2007, Hobart, Tasmania, Australia.' Australasian Forestry Research Working Group 1 (Genetics). <http://www.proceedings.com.au/afgc>.
- Costa e Silva J, Potts BM; Dutkowski GW (2006) Genotype by environment interaction for growth of *Eucalyptus globulus* in Australia. *Tree Genetics and Genomes* **2**, 61-75.
- CycSoftware (2006) CycDesign 3.0.1 - A package for the computer generation of experimental designs. Cycsoftware Ltd, Hamilton, New Zealand. <http://www.cycdesign.co.nz/>
- Eldridge K, Davidson J, Harwood C, van Wyk G (1994) 'Eucalypt domestication and breeding.' Clarendon Press, Oxford, UK.
- Enecon Pty Ltd (2001) Integrated tree processing of mallee eucalypts. Publication No. 01/160. Rural Industries Research and Development Corporation, Canberra.
- Fairlamb J, Bulman P (1994) Farm Tree Improvement Project. Government of South Australia, through Department of Primary Industries, Adelaide.
- Grierson P, Williams K, Adams M (2000) Review of Unpublished Biomass-Related Information, Western Australia, South Australia, New South Wales and Queensland. National Carbon Accounting System, Technical Report No. 25. Australian Greenhouse Office, Canberra.
- Harwood CE, Bird R, Butcher T, Bush DJ, Jackson T, Johnson D, Stackpole D, Underdown M (2005) Australian Low Rainfall Tree Improvement Group (ALRTIG), Update of hardwood breeding strategies. Publication No. 05/023. Rural Industry Research and Development Corporation, Canberra.
- Hobbs TJ [ed] (2008a) Review of wood products, tannins and exotic species for agroforestry in lower rainfall regions of southern Australia. FloraSearch 1c. Report to the Joint Venture Agroforestry Program (JVAP) and Future Farm Industries CRC. Publication No. 07/081. Rural Industries Research and Development Corporation, Canberra.
- Hobbs TJ [ed] (2009) Regional industry potential for woody biomass crops in lower rainfall southern Australia. FloraSearch 3c. Report to the Joint Venture Agroforestry Program (JVAP) and Future Farm Industries CRC. Publication No. 09/045. Rural Industries Research and Development Corporation, Canberra.
- Hobbs TJ, Bartle J, Bennell M [eds] (2009b) Domestication potential of high priority species (*Acacia saligna*, *Atriplex nummularia* & *Eucalyptus rudis*) for woody biomass crops in lower rainfall southern Australia. FloraSearch 3b. Report to the Joint Venture Agroforestry Program (JVAP) and Future Farm Industries CRC. Publication No. 09/044. Rural Industries Research and Development Corporation, Canberra.
- Hobbs TJ, Bennell M (2008) Agroforestry species profiles for lower rainfall regions of southeastern Australia. FloraSearch 1b. Report to the Joint Venture Agroforestry Program (JVAP) and Future Farm Industries CRC. Publication No. 07/080. Rural Industries Research and Development Corporation, Canberra.

- Hobbs TJ, Bennell M, Bartle J [eds] (2009a) Developing species for woody biomass crops in lower rainfall southern Australia. FloraSearch 3a. Report to the Joint Venture Agroforestry Program (JVAP) and Future Farm Industries CRC. Publication No. 09/043. Rural Industries Research and Development Corporation, Canberra.
- Hobbs TJ, Bennell M, Huxtable D, Bartle J, Neumann C, George N, O'Sullivan W, McKenna D (2008) Potential agroforestry species and regional industries for lower rainfall southern Australia. FloraSearch 2. Report to the Joint Venture Agroforestry Program (JVAP) and Future Farm Industries CRC. Publication No. 07/082. Rural Industries Research and Development Corporation, Canberra.
- Hobbs TJ, Crossman N, Ostendorf B, Bryan B, Lyle G, Neumann C (2009c) Opportunities for carbon sequestration from revegetation in South Australia. Conference Paper. Surveying & Spatial Sciences Institute Biennial International Conference, 28 September – 2 October 2009, Adelaide Convention Centre, Adelaide, Australia
- Hobbs TJ, Georgaras PA, Tucker M, Neumann C, Bennell M (2006) Woody biomass productivity and potential biomass industries in the Upper South East. A report for the SA Centre for Natural Resource Management. FloraSearch Series. SA Water, Land and Biodiversity Conservation, Adelaide.
- Hobbs TJ, Neumann CR, Tucker M, (2010) Carbon Sequestration from Revegetation: Southern Murray-Darling Basin Region, DWLBC Report 2010/02, Government of South Australia, through Department of Water, Land and Biodiversity Conservation, Adelaide & Future Farm Industries Cooperative Research Centre.
- Hobbs TJ, Neumann CR, Tucker M, Ryan KT (2013) Carbon sequestration from revegetation: South Australian Agricultural Regions, DEWNR Technical Report 2013/14, Government of South Australia, through Department of Environment, Water and Natural Resources, Adelaide & Future Farm Industries Cooperative Research Centre.
- Kiddle G, Boardman R, van der Sommen F (1987) A study of growth and characteristics of woodlot and amenity tree plantings in semi-arid rural South Australia. Publication No. 5683. Rural Credits Development Fund, Canberra.
- Mazanec R (2014) Milestone 5 Report - Analysis of data from 2 *E. loxophleba* subsp *lissophloia* and two subsp *gratiae* progeny trials Feb-March, 2014. Future Farm Industries CRC Ltd, Delivery Project 2011/12 – 2011/14, Milestone Report, P3 FP17– Breeding Woody Crops. Future Farm Industries Cooperative Research Centre Ltd, Perth.
- Nelder JA (1962) New kinds of systematic designs for spacing experiments. *Biometrics* 18, 283-307.
- Neumann C, Hobbs T, Tucker M (2011) Carbon sequestration and biomass production rates from agroforestry in lower rainfall zones (300-650) of South Australia: Southern Murray-Darling Basin region, Government of South Australia, through Department of Environment and Natural Resources, Adelaide & Future Farm Industries Cooperative Research Centre.
- Olsen G, Cooper D, Carslake J, Bartle JR, Huxtable D (2004a) Search Project - Terminating Report, Vols. 1-3, NHT Project 973849, WA Department of Conservation and Land Management, Perth.
- Olsen G, Cooper D, Huxtable D, Carslake J, Bartle J. (2004b) Developing Multipurpose Species for Large-scale Revegetation, Search Project Final Report. The Department of Conservation and Land Management. National Heritage Trust Project 973849, Perth, Australia.
- Paul K, Roxburgh S, Raison J, Larmour J, England J, Murphy S, Norris J, Ritson P, Brooksbank K, Hobbs T, Neumann C, Lewis T, Read Z, Clifford D, Kmoch L, Rooney M, Freudenberger D, Jonson J, Peck A, Giles R, Bartle J, McAurthur G, Wildy D, Lindsay A, Preece N, Cunningham S, Powe T, Carter J, Bennett R, Mendham D, Sudmeyer R, Rose B, Butler D, Cohen L, Fairman T, Law R, Finn B, Brammar M, Minchin G, van Oosterzee P, Lothian A (2012) Improved estimation of biomass accumulation by environmental plantings and mallee plantings using FullCAM. CSIRO Flagships Report for the Department of Climate Change and Energy Efficiency. CSIRO, Canberra.
- Paul KI, Roxburgh SH, England JR, Ritson P, Hobbs T, Brooksbank K, Raison RJ, Larmour JS, Murphy S, Norris J, Neumann C, Lewis T, Jonson J, Carter JL, McArthur G, Barton C, Rose B (2013) Development and testing of allometric equations for estimating above-ground biomass of mixed-species environmental plantings. *Forest Ecology and Management* 310, 483-494.
- Polglase P, Paul K, Hawkins C, Siggins A, Turner J, Booth T, Crawford D, Jovanovic T, Hobbs T, Opie K, Almeida A, Carter J (2008) Regional opportunities for agroforestry. A report for the Rural Industry Research and Development Corporation /Land and

Water Australia / Forest and Wood Products Australia / Murray-Darling Basin Commission, Joint Venture Agroforestry Program. Publication No 08/176 .Rural Industry Research and Development Corporation, Canberra.

Polglase PJ, Reeson A, Hawkins CS, Paul KI, Siggins AW, Turner J, Crawford DF, Jovanovic T, Hobbs TJ, Opie K, Carwardine J, Almeida A (2013) Potential for forest carbon plantings to offset greenhouse emissions in Australia: economics and constraints to implementation. *Climatic Change* 2013 (Sept), 1-15.

Rural Solutions SA (2003) South Australian Farm Tree Improvement Project – Review 2003. Rural Solutions South Australia, Department of Primary Industries and Resources of South Australia, Adelaide.

Snowdon P, Eamus D, Gibbons P, Khanna P, Keith H, Raison J, Kirschbaum M (2000). Synthesis of allometrics, review of root biomass and design of future woody biomass sampling strategies. National Carbon Accounting System Technical Report No. 17. Australian Greenhouse Office, Canberra.

Snowdon P, Raison J, Keith H, Ritson P, Grierson P, Adams M, Montagu K, Bi H, Burrows W, Eamus D (2002) Protocol for sampling tree and stand biomass. National Carbon Accounting System Technical Report No. 31. Australian Greenhouse Office, Canberra.

Stein W, Tobiasen L (2007) Biofuel Database: A database of energy-related characteristics for Australian biomass. Publication No. 07/064. Rural Industry Research and Development Corporation, Canberra.

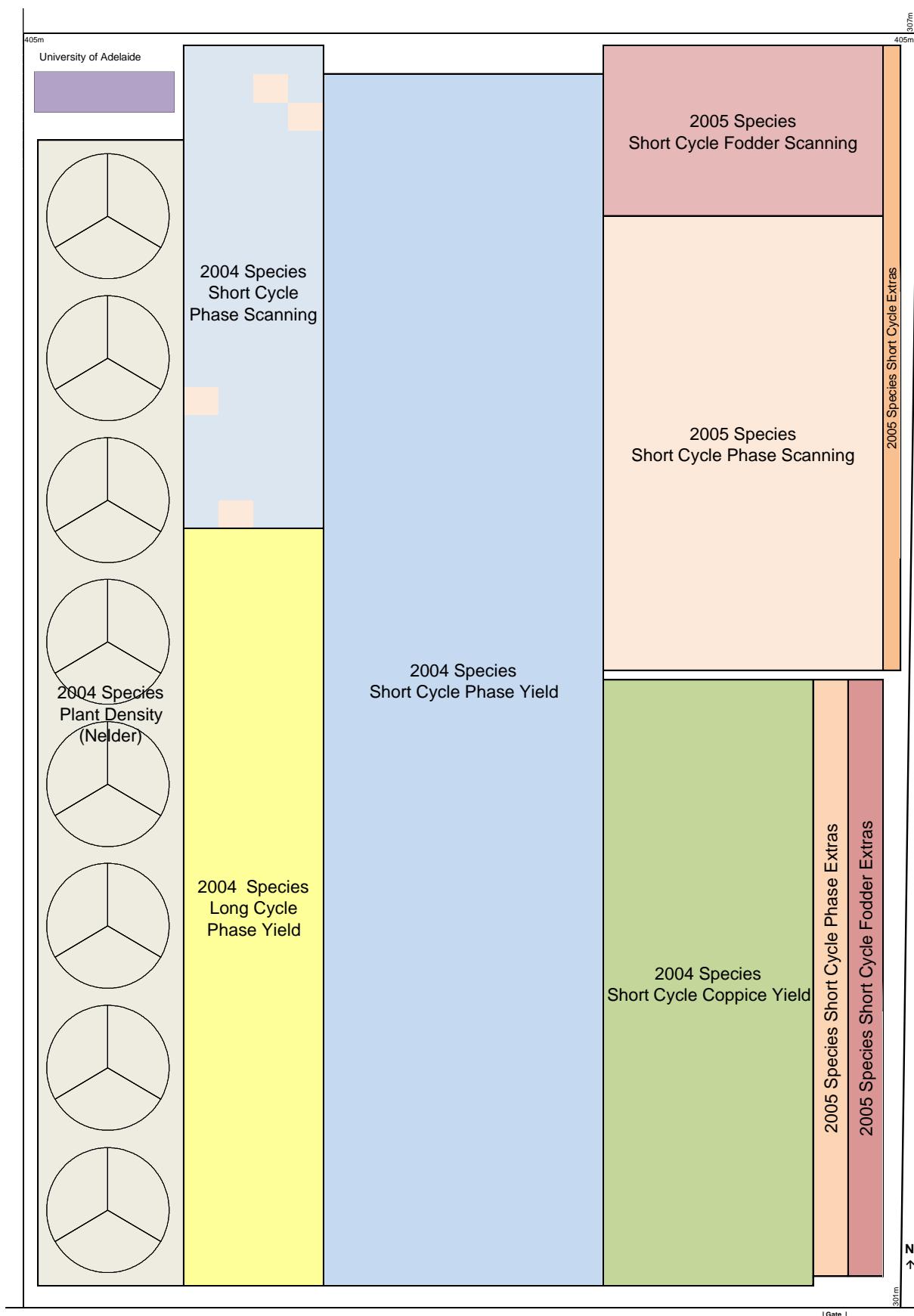
Stirzaker R, Vertessy R, Sarre A (eds) (2002) Trees, water and salt: an Australian guide to using trees for healthy catchments. Rural Industries Research and Development Corporation, Publication No. 01/086, Canberra.

Whitaker D, Williams ER, John JA (2002) CycDesign Software Version 2. Commonwealth Scientific and Industrial Research Organisation, Forestry and Forests Products, Canberra, Australia & University of Waikato, Hamilton, New Zealand.

Zorzetto A, Chudleigh P (1999) Commercial prospects for low rainfall agroforestry. Publication No. 99/152. Rural Industries Research and Development Corporation, Canberra.

6 Appendix A – Field trial plans

Murray Bridge Species Trials 2004-2005



Murray Bridge Species Trial Plots – North West

	24	50	12	24	36	48	60	72	84	96		
NW					Rows 1 - 4	Rows 5 - 8	Rows 9 - 12	Rows 13 - 16	Rows 17 - 20	Rows 21 - 24	Rows 25 - 28	Rows 29 - 32
393					SCP4scan 1.17	SCP4scan 2.17	SCP4scan 3.17	SCP4scan 4.17				
390					Casuarina obesa [Salt Creek]	Acacia lasiocarpa [WA CALM]	Eucalyptus macrocarpa ssp. macrocarpa [Clare CS20290]	Acacia aneura [Glendambo BSC]				
387	Block I Euc Saltbush	Block II Euc Saltbush	Block III Euc Saltbush	Block IV Euc Saltbush	Block V Euc Saltbush	Block VI Euc Saltbush	Block VII Euc Saltbush	Block IX Euc Saltbush	Block X Euc Saltbush	Block XI Euc Saltbush	Block XII Euc Saltbush	
384					SCP4scan 1.16	SCP4scan 2.16	SCP5scan 3.33	SCP4scan 4.16	SCP4yield 4.08		SCP4yield 4.16	
381					Acacia salicina [Threshed 87R 2/88]	Eucalyptus rufida [WA CALM]	Codonocarpus cotinifolius [Riverland]	Casuarina obesa [Salt Creek]	Eucalyptus incrassata [Finnis]		Acacia retinodes var. retinodes (swamp form) [BSC]	
378					SCP4scan 1.15	SCP4scan 2.15	SCP4scan 3.15	SCP5scan 4.33	R17 - 372m	R25 - 372m		
375					Alyogyne huegelli [Yorke Peninsula]	Eucalyptus porosa [Yorke Peninsula]	Acacia aneura [Glendambo BSC]	Codonocarpus cotinifolius [Riverland]	SCP4yield 4.07		SCP4yield 4.15	
372	University of Adelaide				SCP4scan 1.14	SCP4scan 2.14	SCP4scan 3.14	SCP4scan 4.14	Acacia victoriae [Copley CS19334]		Viminaria juncea [Mt. Compass]	
369					Eucalyptus rufida [WA CALM]	Eucalyptus incrassata [Owen]	Acacia retinodes var. retinodes (hill form) [Clare/Spalding]	Acacia lasiocarpa [WA CALM]	R17 - 360m	R25 - 360m		
366					SCP4scan 1.13	SCP4scan 2.13	SCP4scan 3.13	SCP4scan 4.13	Acacia mearnsii [Bungendore CS18975]		SCP4yield 4.14	
363					Eucalyptus rubida ssp. rubida [Boboyan Forest CS19628]	Acacia leucoclada [ATSC]	Eucalyptus porosa [Yorke Peninsula]	Eucalyptus rufida [WA CALM]	R17 - 348m	R25 - 348m		
360					SCP4scan 1.12	SCP4scan 2.12	SCP4scan 3.12	SCP4scan 4.12	SCP4yield 4.05		SCP4yield 4.13	
357					Acacia retinodes var. retinodes (hill form) [Clare/Spalding]	Eucalyptus chloroclada [Dalby CS17756]	Casuarina obesa [Salt Creek]	Alyogyne huegelli [Yorke Peninsula]	Atriplex nummularia [Yando]		Acacia deanii ssp. deanii [Biloela CS16922]	
354					SCP4scan 1.11	SCP4scan 2.11	SCP4scan 3.11	SCP4scan 4.11	R17 - 336m	R25 - 336m		
351					Melaleuca uncinata [Finnis]	Eucalyptus porosa [Laura]	Eucalyptus rufida [WA CALM]	Eucalyptus chloroclada [Dalby CS17756]	SCP4yield 4.04		SCP4yield 4.12	
348	Acacia salicina [Mambray Creek]				SCP4scan 1.10	SCP4scan 2.10	SCP4scan 3.10	SCP4scan 4.10	Eucalyptus polybractea [WA CALM]		Eucalyptus cyanophylla [Alawoona]	
345					Eucalyptus incrassata [Owen]	Eucalyptus chloroclada ssp. macrocarpa [Clare CS20290]	Eucalyptus chloroclada [Dalby CS17756]	Eucalyptus rubida ssp. rubida [Boboyan Forest CS19628]	R17 - 324m	R25 - 324m		
342					SCP4scan 1.09	SCP4scan 2.09	SCP4scan 3.09	SCP4scan 4.09	Eucalyptus occidentalis [Redhill]		SCP4yield 4.03	
339					Eucalyptus macrocarpa ssp. macrocarpa [Clare CS20290]	Alyogyne huegelli [Yorke Peninsula]	Eucalyptus obliqua [Maclefield]	Acacia leucoclada [ATSC]	Eucalyptus globulus ssp. bicostata [Mt. Bryan FS_BB055]		Eucalyptus globulus ssp. bicostata [Mt. Bryan FS_BB055]	
336					SCP4scan 1.08	SCP4scan 2.08	SCP4scan 3.08	SCP4scan 4.08	R17 - 312m	R25 - 312m		
333					Eucalyptus porosa [Laura]	Casuarina obesa [Salt Creek]	Eucalyptus incrassata [Owen]	Eucalyptus obliqua [Maclefield]	SCP4yield 4.02		SCP4yield 4.10	
330	Eucalyptus occidentalis [Redhill]				SCP4scan 1.07	SCP4scan 2.07	SCP4scan 3.07	SCP4scan 4.07	Acacia retinodes var. retinodes (hill form) [Eden Valley]		Eucalyptus viminalis ssp. cygnensis [Williamstown CS16025]	
327					Eucalyptus globulus ssp. bicostata [Wee Jasper CS19283]	Eucalyptus cladocalyx [Wirrabara]	Acacia salicina [Glendambo BSC]	Acacia leucoclada [ATSC]	R17 - 300m	R25 - 300m		
324					SCP4scan 1.06	SCP4scan 2.06	SCP4scan 3.06	SCP4scan 4.06	SCP4yield 4.01		SCP4yield 4.09	
321					Eucalyptus obliqua [Maclefield]	Acacia aneura [Glendambo BSC]	Eucalyptus rubida ssp. rubida [Boboyan Forest CS19628]	Acacia porosa [Laura]	Eucalyptus bridgesiana [Cullerin Range CS20500]		Eucalyptus globulus ssp. bicostata [Mt. Bryan CS19864]	
318					SCP4scan 1.05	SCP4scan 2.05	SCP4scan 3.05	SCP4scan 4.05	R17 - 288m	R25 - 288m		
315					Eucalyptus macrocarpa ssp. macrocarpa [Clare CS20290]	Alyogyne huegelli [Yorke Peninsula]	Eucalyptus porosa [Laura]	Eucalyptus macrocarpa ssp. macrocarpa [Clare CS20290]	SCP4yield 3.08		SCP4yield 3.16	
312					SCP4scan 1.04	SCP4scan 2.04	SCP4scan 3.04	SCP4scan 4.04	Eucalyptus viminalis ssp. cygnensis [Williamstown CS16025]		Eucalyptus cladocalyx [Wirrabara]	
309					Eucalyptus porosa [Laura]	Casuarina obesa [Salt Creek]	Eucalyptus incrassata [Owen]	Eucalyptus obliqua [Maclefield]	R17 - 276m	R25 - 276m		
306					SCP4scan 1.03	SCP4scan 2.03	SCP4scan 3.03	SCP4scan 4.03	Acacia deanii ssp. deanii [Biloela CS16922]		Acacia melanoxylon [Mt. Compass]	
303	7NW				Eucalyptus globulus ssp. bicostata [Wee Jasper CS19283]	Eucalyptus cladocalyx [Wirrabara]	Acacia aneura [Glendambo BSC]	Acacia leucoclada [ATSC]	R17 - 264m	R25 - 264m		
300					SCP4scan 1.02	SCP4scan 2.02	SCP4scan 3.02	SCP4scan 4.02	SCP4yield 3.07		SCP4yield 3.15	
297					Eucalyptus porosa [Yorke Peninsula]	Malaleuca uncinata [Finnis]	Eucalyptus rubida ssp. rubida [Boboyan Forest CS19628]	Acacia porosa [Laura]	Eucalyptus viminalis ssp. cygnensis [Williamstown CS16025]		Acacia melanoxylon [Mt. Compass]	
294					SCP4scan 1.01	SCP4scan 2.01	SCP4scan 3.01	SCP4scan 4.01	R17 - 252m	R25 - 252m		
291					Eucalyptus obliqua [Maclefield]	Acacia aneura [Glendambo BSC]	Eucalyptus rubida ssp. rubida [Boboyan Forest CS19628]	Acacia porosa [Yorke Peninsula]	SCP4yield 3.06		SCP4yield 3.14	
288					SCP4scan 1.00	SCP4scan 2.00	SCP4scan 3.00	SCP4scan 4.00	Eucalyptus goniocalyx [Mt. Osmond]		Eucalyptus nummularia [Yando]	
285	Atriplex nummularia [Yando]				Eucalyptus porosa [Laura]	Eucalyptus obliqua [Maclefield]	Eucalyptus rubida ssp. rubida [Boboyan Forest CS19628]	Acacia porosa [Yorke Peninsula]	R17 - 240m	R25 - 240m		
282	3.65				SCP4scan 0.99	SCP4scan 1.98	SCP4scan 2.97	SCP4scan 3.96	SCP4yield 3.05		SCP4yield 3.13	
279	5.00				Eucalyptus porosa [Laura]	Eucalyptus obliqua [Maclefield]	Eucalyptus rubida ssp. rubida [Boboyan Forest CS19628]	Acacia porosa [Yorke Peninsula]	SCP4yield 3.04		Eucalyptus incrassata [Finnis]	
276	6.90				SCP4scan 0.98	SCP4scan 1.97	SCP4scan 2.96	SCP4scan 3.95	Viminaria juncea [Mt. Compass]		Callitris gracilis [Murray Bridge]	
273	9.28				Eucalyptus porosa [Laura]	Eucalyptus obliqua [Maclefield]	Eucalyptus rubida ssp. rubida [Boboyan Forest CS19628]	Acacia salicina [Glendambo BSC]	R17 - 228m	R25 - 228m		
270	12.23				SCP4scan 0.97	SCP4scan 1.96	SCP4scan 2.95	SCP4scan 3.94	SCP4yield 3.03		Scirpus californicus [Murray Bridge]	
267	15.94				Eucalyptus porosa [Laura]	Eucalyptus obliqua [Maclefield]	Eucalyptus rubida ssp. rubida [Boboyan Forest CS19628]	Acacia salicina [Glendambo BSC]	R17 - 216m	R25 - 216m		
264	20.51				SCP4scan 0.96	SCP4scan 1.95	SCP4scan 2.94	SCP4scan 3.93	SCP4yield 3.02		Acacia dealbata [Mt. Barker]	
261					Eucalyptus porosa [Laura]	Eucalyptus obliqua [Maclefield]	Eucalyptus rubida ssp. rubida [Boboyan Forest CS19628]	Acacia salicina [Glendambo BSC]	R17 - 204m	R25 - 204m		
258	6NW				SCP4scan 0.95	SCP4scan 1.94	SCP4scan 2.93	SCP4scan 3.92	SCP4yield 3.01		Acacia dealbata [Mt. Barker]	
255					Eucalyptus porosa [Laura]	Eucalyptus obliqua [Maclefield]	Eucalyptus rubida ssp. rubida [Boboyan Forest CS19628]	Acacia salicina [Glendambo BSC]	R17 - 192m	R25 - 192m		
252					SCP4scan 0.94	SCP4scan 1.93	SCP4scan 2.92	SCP4scan 3.91	SCP4yield 3.00		Acacia dealbata [Mt. Barker]	
249					Eucalyptus porosa [Laura]	Eucalyptus obliqua [Maclefield]	Eucalyptus rubida ssp. rubida [Boboyan Forest CS19628]	Acacia salicina [Glendambo BSC]	R17 - 180m	R25 - 180m		
246					SCP4scan 0.93	SCP4scan 1.92	SCP4scan 2.91	SCP4scan 3.90	SCP4yield 2.99		Acacia dealbata [Mt. Barker]	
243					Eucalyptus porosa [Laura]	Eucalyptus obliqua [Maclefield]	Eucalyptus rubida ssp. rubida [Boboyan Forest CS19628]	Acacia salicina [Glendambo BSC]	R17 - 168m	R25 - 168m		
240					SCP4scan 0.92	SCP4scan 1.91	SCP4scan 2.90	SCP4scan 2.99	SCP4yield 2.98		Acacia dealbata [Mt. Barker]	
237					Eucalyptus porosa [Laura]	Eucalyptus obliqua [Maclefield]	Eucalyptus rubida ssp. rubida [Boboyan Forest CS19628]	Acacia salicina [Glendambo BSC]	R17 - 156m	R25 - 156m		
234					SCP4scan 0.91	SCP4scan 1.90	SCP4scan 1.89	SCP4scan 1.88	SCP4yield 2.97		Acacia dealbata [Mt. Barker]	
231					Eucalyptus porosa [Laura]	Eucalyptus obliqua [Maclefield]	Eucalyptus rubida ssp. rubida [Boboyan Forest CS19628]	Acacia salicina [Glendambo BSC]	R17 - 144m	R25 - 144m		
228					SCP4scan 0.90	SCP4scan 0.89	SCP4scan 0.88	SCP4scan 0.87	SCP4yield 2.96		Acacia dealbata [Mt. Barker]	
225					Eucalyptus porosa [Laura]	Eucalyptus obliqua [Maclefield]	Eucalyptus rubida ssp. rubida [Boboyan Forest CS19628]	Acacia salicina [Glendambo BSC]	R17 - 132m	R25 - 132m		
222					SCP4scan 0.89	SCP4scan 0.88	SCP4scan 0.87	SCP4scan 0.86	SCP4yield 2.95		Acacia	

Murray Bridge Species Trial Plots – South West

192	Atriplex nummularia [Yando]			LC_4yield 2.03	LC_4yield 4.03	SCP4yield 2.08	SCP4yield 2.16				
189		5S		Callitris gracilis [Murray Bridge]	Eucalyptus cladocalyx [Wirrabara]	Acacia pycnantha [Onka NP]	Eucalyptus petiolaris [Ungarra]				
186				R1 - 168m	R9 - 168m	R17 - 180m	R25 - 180m				
183											
180				LC_4yield 2.02	LC_4yield 4.02	SCP4yield 2.07	SCP4yield 2.15				
177				Casuarina cunninghamiana ssp. cunninghamiana [Coonabarabran CS15001]	Callitris gracilis [Murray Bridge]	Eucalyptus ovata [Back Valley]	Eucalyptus goniocalyx [Mt. Osmond]				
174				R1 - 144m	R9 - 144m	R17 - 168m	R25 - 168m				
171	4NW	4NE									
168	Eucalyptus globulus ssp. bicostata [Wee Jasper CS19283]	Atriplex nummularia [Yando]		LC_4yield 2.01	LC_4yield 4.01	SCP4yield 2.06	SCP4yield 2.14				
165				Eucalyptus occidentalis [Redhill]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus cyanophylla [Alawoona]	Acacia pycnantha [McLaren Flat]				
162	4			R1 - 120m	R9 - 120m	R17 - 156m	R25 - 156m				
159											
156				LC_4yield 1.05	LC_4yield 3.05	SCP4yield 2.05	SCP4yield 2.13				
153				Callitris gracilis [Murray Bridge]	Eucalyptus occidentalis [Redhill]	Eucalyptus leucoxylon ssp. leucoxylon [Wirrabara CS20274]	Acacia retinodes var. retinodes (hill form) [Bull Creek]				
150	Acacia salicina [Mambray Creek]			R1 - 96m	R9 - 96m	R17 - 144m	R25 - 144m				
147		4S									
144				LC_4yield 1.04	LC_4yield 3.04	SCP4yield 2.04	SCP4yield 2.12				
141				Casuarina cunninghamiana ssp. cunninghamiana [Coonabarabran CS15001]	Callitris gracilis [Murray Bridge]	Eucalyptus incrassata [Jabuk]	Acacia pycnantha [Kuipto CS19346]				
138				R1 - 72m	R9 - 72m	R17 - 132m	R25 - 132m				
135	3NW	3NE									
132	Eucalyptus cladocalyx [Wirrabara]	Eucalyptus polybractea [WA CALM]		LC_4yield 1.01	LC_4yield 3.05	SCP4yield 2.03	SCP4yield 2.11				
129				Eucalyptus occidentalis [Redhill]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Acacia salicina [Condobolin Milthorpe 01/04]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]				
126				R1 - 48m	R9 - 48m	R17 - 120m	R25 - 120m				
123	3										
120	Eucalyptus occidentalis [Redhill]			LC_4yield 1.03	LC_4yield 3.03	SCP4yield 2.02	SCP4yield 2.10				
117	3.65			Eucalyptus cladocalyx [Wirrabara]	Eucalyptus occidentalis [Redhill]	Acacia melanoxylon [Mt. Compass]	Acacia victoriae [Copley CS19334]				
114	5.00	3S		R1 - 72m	R9 - 72m	R17 - 108m	R25 - 108m				
111											
108	6.90			LC_4yield 1.04	LC_4yield 3.04	SCP4yield 2.01	SCP4yield 2.09				
105	Nelder spacings	.		Casuarina cunninghamiana ssp. cunninghamiana [Coonabarabran CS15001]	Callitris gracilis [Murray Bridge]	Eucalyptus cladocalyx [Wirrabara]	Acacia retinodes var. retinodes (swamp form) [BSC]				
102	9.28			R1 - 48m	R9 - 48m	R17 - 84m	R25 - 84m				
99	12.23										
96	15.94			LC_4yield 1.03	LC_4yield 3.03	SCP4yield 1.07	SCP4yield 1.15				
93	20.51			Eucalyptus occidentalis var. retinodes (hill form) [Bull Creek]	Eucalyptus petiolaris [Ungarra]	Eucalyptus bridgesiana [Cullerin Range CS20500]	Acacia pycnantha [Onka NP]				
90	2S			R1 - 72m	R9 - 72m	R17 - 72m	R25 - 72m				
87	2NW	2NE									
84	Acacia salicina [Mambray Creek]	Eucalyptus occidentalis [Redhill]		LC_4yield 1.04	LC_4yield 3.04	SCP4yield 1.08	SCP4yield 1.16				
81				Eucalyptus polybractea [WA CALM]	Callitris gracilis [Murray Bridge]	Eucalyptus salicina [Condobolin Milthorpe 01/04]	Eucalyptus victoriae [Copley CS19334]				
78				R1 - 48m	R9 - 48m	R17 - 60m	R25 - 60m				
75	2										
72				LC_4yield 1.03	LC_4yield 3.03	SCP4yield 1.06	SCP4yield 1.14				
69				Eucalyptus cladocalyx [Wirrabara]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Acacia retinodes var. retinodes (hill form) [Eden Valley]	Acacia retinodes var. retinodes (hill form) [Eden Valley]				
66				R1 - 48m	R9 - 48m	R17 - 48m	R25 - 48m				
63											
60	1NW	1NE		LC_4yield 1.04	LC_4yield 3.04	SCP4yield 1.05	SCP4yield 1.13				
57	Atriplex nummularia [Yando]	Eucalyptus globulus ssp. bicostata [Wee Jasper CS19283]		Eucalyptus occidentalis [Redhill]	Eucalyptus cladocalyx [Wirrabara]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus occidentalis [Redhill]				
54				R1 - 48m	R9 - 48m	R17 - 48m	R25 - 48m				
51	2										
48				LC_4yield 1.03	LC_4yield 3.03	SCP4yield 1.06	SCP4yield 1.14				
45				Eucalyptus occidentalis [Redhill]	Eucalyptus globulus ssp. bicostata [Mt. Bryan FS_BB055]	Acacia retinodes var. retinodes (hill form) [Bull Creek]	Acacia retinodes var. retinodes (hill form) [Eden Valley]				
42				R1 - 48m	R9 - 48m	R17 - 36m	R25 - 36m				
39											
36	1			LC_4yield 1.02	LC_4yield 3.02	SCP4yield 1.04	SCP4yield 1.12				
33	1NW	1NE		Eucalyptus occidentalis [Redhill]	Eucalyptus globulus ssp. bicostata [Mt. Bryan FS_BB055]	Acacia salicina [Mambray Creek]	Acacia salicina [Mambray Creek]				
30	Atriplex nummularia [Yando]	Eucalyptus globulus ssp. bicostata [Wee Jasper CS19283]		R1 - 24m	R9 - 24m	R17 - 24m	R25 - 24m				
27				LC_4yield 1.01	LC_4yield 3.01	SCP4yield 1.03	SCP4yield 1.11				
24				Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Casuarina cunninghamiana ssp. cunninghamiana [Coonabarabran CS15001]	Eucalyptus baxteri [Willunga]	Eucalyptus polybractea [WA CALM]				
21				R1 - 0m	R9 - 0m	R17 - 0m	R25 - 0m				
18											
15	1										
12				LC_4yield 1.01	LC_4yield 3.01	SCP4yield 1.02	SCP4yield 1.10				
9				Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Casuarina cunninghamiana ssp. cunninghamiana [Coonabarabran CS15001]	Eucalyptus globulus ssp. bicostata [Mt. Bryan CS19864]	Eucalyptus ovata [Back Valley]				
6				R1 - 0m	R9 - 0m	R17 - 12m	R25 - 12m				
3	1S										
0				Rows 1 - 4	Rows 5 - 8	Rows 9 - 12	Rows 13 - 16	Rows 17 - 20	Rows 21 - 24	Rows 25 - 28	Rows 29 - 32
SW	24	50	12	24	36	48	60	72	84	96	

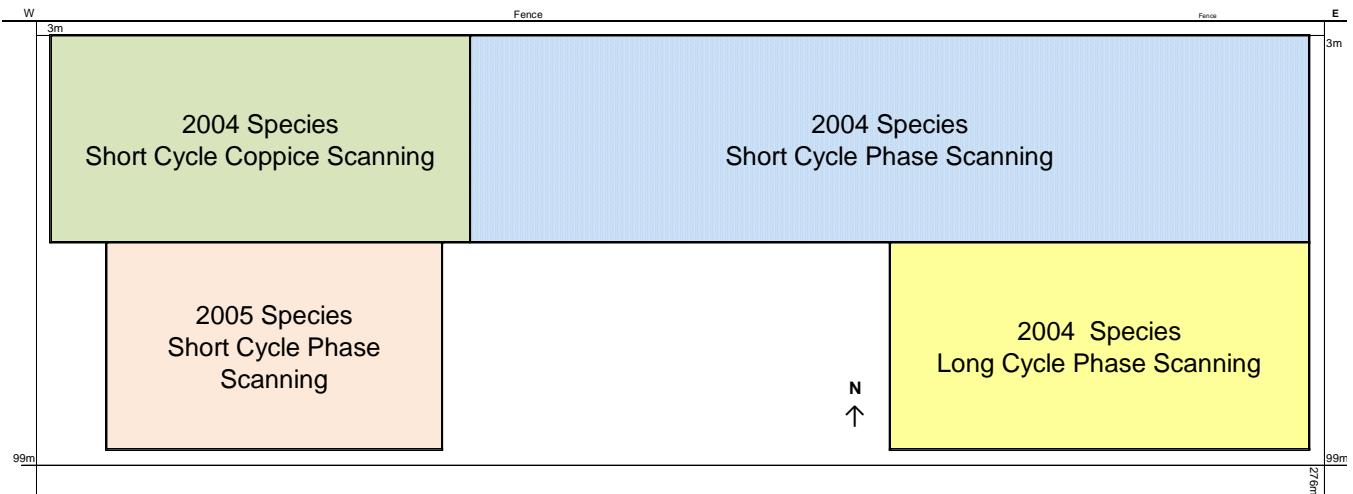
Murray Bridge Species Trial Plots – North East

Rows 33 - 36	Rows 37 - 40	Rows 41 - 44	Rows 45 - 48	Rows 49 - 52	Rows 53 - 56	Rows 57 - 60	Rows 61 - 64	Rows 65 - 68	Rows 69 - 72	Rows 73 - 76	Rows 77 - 80	81 - 82	NE		
				SCP5socn 1.06	SCP5socn 1.12	SCP5socn 2.06	SCP5socn 2.12	SCP5socn 3.06	SCP5socn 3.12	SCP5socn 4.06	SCP5socn 4.12	SCP5socn 2.11	383		
				Acacia decora [ATSC]	Acacia iteaphylla	Eremophila longifolia [Riverland]	Acacia myrtifolia [Adelaide Hills]	Maireana brevifolia [Hog] / Rhagodia spinescens [Hog]	Eremophila longifolia [Mannum]	Maireana pedicellata [Morgan]	Maireana pedicellata [Hog]	Maireana pedicellata [Tallandery]	390		
R33 - 384m	R37 - 384m	R41 - 384m	R45 - 384m										387		
	SCP4yield 4.24			SCP5socn 1.05	SCP5socn 1.11	SCP5socn 2.05	SCP5socn 2.11	SCP5socn 3.05	SCP5socn 3.11	SCP5socn 4.05	SCP5socn 4.11	SCP5socn 2.10	384		
	Callitris gracilis [Murray Bridge]	Acacia salicina [Mambray Creek]		Acacia myrtifolia [Adelaide Hills]	Maireana brevifolia [Hog] / Rhagodia spinescens [Hog]	Acacia decora [ATSC]	Chenopodium nitratuum [Hog]	Codonocarpus confertillaris [Goodlands] / Echylepia tomentosa [Hog]	Acacia iteaphylla	Acacia ligulata [Wellington]	Atriplex vesicaria [Hog]	Callitris gracilis [Tallandery]	381		
R33 - 372m		R41 - 372m			SCP5socn 1.04	SCP5socn 1.10	SCP5socn 2.04	SCP5socn 2.10	SCP5socn 3.04	SCP5socn 3.10	SCP5socn 4.04	SCP5socn 4.10	SCP5socn 2.03	379	
	SCP4yield 4.23			Eucalyptus incrassata [Jabuk]	Maireana sedifolia [Morgan]	Atriplex vesicaria [Hog]	Acacia ligulata [Wellington]	Acacia myrtifolia [Adelaide Hills]	Maireana sedifolia [Hog]	Codonocarpus confertillaris [Goodlands] / Echylepia tomentosa [Hog]	Chenopodium nitratuum [Hog]	Callitris gracilis [Tallandery]	375		
R33 - 360m		R41 - 360m			SCP5socn 1.03	SCP5socn 1.08	SCP5socn 2.03	SCP5socn 2.08	SCP5socn 3.03	SCP5socn 3.08	SCP5socn 4.03	SCP5socn 4.08	SCP5socn 2.08	366	
	SCP4yield 4.22			Acacia pycnantha [Kuipto CS19346]	Acacia saligna [Mandurah]	Eremophila longifolia [Mannum]	Chenopodium nitratuum [Hog]	Maireana brevifolia [Hog] / Rhagodia spinescens [Hog]	Atriplex vesicaria [Hog]	Acacia decora [ATSC]	Eremophila longifolia [Mannum]	Callitris gracilis [Tallandery]	363		
R33 - 348m		R41 - 348m			SCP5socn 1.02	SCP5socn 1.08	SCP5socn 2.02	SCP5socn 2.08	SCP5socn 3.02	SCP5socn 3.08	SCP5socn 4.02	SCP5socn 4.08	SCP5socn 2.07	360	
	SCP4yield 4.21			Acacia retinodes var. retinodes (hill form) [Bull Creek]	Eucalyptus ovata [Back Valley]	Eremophila longifolia [Mannum]	Chenopodium nitratuum [Hog]	Maireana sedifolia [Hog]	Eremophila longifolia [Riverland]	Maireana sedifolia [Morgan]	Acacia myrtifolia [Adelaide Hills]	Acacia iteaphylla	Eucalyptus ovata [Tallandery]	354	
R33 - 336m		R41 - 336m			SCP5socn 1.01	SCP5socn 1.07	SCP5socn 2.01	SCP5socn 2.07	SCP5socn 3.01	SCP5socn 3.07	SCP5socn 4.01	SCP5socn 4.07	SCP5socn 2.06	348	
	SCP4yield 4.20			Eucalyptus cladocalyx [Wirrabara]	Eucalyptus petiolaris [Ungarra]	Grevillea leucoptera [Gin Gin NS-26038]	Eremophila longifolia [Mannum]	Eremophila longifolia [Mannum]	Atriplex vesicaria [Hog]	Acacia ligulata [Wellington]	Chenopodium nitratuum [Hog]	Maireana brevifolia [Hog] / Rhagodia spinescens [Hog]	Eucalyptus leucoxylon [Adelaide Hills]	345	
R33 - 324m		R41 - 324m			SCP5socn 1.15	SCP5socn 1.31	SCP5socn 2.15	SCP5socn 2.31	SCP5socn 3.15	SCP5socn 3.31	SCP5socn 4.15	SCP5socn 4.31	SCP5socn 2.04	342	
	SCP4yield 4.19			Acacia melanoxylon [Mt. Compass]	Acacia pycnantha [McLaren Flat]	Eucalyptus viridis ssp. viridis [NSW Forestry] / Melaleuca uncinata [Tumby Bay]	Eucalyptus fibrosa ssp. nubila [Gidgegong CS18558]	Eucalyptus leucocyon ssp. stephanie [Narrung BSC]	Melaleuca armillaris ssp. armillaris [BSC]	Eucalyptus macrorhiza [Kangaroo River]	Eucalyptus botryoides [Orbost CS15303]	Acacia implexa [ATSC]	Allocasuarina huegeliana [Kattanning]	Eucalyptus leucoxylon [Tallandery]	339
R33 - 312m		R41 - 312m			SCP5socn 1.14	SCP5socn 1.30	SCP5socn 2.14	SCP5socn 2.30	SCP5socn 3.14	SCP5socn 3.30	SCP5socn 4.14	SCP5socn 4.30	SCP5socn 2.05	336	
	SCP4yield 4.18			Acacia salicina [Condobolin Milthorpe 01/04]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Acacia decurrens [BSC M-30126p]	Eucalyptus aromaphloia [Balmoral CS20813]	Acacia pendula [BSC]	Eucalyptus fasciculosa [Milang]	Trymalium floribundum [Harvey NS-25038]	Eucalyptus microcarpa [Toll Gate]	Taxodium juniperinum [SP7 seedlot]	Eucalyptus blakelyi [Mendooran CS1835]	Eucalyptus viridis ssp. viridis [NSW Forestry]	333
R33 - 300m		R41 - 300m			SCP5socn 1.12	SCP5socn 1.28	SCP5socn 2.12	SCP5socn 2.28	SCP5socn 3.12	SCP5socn 3.28	SCP5socn 4.12	SCP5socn 4.28	SCP5socn 2.01	330	
	SCP4yield 4.17			Acacia pycnantha [Onka NP]	Eucalyptus leucoxylon ssp. leucoxylon [Wirrabara CS20274]	Eucalyptus oleoides [Far North]	Eucalyptus socialis [Far North]	Eucalyptus oleosa [Far North]	Eucalyptus laevigata [NSW Forestry]	Eucalyptus globulus ssp. globulus [NSW State Flora Seedlot]	Eucalyptus globulus ssp. globulus [MB State Flora Seedlot]	Eucalyptus blakelyi [Mendooran CS1835]	Eucalyptus viridis ssp. viridis [NSW Forestry] / Melaleuca uncinata [Tumby Bay]	Eucalyptus viridis ssp. viridis [NSW Forestry] / Melaleuca uncinata [Tumby Bay]	327
R33 - 288m		R41 - 288m			SCP5socn 1.11	SCP5socn 1.27	SCP5socn 2.11	SCP5socn 2.27	SCP5socn 3.11	SCP5socn 3.27	SCP5socn 4.11	SCP5socn 4.27	SCP5socn 1.11	324	
	SCP4yield 3.24			Eucalyptus ovata [Back Valley]	Acacia victoriae [Copley CS19334]	Melaleuca armillaris ssp. armillaris [BSC]	Eucalyptus maculata [Kangaroo River]	Allocasuarina huegeliana [Kattanning]	Eucalyptus polystachya [Bruthen CS15345] / Eucalyptus sideroxylon [Gidgegong CS18558]	Eucalyptus cladocalyx [Lower Eyre Peninsula]	Acacia decurrens [BSC M-30126p]	Eucalyptus fasciculosa [Milang]	Trymalium floribundum [Harvey NS-25038]	Eucalyptus viridis ssp. viridis [NSW Forestry]	321
R33 - 276m		R41 - 276m			SCP5socn 1.10	SCP5socn 1.26	SCP5socn 2.10	SCP5socn 2.26	SCP5socn 3.10	SCP5socn 3.26	SCP5socn 4.10	SCP5socn 4.26	SCP5socn 1.10	318	
	SCP4yield 3.23			Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus polybractea [VA CALM]	Eucalyptus microcarpa [Toll Gate]	Acacia pendula [BSC]	Eucalyptus odorata [Two Wells]	Taxodium juniperinum [SP7 seedlot]	Eucalyptus fibrosa ssp. nubila [Gidgegong CS18558]	Eucalyptus longifolia [NSW Forestry]	Eucalyptus botryoides [Orbost CS15303]	Eucalyptus leucoxylon ssp. leucoxylon [NSW Forestry]	Eucalyptus viridis ssp. viridis [NSW Forestry]	315
R33 - 264m		R41 - 264m			SCP5socn 1.08	SCP5socn 1.25	SCP5socn 2.03	SCP5socn 2.25	SCP5socn 3.05	SCP5socn 3.25	SCP5socn 4.08	SCP5socn 4.25	SCP5socn 2.02	312	
	SCP4yield 3.22			Eucalyptus petiolaris [Ungarra]	Acacia retinodes var. retinodes (swamp form) [BSC]	Allocasuarina huegeliana [Kattanning]	Taxodium juniperinum [SP7 seedlot]	Eucalyptus socialis [Far North]	Grevillea leucoptera [Gin Gin NS-26038]	Eucalyptus leucoxylon [Adelaide Hills]	Eucalyptus leucophloia ssp. pruinosa [Northern Mt. Lofty Ranges]	Eucalyptus fasciculosa [Milang]	Eucalyptus blakelyi [Mendooran CS1835]	Eucalyptus viridis ssp. viridis [NSW Forestry] / Melaleuca uncinata [Tumby Bay]	309
R33 - 252m		R41 - 252m			SCP5socn 1.07	SCP5socn 1.23	SCP5socn 2.01	SCP5socn 2.23	SCP5socn 3.07	SCP5socn 3.23	SCP5socn 4.07	SCP5socn 4.23	SCP5socn 1.07	306	
	SCP4yield 3.21			Eucalyptus baxteri [Willunga]	Acacia pycnantha [Onka NP]	Trymalium floribundum [Harvey NS-25038]	Eucalyptus botryoides [Orbost CS15303]	Acacia implexa [ATSC]	Eucalyptus leucophloia ssp. pruinosa [Northern Mt. Lofty Ranges]	Eucalyptus cladocalyx [Lower Eyre Peninsula]	Acacia decurrens [BSC M-30126p]	Eucalyptus fasciculosa [Milang]	Trymalium floribundum [Harvey NS-25038]	Eucalyptus viridis ssp. viridis [NSW Forestry]	303
R33 - 240m		R41 - 240m			SCP5socn 1.06	SCP5socn 1.22	SCP5socn 2.06	SCP5socn 2.22	SCP5socn 3.06	SCP5socn 3.22	SCP5socn 4.06	SCP5socn 4.22	SCP5socn 1.06	300	
	SCP4yield 3.20			Eucalyptus bridgesiana [Cullerin Range CS20500]	Acacia salicina [Condobolin Milthorpe 01/04]	Eucalyptus globulus ssp. globulus [MB State Flora Seedlot]	Eucalyptus leucocylon [Adelaide Hills]	Acacia dealbata [NS-8086p] / Agonis flexuosa [WA NS-20608]	Eucalyptus socialis [Far North]	Eucalyptus leucophloia ssp. pruinosa [Northern Mt. Lofty Ranges]	Eucalyptus fibrosa ssp. nubila [Gidgegong CS18558]	Eucalyptus longifolia [NSW Forestry]	Eucalyptus botryoides [Orbost CS15303]	Eucalyptus viridis ssp. viridis [NSW Forestry] / Melaleuca uncinata [Tumby Bay]	297
R33 - 228m		R41 - 228m			SCP5socn 1.04	SCP5socn 1.20	SCP5socn 2.04	SCP5socn 2.20	SCP5socn 3.04	SCP5socn 3.20	SCP5socn 4.04	SCP5socn 4.20	SCP5socn 1.04	294	
	SCP4yield 3.19			Eucalyptus occidentalis [Redhill]	Eucalyptus globulus ssp. bicostata [Mt. Bryan CS19864]	Acacia dealbata [NS-8086p] / Agonis flexuosa [WA NS-20608]	Eucalyptus leucocylon ssp. pruinosa [Northern Mt. Lofty Ranges]	Acacia decurrens [BSC M-30126p]	Eucalyptus fibrosa ssp. nubila [Gidgegong CS18558]	Eucalyptus longifolia [NSW Forestry]	Allocasuarina huegeliana ssp. maniflora [Lakes Entrance CS16088]	Eucalyptus leucophloia ssp. pruinosa [Northern Mt. Lofty Ranges]	Eucalyptus blakelyi [Mendooran CS1835]	Eucalyptus viridis ssp. viridis [NSW Forestry]	291
R33 - 216m		R41 - 216m			SCP5socn 1.03	SCP5socn 1.18	SCP5socn 2.03	SCP5socn 2.18	SCP5socn 3.03	SCP5socn 3.18	SCP5socn 4.03	SCP5socn 4.18	SCP5socn 1.03	288	
	SCP4yield 3.18			Acacia retinodes var. retinodes (hill form) [Eden Valley]	Eucalyptus globulus ssp. bicostata [Mt. Bryan FS_BB055]	Eucalyptus odorata [Twin Wells]	Eucalyptus polystachya [Bruthen CS15348] / Eucalyptus sideroxylon [Gidgegong CS18558]	Eucalyptus aromaphloia [Balmoral CS20813]	Eucalyptus viridis ssp. viridis [NSW Forestry]	Eucalyptus blakelyi [Mendooran CS1835]	Acacia retinodes var. retinodes [Tumby Bay]	Eucalyptus fibrosa ssp. nubila [Gidgegong CS18558]	Eucalyptus longifolia [NSW Forestry]	Eucalyptus viridis ssp. viridis [NSW Forestry]	285
R33 - 204m		R41 - 204m			SCP5socn 1.02	SCP5socn 1.18	SCP5socn 2.02	SCP5socn 2.18	SCP5socn 3.02	SCP5socn 3.18	SCP5socn 4.02	SCP5socn 4.18	SCP5socn 1.02	282	
	SCP4yield 3.17			Eucalyptus cyanophylla [Alawoona]	Acacia retinodes var. retinodes (hill form) [Bull Creek]	Eucalyptus fasciculosa [Milang]	Eucalyptus leucocylon ssp. stephanie [Narrung BSC]	Eucalyptus globulus ssp. globulus [MB State Flora Seedlot]	Eucalyptus longifolia [Lonswood]	Eucalyptus botryoides [Orbost CS15303]	Trymalium floribundum [Harvey NS-25038]	Acacia pendula [BSC]	Melaleuca armillaris ssp. armillaris [BSC]	Eucalyptus longifolia [NSW Forestry	

Murray Bridge Species Trial Plots – South East

Murray Bridge Species Trial Plots – South East												
Department of Environment, Water and Natural Resources, north of State Flora site, Murray Bridge, SA		Species Trial Plot Details		Plot Location		Plot Description		Plot Status				
SCP4yield 2.24	SCP4yield 2.32	SCP4yield 4.04	SCP4yield 4.08	SCP4yield 4.12	SCP5x 1.21	SCP5x 2.21	SCP5x 1.21	SCP5x 2.21	192			
Atriplex nummularia [Yando]	Viminaria juncea [Mt. Compass]	Eucalyptus occidentalis [Redhill]	Eucalyptus cladocalyx [Wirrabara]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus tereticornis ssp. tereticornis	Angophora forrestiana [NSW Forestry]	Pultaria dubia [Miller oak]	Atriplex amnicola [Toree Peninsula]	189			
R33 - 180m	R41 - 180m	R49 - 180m	R57 - 180m	R65 - 180m	SCP5x 1.20	SCP5x 2.20	SCP5x 1.20	SCP5x 2.20	186			
SCP4yield 2.23	SCP4yield 2.31	SCP4yield 4.03	SCP4yield 4.07	SCP4yield 4.11	Seamia plicocarpa var. plicocarpa	Acacia floribunda [Lower South East]	Rhodopis spinulosa [SA44320]	Atriplex semibaccata [Galler]	183			
Eucalyptus globulus ssp. bicostata [Mt. Bryan FS_BB055]	Acacia mearnsii [Bungendore CS18975]	Atriplex nummularia [Eyes Green]	Acacia salicina [Mambray Creek]	Eucalyptus cneorifolia [Kangaroo Island CS20275]	SCP5x 1.18	SCP5x 2.18	SCP5x 1.18	SCP5x 2.18	180			
R33 - 168m	R41 - 168m	R49 - 168m	R57 - 168m	R65 - 168m	Eucalyptus megacephala [Blair Nursey]	Eucalyptus floribunda [NSW Forestry]	Daviesia laevigata [SA43281]	Atriplex semibaccata [SA40827]	177			
SCP4yield 2.22	SCP4yield 2.30	SCP4yield 4.02	SCP4yield 4.06	SCP4yield 4.10	Eucalyptus incassata [Owen]	Acacia floribunda [Blair Nursey]	SCP5x 1.18	SCP5x 2.18	174			
Eucalyptus globulus ssp. bicostata [Mt. Bryan CS19864]	Acacia retinodes var. retinodes (hill form) [Eden Valley]	Eucalyptus loxophleba ssp. lissophloia [MB State Flora]	Eucalyptus socialis [Chapman Bore]	Eucalyptus incassata [Owen]	Eucalyptus megacephala [Blair Nursey]	Acacia banksii [Tenterfield]	Rhodopis spinulosa [SA44320]	Atriplex semibaccata [SA40827]	171			
R33 - 156m	R41 - 156m	R49 - 156m	R57 - 156m	R65 - 156m	SCP5x 1.17	SCP5x 2.17	SCP5x 1.17	SCP5x 2.17	168			
SCP4yield 2.21	SCP4yield 2.29	SCP4yield 4.01	SCP4yield 4.05	SCP4yield 4.09	Indigofera australis [Scott Creek]	Eucalyptus megacephala [Blair Nursey]	Daviesia laevigata [SA43281]	Atriplex semibaccata [SA40827]	165			
Eucalyptus viminalis ssp. cygnensis [Williamstown CS16025]	Eucalyptus occidentalis [Redhill]	Eucalyptus polybractea [WA CALM]	Acacia saligna [Parkeyerring - wheatbelt]	Eucalyptus incassata [Owen]	Eucalyptus megacephala [Blair Nursey]	Acacia banksii [Tenterfield]	SCP5x 1.18	SCP5x 2.18	162			
R33 - 144m	R41 - 144m	R49 - 144m	R57 - 144m	R65 - 144m	SCP5x 1.16	SCP5x 2.16	SCP5x 1.16	SCP5x 2.16	159			
SCP4yield 2.20	SCP4yield 2.28	SCP4yield 3.04	SCP4yield 3.08	SCP4yield 3.12	Acacia saligna [Parkeyerring - wheatbelt]	Eucalyptus megacephala [Blair Nursey]	Daviesia laevigata [SA43281]	Atriplex semibaccata [SA40827]	156			
Eucalyptus polybractea [WA CALM]	Callitris gracilis [Murray Bridge]	Eucalyptus loxophleba ssp. lissophloia [MB State Flora]	Atriplex nummularia [Eyes Green]	Eucalyptus incassata [Owen]	Eucalyptus megacephala [Blair Nursey]	Acacia banksii [Tenterfield]	Rhodopis spinulosa [SA44320]	Atriplex semibaccata [SA40827]	153			
R33 - 132m	R41 - 132m	R49 - 132m	R57 - 132m	R65 - 132m	SCP5x 1.15	SCP5x 2.15	SCP5x 1.15	SCP5x 2.15	150			
SCP4yield 2.19	SCP4yield 2.27	SCP4yield 3.03	SCP4yield 3.07	SCP4yield 3.11	Eucalyptus socialis [Chapman Bore]	Eucalyptus megacephala [Blair Nursey]	Daviesia laevigata [SA43281]	Atriplex semibaccata [SA40827]	147			
Eucalyptus incassata [Finnis]	Acacia deanii ssp. deanii [Biloela CS16922]	Indigofera australis [Scott Creek]	Eucalyptus cladocalyx [Wirrabara]	Eucalyptus socialis [Chapman Bore]	Eucalyptus megacephala [Blair Nursey]	Acacia floribunda [Lower South East]	SCP5x 1.16	SCP5x 2.16	144			
R33 - 120m	R41 - 120m	R49 - 120m	R57 - 120m	R65 - 120m	SCP5x 1.14	SCP5x 2.14	SCP5x 1.14	SCP5x 2.14	141			
SCP4yield 2.18	SCP4yield 2.26	SCP4yield 3.02	SCP4yield 3.06	SCP4yield 3.10	Eucalyptus incassata [Owen]	Eucalyptus megacephala [Blair Nursey]	Acacia floribunda [Lower South East]	SCP5x 1.15	SCP5x 2.15			
Acacia salicina [Mambray Creek]	Eucalyptus baxteri [Willunga]	Acacia salicina [Mambray Creek]	Eucalyptus incassata [Owen]	Eucalyptus occidentalis [Redhill]	Eucalyptus megacephala [Blair Nursey]	Eucalyptus viminalis ssp. viminalis [Cleland]	Alphitonia pulcherrima [Port Gavet]	Pultaria daphnoides [Millbrook]	135			
R33 - 108m	R41 - 108m	R49 - 108m	R57 - 108m	R65 - 108m	SCP5x 1.13	SCP5x 2.13	SCP5x 1.13	SCP5x 2.13	132			
SCP4yield 2.17	SCP4yield 2.25	SCP4yield 3.01	SCP4yield 3.05	SCP4yield 3.09	Eucalyptus polybractea [WA CALM]	Eucalyptus megacephala [Blair Nursey]	Acacia floribunda [Lower South East]	Angophora floribunda [NSW Foresty]	129			
Acacia saligna [Mandurah]	Eucalyptus cladocalyx [Wirrabara]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus polybractea [WA CALM]	Eucalyptus cneorifolia [Kangaroo Island CS20275]	Eucalyptus megacephala [Blair Nursey]	Eucalyptus viminalis ssp. viminalis [Cleland]	Alphitonia pulcherrima [Port Gavet]	Pultaria daphnoides [Millbrook]	126			
R33 - 96m	R41 - 96m	R49 - 96m	R57 - 96m	R65 - 96m	SCP5x 1.12	SCP5x 2.12	SCP5x 1.12	SCP5x 2.12	123			
SCP4yield 1.24	SCP4yield 1.32	SCP4yield 2.04	SCP4yield 2.08	SCP4yield 2.12	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus cneorifolia [Kangaroo Island CS20275]	Eucalyptus megacephala [Blair Nursey]	Rhodopis crassifolia [Narung]	120			
Acacia pycnantha [McLaren Flat]	Atriplex nummularia [Yando]	Acacia saligna [Parkeyerring - wheatbelt]	Eucalyptus cneorifolia [Kangaroo Island CS20275]	Acacia salicina [Mambray Creek]	Eucalyptus megacephala [Blair Nursey]	Eucalyptus viminalis ssp. viminalis [Cleland]	Geijera parviflora [Millbrook]	Rhodopis crassifolia [Narung]	117			
R33 - 84m	R41 - 84m	R49 - 84m	R57 - 84m	R65 - 84m	SCP5x 1.11	SCP5x 2.11	SCP5x 1.11	SCP5x 2.11	114			
SCP4yield 1.23	SCP4yield 1.31	SCP4yield 2.03	SCP4yield 2.07	SCP4yield 2.11	Eucalyptus incassata [Owen]	Eucalyptus cneorifolia [Kangaroo Island CS20275]	Eucalyptus megacephala [Blair Nursey]	Rhodopis crassifolia [Narung]	111			
Acacia mearnsii [Bungendore CS18975]	Eucalyptus viminalis ssp. cygnensis [Williamstown CS16025]	Indigofera australis [Scott Creek]	Indigofera loxophleba ssp. lissophloia [MB State Flora]	Eucalyptus incassata [Owen]	Eucalyptus megacephala [Blair Nursey]	Eucalyptus viminalis ssp. viminalis [Cleland]	Geijera parviflora [Millbrook]	Rhodopis crassifolia [Narung]	108			
R33 - 72m	R41 - 72m	R49 - 72m	R57 - 72m	R65 - 72m	SCP5x 1.09	SCP5x 2.08	SCP5x 1.09	SCP5x 2.08	105			
SCP4yield 1.22	SCP4yield 1.30	SCP4yield 2.02	SCP4yield 2.06	SCP4yield 2.10	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus cneorifolia [Kangaroo Island CS20275]	Eucalyptus megacephala [Blair Nursey]	Alphitonia pulcherrima [Port Gavet]	102			
Eucalyptus incassata [Jabuk]	Eucalyptus incassata [Finnis]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Atriplex nummularia [Eyes Green]	Eucalyptus socialis [Chapman Bore]	Eucalyptus megacephala [Blair Nursey]	Eucalyptus viminalis ssp. viminalis [Cleland]	Geijera parviflora [Millbrook]	Rhodopis crassifolia [Narung]	99			
R33 - 60m	R41 - 60m	R49 - 60m	R57 - 60m	R65 - 60m	SCP5x 1.08	SCP5x 2.08	SCP5x 1.08	SCP5x 2.08	96			
SCP4yield 1.21	SCP4yield 1.29	SCP4yield 2.01	SCP4yield 2.05	SCP4yield 2.09	Eucalyptus cladocalyx [Wirrabara]	Eucalyptus cneorifolia [Kangaroo Island CS20275]	Eucalyptus megacephala [Blair Nursey]	Rhodopis crassifolia [Narung]	93			
Acacia retinodes var. retinodes (swamp form) [BSC]	Acacia pycnantha [Kuipot CS19346]	Eucalyptus occidentalis [Redhill]	Eucalyptus polybractea [WA CALM]	Eucalyptus socialis [Mambray Creek]	Eucalyptus megacephala [Blair Nursey]	Eucalyptus viminalis ssp. viminalis [Cleland]	Geijera parviflora [Millbrook]	Rhodopis crassifolia [Narung]	90			
R33 - 48m	R41 - 48m	R49 - 48m	R57 - 48m	R65 - 48m	SCP5x 1.07	SCP5x 2.07	SCP5x 1.07	SCP5x 2.07	87			
SCP4yield 1.20	SCP4yield 1.28	SCP4yield 1.04	SCP4yield 1.08	SCP4yield 1.12	Eucalyptus bridgesiana [Cullerin Range CS20500]	Eucalyptus cneorifolia [Kangaroo Island CS20275]	Eucalyptus megacephala [Blair Nursey]	Rhodopis crassifolia [Narung]	84			
Acacia deanii ssp. deanii [Biloela CS16922]	Eucalyptus goniocalyx [Mt. Osmond]	Eucalyptus loxophleba ssp. lissophloia [MB State Flora]	Eucalyptus cladocalyx [Wirrabara]	Eucalyptus socialis [Mambray Creek]	Eucalyptus megacephala [Blair Nursey]	Eucalyptus viminalis ssp. viminalis [Cleland]	Geijera parviflora [Millbrook]	Rhodopis crassifolia [Narung]	81			
R33 - 36m	R41 - 36m	R49 - 36m	R57 - 36m	R65 - 36m	SCP5x 1.03	SCP5x 2.03	SCP5x 1.03	SCP5x 2.03	78			
SCP4yield 1.19	SCP4yield 1.27	SCP4yield 1.03	SCP4yield 1.07	SCP4yield 1.11	Eucalyptus leucoxylon ssp. leucoxylon [Wirrabara CS20274]	Eucalyptus goniocalyx [Mt. Osmond]	Eucalyptus megacephala [Blair Nursey]	Alphitonia pulcherrima [Port Gavet]	Rhodopis crassifolia [Narung]	75		
R33 - 24m	R41 - 24m	R49 - 24m	R57 - 24m	R65 - 24m	SCP5x 1.02	SCP5x 2.02	SCP5x 1.02	SCP5x 2.02	72			
SCP4yield 1.18	SCP4yield 1.26	SCP4yield 1.02	SCP4yield 1.06	SCP4yield 1.10	Viminaria juncea [Mt. Compass]	Eucalyptus polybractea [WA CALM]	Eucalyptus megacephala [Blair Nursey]	Geijera parviflora [Millbrook]	Rhodopis crassifolia [Narung]	69		
Acacia melanoxylon [Mt. Compass]	Acacia melanoxylon [Mt. Compass]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	SCP5x 1.01	SCP5x 2.01	SCP5x 1.01	SCP5x 2.01	66			
R33 - 12m	R41 - 12m	R49 - 12m	R57 - 12m	R65 - 12m	SCP5x 1.02	SCP5x 2.02	SCP5x 1.02	SCP5x 2.02	63			
SCP4yield 1.17	SCP4yield 1.25	SCP4yield 1.01	SCP4yield 1.05	SCP4yield 1.09	Acacia victoriae [Copley CS19334]	Eucalyptus cyanophylla [Alawoona]	Eucalyptus occidentalis [Redhill]	Alphitonia pulcherrima [Port Gavet]	Rhodopis crassifolia [Narung]	60		
R33 - 0m	R41 - 0m	R49 - 0m	R57 - 0m	R65 - 0m	SCP5x 1.00	SCP5x 2.00	SCP5x 1.00	SCP5x 2.00	57			
Rows 33 - 36	Rows 37 - 40	Rows 41 - 44	Rows 45 - 48	Rows 49 - 52	Rows 53 - 56	Rows 57 - 60	Rows 61 - 64	Rows 65 - 68	Rows 69 - 72	Rows 73 - 76	Rows 77 - 80	Rows 78 - 82
108	120	132	144	156	168	180	192	204	216	228	' Gate	

Roseworthy Species Trials 2004-2005

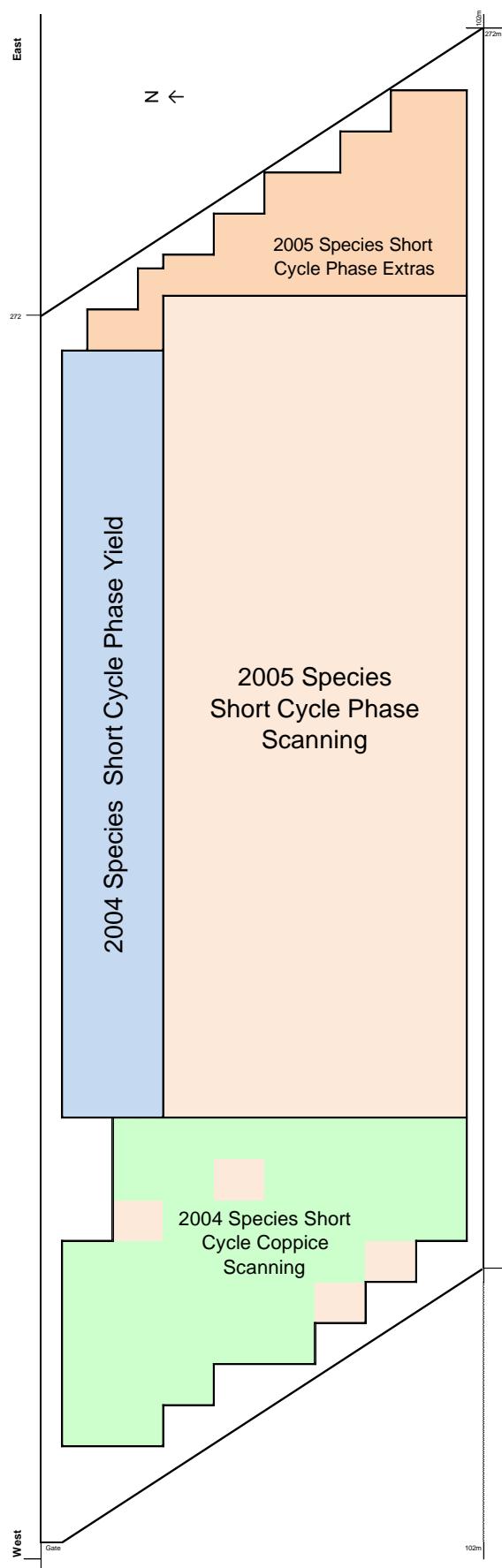


	12	24	36	48	60	72	84	96m		
E	Om	R1 - 270m	R5 - 270m	R9 - 270m	R13 - 270m	R17 - 270m	R21 - 270m	R25 - 270m	R29 - 270m	273
Fence	270	SCP4s 4.05	SCP4s 4.10	SCP4s 4.15	SCP4s 4.20	LC_4s 1.05	LC_4s 2.05	LC_4s 3.05	LC_4s 4.05	270
	267	Eucalyptus occidentalis [Redhill]	Viminaria juncea [Mt. Compass]	Acacia leucoclada [ATSC]	Melaleuca uncinata [Finnis]	Casuarina cunninghamiana ssp. cunninghamiana [CS15001]	Eucalyptus cladocalyx [Mirrabara]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Callitris gracilis [Murray Bridge]	267
	264	SCP4s 4.04	SCP4s 4.09	SCP4s 4.14	SCP4s 4.19	R17 - 252m	R21 - 252m	R25 - 252m	R29 - 252m	264
	261	Eucalyptus globulus ssp. bicostata [Wee Jasper CS19283 & Mt. Bryan FS_BB055]	Eucalyptus viminalis ssp. cygnetensis [Williamstown CS16025]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus globulus ssp. bicostata [Mt. Bryan CS19864]	R17 - 234m	R21 - 234m	R25 - 234m	R29 - 234m	261
	258	SCP4s 4.03	SCP4s 4.08	SCP4s 4.13	SCP4s 4.18	LC_4s 1.04	LC_4s 2.04	LC_4s 3.04	LC_4s 4.04	258
	255	Eucalyptus cladocalyx [Mirrabara]	Acacia salicina [Mambray Creek]	Callitris gracilis [Murray Bridge]	Eucalyptus ovata [Back Valley]	Callitris gracilis [Murray Bridge]	Casuarina cunninghamiana ssp. .	Eucalyptus occidentalis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	255
	252	SCP4s 4.02	SCP4s 4.07	SCP4s 4.12	SCP4s 4.17	R17 - 216m	R21 - 216m	R25 - 216m	R29 - 216m	252
	249	Atriplex nummularia [Yando]	Acacia pyronantha [Kuipto CS19346]	Eucalyptus goniocalyx [Mt. Osmond]	Eucalyptus bridgesiana [Cullerin Range CS20500]	LC_4s 1.03	LC_4s 2.03	LC_4s 3.03	LC_4s 4.03	249
	246	SCP4s 4.01	SCP4s 4.06	SCP4s 4.11	SCP4s 4.16	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Callitris gracilis [Murray Bridge]	Eucalyptus occidentalis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	246
	243	Eucalyptus petiolaris [Ungarra]	Eucalyptus polybractea [WA CALM]	Acacia retinodes var. retinodes (swamp form) [BSC]	Acacia retinodes var. retinodes (hill form) [Clare/Spalding]	R17 - 198m	R21 - 198m	R25 - 198m	R29 - 198m	243
	228	SCP4s 3.05	SCP4s 3.10	SCP4s 3.15	SCP4s 3.20	LC_4s 1.02	LC_4s 2.02	LC_4s 3.02	LC_4s 4.02	228
	225	Eucalyptus goniocalyx [Mt. Osmond]	Acacia leucoclada [ATSC]	Eucalyptus ovata [Back Valley]	Eucalyptus globulus ssp. bicostata [Wee Jasper CS19283 & Mt. Bryan FS_BB055]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Callitris gracilis [Murray Bridge]	Eucalyptus occidentalis var. camaldulensis [Mirrabara]	Eucalyptus occidentalis var. camaldulensis [Mirrabara]	225
	222	SCP4s 3.04	SCP4s 3.09	SCP4s 3.14	SCP4s 3.19	R17 - 180m	R21 - 180m	R25 - 180m	R29 - 180m	222
	219	Melaleuca uncinata [Finnis]	Eucalyptus cladocalyx [Mirrabara]	Eucalyptus viminalis ssp. cygnetensis [Williamstown CS16025]	Eucalyptus polybractea [WA CALM]	LC_4s 1.01	LC_4s 2.01	LC_4s 3.01	LC_4s 4.01	219
	216	SCP4s 3.03	SCP4s 3.08	SCP4s 3.13	SCP4s 3.18	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Casuarina cunninghamiana ssp. cunninghamiana [CS15001]	Eucalyptus occidentalis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus occidentalis var. camaldulensis [Lake Albacutya CS20561]	216
	213	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus petiolaris [Ungarra]	Eucalyptus bridgesiana [Cullerin Range CS20500]	Viminaria juncea [Mt. Compass]	R17 - 198m	R21 - 198m	R25 - 198m	R29 - 198m	213
	210	SCP4s 3.01	SCP4s 3.06	SCP4s 3.11	SCP4s 3.16	LC_4s 1.02	LC_4s 2.02	LC_4s 3.02	LC_4s 4.02	210
	207	Acacia salicina [Mambray Creek]	Acacia retinodes var. retinodes (swamp form) [BSC]	Eucalyptus occidentalis [Redhill]	Atriplex nummularia [Yando]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Casuarina cunninghamiana ssp. cunninghamiana [CS15001]	Eucalyptus occidentalis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus occidentalis var. camaldulensis [Lake Albacutya CS20561]	207
	204	Acacia retinodes var. retinodes (hill form) [Clare/Spalding]	Eucalyptus globulus ssp. bicostata [Mt. Bryan CS19864]	Acacia pyronantha [Kuipto CS19346]	Callitris gracilis [Murray Bridge]	R17 - 180m	R21 - 180m	R25 - 180m	R29 - 180m	204
	201	SCP4s 2.05	SCP4s 2.10	SCP4s 2.15	SCP4s 2.20	R17 - 180m	R21 - 180m	R25 - 180m	R29 - 180m	201
	198	Eucalyptus ovata [Back Valley]	Atriplex nummularia [Yando]	Eucalyptus polybractea [WA CALM]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	LC_4s 1.01	LC_4s 2.01	LC_4s 3.01	LC_4s 4.01	198
	195	SCP4s 2.04	SCP4s 2.09	SCP4s 2.14	SCP4s 2.19	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus cladocalyx [Mirrabara]	Eucalyptus occidentalis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus occidentalis var. camaldulensis [Lake Albacutya CS20561]	195
	192	Viminaria juncea [Mt. Compass]	Eucalyptus goniocalyx [Mt. Osmond]	Acacia retinodes var. retinodes (hill form) [Clare/Spalding]	Atriplex nummularia [Yando]	R17 - 180m	R21 - 180m	R25 - 180m	R29 - 180m	192
	189	SCP4s 2.03	SCP4s 2.08	SCP4s 2.13	SCP4s 2.18	LC_4s 1.02	LC_4s 2.02	LC_4s 3.02	LC_4s 4.02	189
	186	Acacia retinodes var. retinodes (swamp form) [BSC]	Eucalyptus uncinata [Finnis]	Eucalyptus globulus ssp. bicostata [Mt. Bryan CS19864]	Acacia pyronantha [Kuipto CS19346]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Callitris gracilis [Murray Bridge]	Casuarina cunninghamiana ssp. cunninghamiana [CS15001]	Eucalyptus occidentalis var. camaldulensis [Lake Albacutya CS20561]	186
	183	SCP4s 2.01	SCP4s 2.06	SCP4s 2.11	SCP4s 2.16	R17 - 180m	R21 - 180m	R25 - 180m	R29 - 180m	183
	180	Eucalyptus ovata [Back Valley]	Atriplex nummularia [Yando]	Eucalyptus polybractea [WA CALM]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	LC_4s 1.01	LC_4s 2.01	LC_4s 3.01	LC_4s 4.01	180
	177	SCP4s 2.04	SCP4s 2.09	SCP4s 2.14	SCP4s 2.19	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus cladocalyx [Mirrabara]	Eucalyptus occidentalis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus occidentalis var. camaldulensis [Lake Albacutya CS20561]	177
	174	Viminaria juncea [Mt. Compass]	Eucalyptus goniocalyx [Mt. Osmond]	Acacia retinodes var. retinodes (hill form) [Clare/Spalding]	Atriplex nummularia [Yando]	R17 - 180m	R21 - 180m	R25 - 180m	R29 - 180m	174
	171	SCP4s 2.03	SCP4s 2.08	SCP4s 2.13	SCP4s 2.18	LC_4s 1.02	LC_4s 2.02	LC_4s 3.02	LC_4s 4.02	171
	168	Acacia retinodes var. retinodes (swamp form) [BSC]	Melaleuca uncinata [Finnis]	Eucalyptus globulus ssp. bicostata [Wee Jasper CS19283 & Mt. Bryan FS_BB055]	Acacia pyronantha [Kuipto CS19346]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus cladocalyx [Mirrabara]	Eucalyptus occidentalis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus occidentalis var. camaldulensis [Lake Albacutya CS20561]	168
	165	SCP4s 2.02	SCP4s 2.07	SCP4s 2.12	SCP4s 2.17	R17 - 180m	R21 - 180m	R25 - 180m	R29 - 180m	165
	162	Eucalyptus globulus ssp. bicostata [Mt. Bryan CS19864]	Eucalyptus bridgesiana [Cullerin Range CS20500]	Acacia salicina [Mambray Creek]	Acacia leucoclada [ATSC]	LC_4s 1.02	LC_4s 2.02	LC_4s 3.02	LC_4s 4.02	162
	159	SCP4s 2.01	SCP4s 2.06	SCP4s 2.11	SCP4s 2.16	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus cladocalyx [Mirrabara]	Eucalyptus occidentalis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus occidentalis var. camaldulensis [Lake Albacutya CS20561]	159
	156	Eucalyptus viminalis ssp. cygnetensis [Williamstown CS16025]	Callitris gracilis [Murray Bridge]	Eucalyptus petiolaris [Ungarra]	Eucalyptus occidentalis [Redhill]	R17 - 180m	R21 - 180m	R25 - 180m	R29 - 180m	156
	153	SCP4s 2.01	SCP4s 2.06	SCP4s 2.11	SCP4s 2.16	LC_4s 1.02	LC_4s 2.02	LC_4s 3.02	LC_4s 4.02	153
	150	Eucalyptus viminalis ssp. cygnetensis [Williamstown CS16025]	Callitris gracilis [Murray Bridge]	Eucalyptus petiolaris [Ungarra]	Eucalyptus occidentalis [Redhill]	R17 - 180m	R21 - 180m	R25 - 180m	R29 - 180m	150
	147	SCP4s 2.01	SCP4s 2.06	SCP4s 2.11	SCP4s 2.16	LC_4s 1.02	LC_4s 2.02	LC_4s 3.02	LC_4s 4.02	147
	144	Eucalyptus viminalis ssp. cygnetensis [Williamstown CS16025]	Callitris gracilis [Murray Bridge]	Eucalyptus petiolaris [Ungarra]	Eucalyptus occidentalis [Redhill]	R17 - 180m	R21 - 180m	R25 - 180m	R29 - 180m	144
	141	SCP4s 2.01	SCP4s 2.06	SCP4s 2.11	SCP4s 2.16	LC_4s 1.02	LC_4s 2.02	LC_4s 3.02	LC_4s 4.02	141
	138	Eucalyptus viminalis ssp. cygnetensis [Williamstown CS16025]	Callitris gracilis [Murray Bridge]	Eucalyptus petiolaris [Ungarra]	Eucalyptus occidentalis [Redhill]	R17 - 180m	R21 - 180m	R25 - 180m	R29 - 180m	138

Roseworthy Species Trial Plots – West

135	SCP4s 1.05	SCP4s 1.10	SCP4s 1.15	SCP4s 1.20					135
132	Eucalyptus bridgesiana [Cullerin Range CS20500]	Eucalyptus globulus ssp. bicostata [Wee Jasper CS19283 & Mt. Bryan FS_BB055]	Eucalyptus petiolaris [Ungarra] / Eucalyptus cladocalyx [Wirrabara] mixed	Acacia retinodes var. retinodes (swamp form) [BSC]					132
129									129
126	SCP4s 1.04	SCP4s 1.09	SCP4s 1.14	SCP4s 1.19					126
123	Acacia pycnantha [Kuipto CS19346]	Eucalyptus ovata [Back Valley]	Melaleuca uncinata [Finnis]	Eucalyptus petiolaris [Ungarra]					123
120									120
117	SCP4s 1.03	SCP4s 1.08	SCP4s 1.13	SCP4s 1.18					117
114	Acacia retinodes var. retinodes (hill form)	Acacia retinodes var. retinodes (hill form)	Atriplex nummularia [Yando]	Eucalyptus viriminalis ssp. cugnetensis [Williamstown CS16025]					114
111	[Clare/Spalding]	[Clare/Spalding]							111
108	SCP4s 1.02	SCP4s 1.07	SCP4s 1.12	SCP4s 1.17					108
105	Eucalyptus polybractea [WA CALM]	Eucalyptus occidentalis [Redhill]	Eucalyptus globulus ssp. bicostata [Mt. Bryan CS19864]	Eucalyptus goniocalyx [Mt. Osmond]					105
102									102
99	SCP4s 1.01	SCP4s 1.06	SCP4s 1.11	SCP4s 1.16					99
96	Callitris gracilis [Murray Bridge]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Viminaria juncea [Mt. Compass]	Acacia salicina [Mambray Creek]					96
93									93
90	SCC4s 1.10	SCC4s 2.10	SCC4s 3.10	SCC4s 4.10					90
87	Eucalyptus cladocalyx [Wirrabara]	Acacia saligna [Parkeyerring - wheatbelt]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus oneorifolia [Kangaroo Island CS20275]					87
84									84
81	SCC4s 1.09	SCC4s 2.09	SCC4s 3.09	SCC4s 4.09	SCP5s 1.08	SCP5s 2.08	SCP5s 3.08	SCP5s 4.08	81
78	Eucalyptus oneorifolia [Kangaroo Island CS20275]	Eucalyptus polybractea [WA CALM]	Acacia salicina [Mambray Creek]	Eucalyptus loxophleba ssp. lissophloia [MB State Flora]	Atriplex nummularia [Egryes Green]	Acacia iteaphylla [Mildura Nursery]	Eucalyptus viridis ssp. viridis [NSW Forestry]	Acacia myrtifolia [Adelaide Hills]	78
75									75
72	SCC4s 1.08	SCC4s 2.08	SCC4s 3.08	SCC4s 4.08	SCP5s 1.07	SCP5s 2.07	SCP5s 3.07	SCP5s 4.07	72
69	Eucalyptus loxophleba ssp. lissophloia [MB State Flora]	Eucalyptus incrassata [Owen]	Eucalyptus occidentalis [Redhill]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus maculata [Kangaroo River]	Acacia mearnsii [BSC DO 80104P]	Eucalyptus globulus ssp. globulus [MB State Flora Seedlot]	Eucalyptus oleosa [Port Wakefield Berri Nursery]	69
66									66
63	SCC4s 1.07	SCC4s 2.07	SCC4s 3.07	SCC4s 4.07	SCP5s 1.06	SCP5s 2.06	SCP5s 3.06	SCP5s 4.06	63
60	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus socialis [Chapman Bore]	Acacia saligna [Parkeyerring - wheatbelt]	Acacia salicina [Mambray Creek]	Acacia iteaphylla [Mildura Nursery]	Eucalyptus viridis ssp. viridis [NSW Forestry]	Acacia myrtifolia [Adelaide Hills]	Atriplex nummularia [Egryes Green]	60
57									57
54	SCC4s 1.06	SCC4s 2.06	SCC4s 3.06	SCC4s 4.06	SCP5s 1.05	SCP5s 2.05	SCP5s 3.05	SCP5s 4.05	54
51	Acacia salicina [Mambray Creek]	Eucalyptus cladocalyx [Wirrabara]	Eucalyptus polybractea [WA CALM]	Eucalyptus occidentalis [Redhill]	Eucalyptus oleosa [Port Wakefield Berri Nursery]	Eucalyptus maculata [Kangaroo River]	Acacia mearnsii [BSC DO 80104P]	Eucalyptus globulus ssp. globulus [MB State Flora Seedlot]	51
48									48
45	SCC4s 1.05	SCC4s 2.05	SCC4s 3.05	SCC4s 4.05	SCP5s 1.04	SCP5s 2.04	SCP5s 3.04	SCP5s 4.04	45
42	Eucalyptus occidentalis [Redhill]	Eucalyptus oneorifolia [Kangaroo Island CS20275]	Eucalyptus incrassata [Owen]	Acacia saligna [Parkeyerring - wheatbelt]	Acacia mearnsii [BSC DO 80104P]	Acacia myrtifolia [Adelaide Hills]	Atriplex nummularia [Egryes Green]	Eucalyptus maculata [Kangaroo River]	42
39									39
36	SCC4s 1.04	SCC4s 2.04	SCC4s 3.04	SCC4s 4.04	SCP5s 1.03	SCP5s 2.03	SCP5s 3.03	SCP5s 4.03	36
33	Acacia saligna [Parkeyerring - wheatbelt]	Eucalyptus loxophleba ssp. lissophloia [MB State Flora]	Eucalyptus socialis [Chapman Bore]	Eucalyptus polybractea [WA CALM]	Eucalyptus viridis ssp. viridis [NSW Forestry]	Eucalyptus globulus ssp. globulus [MB State Flora Seedlot]	Eucalyptus oleosa [Port Wakefield Berri Nursery]	Acacia iteaphylla [Mildura Nursery]	33
30									30
27	SCC4s 1.03	SCC4s 2.03	SCC4s 3.03	SCC4s 4.03	SCP5s 1.02	SCP5s 2.02	SCP5s 3.02	SCP5s 4.02	27
24	Eucalyptus polybractea [WA CALM]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus cladocalyx [Wirrabara]	Eucalyptus incrassata [Owen]	Eucalyptus globulus ssp. globulus [MB State Flora Seedlot]	Atriplex nummularia [Egryes Green]	Acacia iteaphylla [Mildura Nursery]	Acacia mearnsii [BSC DO 80104P]	24
21									21
18	SCC4s 1.02	SCC4s 2.02	SCC4s 3.02	SCC4s 4.02	SCP5s 1.01	SCP5s 2.01	SCP5s 3.01	SCP5s 4.01	18
15	Eucalyptus incrassata [Owen]	Acacia salicina [Mambray Creek]	Eucalyptus oneorifolia [Kangaroo Island CS20275]	Eucalyptus socialis [Chapman Bore]	Acacia myrtifolia [Adelaide Hills]	Eucalyptus oleosa [Port Wakefield Berri Nursery]	Eucalyptus maculata [Kangaroo River]	Eucalyptus viridis ssp. viridis [NSW Forestry]	15
12									12
9	SCC4s 1.01	SCC4s 2.01	SCC4s 3.01	SCC4s 4.01					9
6	Eucalyptus socialis [Chapman Bore]	Eucalyptus occidentalis [Redhill]	Eucalyptus loxophleba ssp. lissophloia [MB State Flora]	Eucalyptus cladocalyx [Wirrabara]					6
3									3
0m	Rows 1 - 4	Rows 5 - 8	Rows 9 - 12	Rows 13 - 16	Rows 17 - 20	Rows 21 - 24	Rows 25 - 28	Rows 29 - 32	0m
W	12	24	36	48	60	72	84	96	

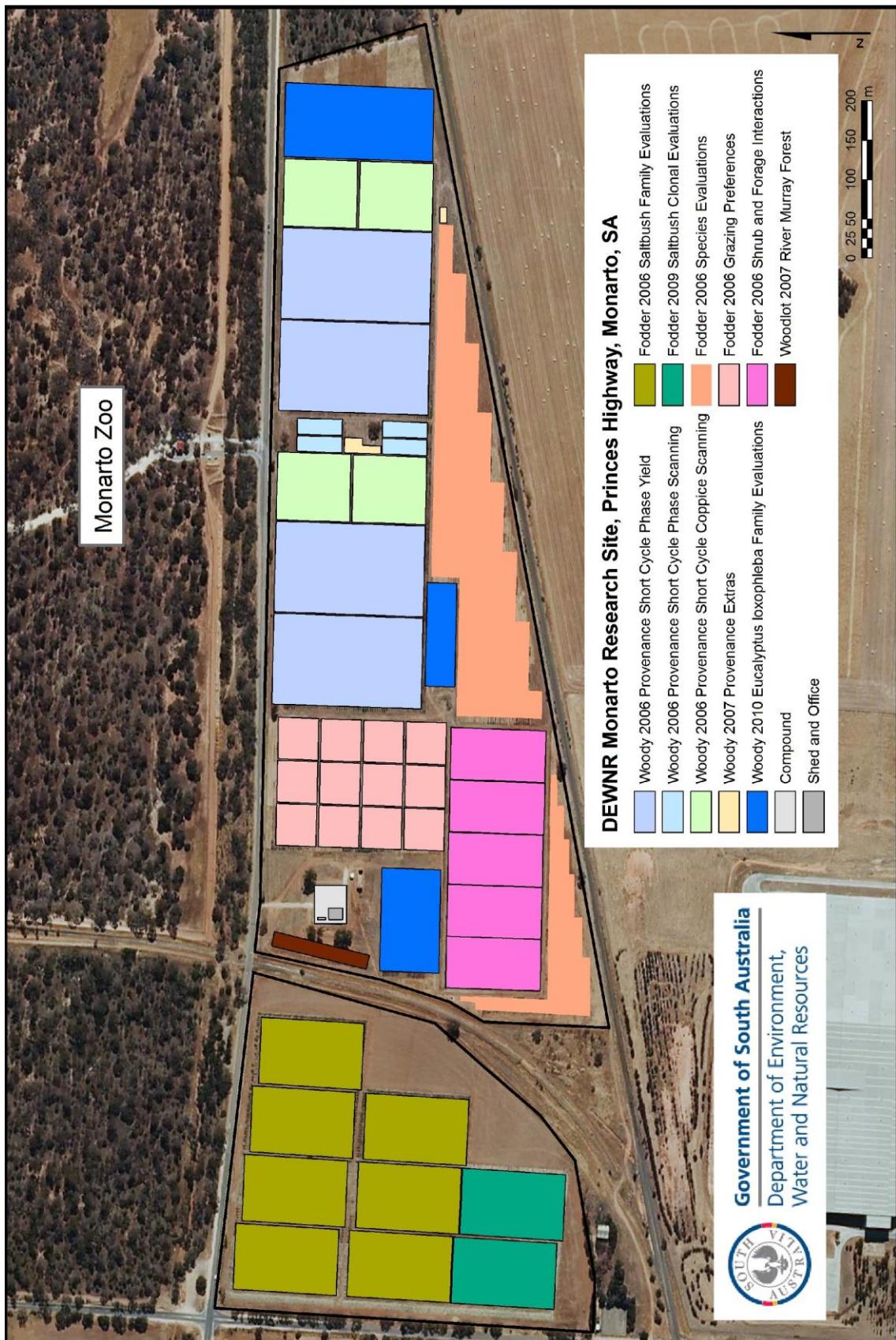
Lucindale (South East) Species Trials 2004-2005



	0	12	24	36	48	60	72	84	93		
E	272	Rows 1 - 4	Rows 5 - 8	Rows 9 - 12	Rows 13 - 16	Rows 17 - 20	Rows 21 - 24	Rows 25 - 28	Rows 29 - 32	272	
	267	330								330 267	
	264	327								327 264	
	261	324								324 261	
	258	321								321 258	
	255	318								318 255	
	252	315								315 252	
	249	312								312 249	
	246	309								309 246	
	243	306								306 243	
	240	303								303 240	
	237	300								300 237	
	234	297								297 207	
	231	294								294 207	
	228	291								291 228	
	225	288								288 225	
	222	285								285 222	
	219	282								282 219	
	216	279								279 216	
	213	276								276 213	
	272	270								270 207	
	204	267	R1 - 264m	SCP4yield 1.14	Eucalyptus polybractea [WA CALM]	SCP5scan 4.05	SCP5scan 4.10	SCP5scan 4.15	SCP5scan 4.20	SCP5scan 4.25	SCP5scan 4.30
	201	264				Eucalyptus viminalis ssp. cygnetensis [Mount Barker]	Eucalyptus globulus ssp. bicostata [Mt. Bryan CS19864]	Eucalyptus globulus ssp. bicostata [Wee Jasper CS19283]	Eucalyptus ovata [Back Valley]	Acacia retinodes var. retinodes (swamp form) [Parawa]	Eucalyptus petiolaris [Ungarra]
	198	261				SCP5scan 4.04	SCP5scan 4.09	SCP5scan 4.14	SCP5scan 4.19	SCP5scan 4.24	SCP5scan 4.29
	195	258				Eucalyptus bridgesiana [Cullerin Range CS20500]	Acacia melanoxylon [Lower South East] / Acacia melanoxylon [Tasmania]	Atriplex nummularia [Yando]	Viminaria juncea [Mt. Compass]	Eucalyptus porosa [Adelaide Plains]	Eucalyptus cladocalyx [Wirrabara]
	192	255				SCP5scan 4.03	SCP5scan 4.08	SCP5scan 4.13	SCP5scan 4.18	SCP5scan 4.23	SCP5scan 4.28
	189	252				Eucalyptus cuneifolia [Kangaroo Island MB State Flora]	Eucalyptus viminalis ssp. cygnetensis [Williamtown CS16025] / Eucalyptus viminalis ssp. viminalis	Eucalyptus polybractea [WA CALM]	Acacia pycnantha [Kuipto CS19346]	Eucalyptus aromaphloia [Balmoral CS20813]	Eucalyptus globulus ssp. globulus [MB State Flora Seedlot]
	186	249				SCP5scan 4.02	SCP5scan 4.07	SCP5scan 4.12	SCP5scan 4.17	SCP5scan 4.22	SCP5scan 4.27
	183	246				Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Acacia retinodes var. retinodes (hill form) [Harrogate]	Eucalyptus saligna [NSW Forestry]	Eucalyptus cladocalyx [Mt. Osmond]	Eucalyptus leucoxylon ssp. leucoxylon [Barossa]	Acacia leucoclada [ATSC]
	180	243				R1 - 240m					
	177	240				SCP4yield 1.12	SCP5scan 4.01	SCP5scan 4.06	SCP5scan 4.11	SCP5scan 4.16	SCP5scan 4.21
	174	237				Acacia pycnantha [Kuipto CS19346]	Eucalyptus occidentalis [Redhill]	Eucalyptus oleosa [Port Wakefield MB State Flora]	Eucalyptus maculata [Kangaroo River]	Casuarina obesa [Salt Creek]	Acacia mearnsii [BSC DO 80104P]
	171	234				R1 - 228m					
	168	231				SCP4yield 1.11	SCP5scan 3.05	SCP5scan 3.10	SCP5scan 3.15	SCP5scan 3.20	SCP5scan 3.30
	165	228				Acacia leucoclada [ATSC]	Eucalyptus oleosa [Port Wakefield MB State Flora]	Eucalyptus cuneifolia [Kangaroo Island MB State Flora]	Acacia mearnsii [BSC DO 80104P]	Eucalyptus ovata [Back Valley]	Eucalyptus occidentalis [Redhill]
	162	225				R1 - 216m					
	159	222				SCP4yield 1.10	SCP5scan 3.04	SCP5scan 3.09	SCP5scan 3.14	SCP5scan 3.19	SCP5scan 3.24
	156	219				Eucalyptus globulus ssp. bicostata [Mt. Bryan FS_BB055]	Eucalyptus porosa [Adelaide Plains]	Acacia leucoclada [ATSC]	Atriplex nummularia [Yando]	Acacia melanoxylon [Lower South East] / Acacia melanoxylon [Tasmania]	SCP5scan 3.29
	153	216				R1 - 204m					
	150	213				SCP4yield 1.09	SCP5scan 3.03	SCP5scan 3.08	SCP5scan 3.13	SCP5scan 3.18	SCP5scan 3.23
	147	210				Eucalyptus goniocalyx [Mt. Osmond]	Eucalyptus petiolaris [Ungarra]	Viminaria juncea [Mt. Compass]	Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	Eucalyptus viminalis ssp. cygnetensis [Mount Barker]	SCP5scan 3.28
	144	207				R1 - 192m					
	141	204				SCP4yield 1.08	SCP5scan 3.02	SCP5scan 3.07	SCP5scan 3.12	SCP5scan 3.17	SCP5scan 3.27
	138	201				Eucalyptus cladocalyx [Wirrabara]	Eucalyptus maculata [Kangaroo River]	Eucalyptus polybractea [WA CALM]	Eucalyptus globulus ssp. bicostata [Mt. Bryan CS19864]	Eucalyptus leucoxylon ssp. leucoxylon [Barossa]	Eucalyptus goniocalyx [Mt. Osmond]
	135	198				R1 - 180m					
	132	195				SCP4yield 1.07	SCP5scan 3.01	SCP5scan 3.06	SCP5scan 3.11	SCP5scan 3.16	SCP5scan 3.21
	129	192				Eucalyptus pycnantha [Kuipto CS19346]	Eucalyptus aromaphloia [Balmoral CS20813]	Acacia retinodes var. retinodes (hill form) [Harrogate]	Eucalyptus cladocalyx [Wirrabara]	Eucalyptus cladocalyx [Lower Eyre Peninsula] / Eucalyptus grandis	SCP5scan 3.26
	126	189				R1 - 168m					
	123	186				Acacia retinodes var. retinodes (swamp form) [BSC]	SCP5scan 2.05	SCP5scan 2.10	SCP5scan 2.15	SCP5scan 2.20	SCP5scan 2.25
	120	183				R1 - 168m					
	117	180				SCP4yield 1.06	SCP5scan 2.04	SCP5scan 2.09	SCP5scan 2.14	SCP5scan 2.19	SCP5scan 2.24
	114	177				Eucalyptus petiolaris [Ungarra]	Eucalyptus pycnantha [Kuipto CS19346]	Eucalyptus retinodes var. retinodes (swamp form) [Parawa]	Eucalyptus globulus ssp. bicostata [Mt. Bryan CS19864]	Eucalyptus saligna [NSW Forestry]	SCP5scan 2.29
	111	174				R1 - 168m					
	108	171				Acacia retinodes var. retinodes (swamp form) [Parawa]	Acacia retinodes var. retinodes (hill form) [Parawa]	Eucalyptus petiolaris [Ungarra]	Eucalyptus globulus ssp. bicostata [Mt. Bryan CS19864]	Eucalyptus saligna [NSW Forestry]	Acacia retinodes var. retinodes (hill form) [Harrogate]

Lucindale (South East) Species Trial Plots – West

Monarto Trials 2006-2010



Monarto Woody Provenance Trial Plots 2006 – East

East

z ←

SCP7 s4.1
Eucalyptus
omphocephala
Perth ANNG
007.01]

SCP7 s3.1
Eucalyptus
omphocephala
Perth ANNG
007.01]

Monarto Woody Provenance Trial Plots 2006 – West

N ↑
West

7 Appendix B – Field trials detailed results

Table 7.1 Performance of FloraSearch woody crops field trials and regrowth experiments established in South Australia

Trial Type, Year, Site / Taxonomy [seedlot]	Establishment Year	Experimental Replicates	Total Planted	Survey Area (m ²)	Age (years)	Assessment Observations	Height (m)	Crown Cover (%)	Plant Density (plants/ha)	Basal Area (m ² /ha)	Stem Volume MAI (m ³ /ha/yr)	Above-ground Biomass (t/ha/yr)	Above-ground CO ₂ e Seq.(t/ha/yr)
a) Species Trials 2004-2005, Murray Bridge													
Acacia acinacea [SFB_2005.01]	2005	2	24	108	7.9	24	1.34	78	2222	1.91	0.20	0.52	0.94
Acacia aneura [Glendambo BSC_2004.01]	2004	4	96	432	8.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Acacia dealbata [NS-8096p]	2005	4	48	216	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Acacia deanii ssp. deanii [Biloela CS16922]	2004	4	256	1152	8.9	16	1.43	5	139	0.35	0.07	0.11	0.21
Acacia decora [ATSC_2005.01]	2005	4	96	432	7.9	8	1.12	1	185	0.11	0.01	0.03	0.06
Acacia decurrens [BSC M-30126p]	2005	4	96	432	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Acacia filicifolia [NSWF_2005.01]	2005	2	24	108	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Acacia implexa [ATSC_2005.02]	2005	4	96	432	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Acacia iteaphylla [N_M_2005.01]	2005	4	96	432	7.9	21	1.22	10	486	0.41	0.05	0.11	0.21
Acacia lasiocalyx [Muntadgin S-AV-22]	2004	4	96	432	8.9	3	0.84	4	69	0.23	0.05	0.08	0.14
Acacia leucoclada [ATSC_2004.01]	2004	4	96	432	8.9	6	1.96	2	139	0.19	0.04	0.07	0.12
Acacia ligulata [Wellington SFMB_2005.01]	2005	4	96	432	7.9	57	1.39	25	1319	1.18	0.13	0.32	0.58
Acacia longifolia var. longifolia [SFMB_2005.02]	2005	2	24	108	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Acacia mearnsii [Bungendore CS18975]	2004	4	256	1152	8.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Acacia melanoxylon [Lower South East TFL_2005.01]	2005	2	24	108	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Acacia melanoxylon [Mt. Compass SFMB_2004.01]	2004	4	256	1152	8.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Acacia montana [Belair Nursery SFB_2005.02]	2005	2	24	108	7.9	20	1.44	65	1852	1.76	0.20	0.48	0.87
Acacia murrayana [Belair Nursery SFB_2005.03]	2005	2	24	108	7.9	3	0.78	5	278	0.30	0.04	0.08	0.14
Acacia myrtifolia [Adelaide Hills TFL_2005.02]	2005	4	96	432	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Acacia pendula [BSC_2005.01]	2005	4	93	432	7.9	21	1.47	6	486	0.50	0.06	0.14	0.25
Acacia pycnantha [Kuipto CS19346]	2004	4	256	1152	8.9	15	1.68	2	130	0.18	0.03	0.05	0.09
Acacia pycnantha [McLaren Flat SFMB_2004.02]	2004	4	256	1152	8.9	66	1.88	13	573	0.99	0.16	0.27	0.50
Acacia pycnantha [Onka NP SFMB_2004.03]	2004	4	256	1152	8.9	44	2.08	10	382	0.94	0.15	0.25	0.45

Trial Type, Year, Site / Taxonomy [seedlot]	Establishment Year	Experimental Replicates	Total Planted	Survey Area (m ²)	Age (years)	Assessment Observations	Height (m)	Crown Cover (%)	Plant Density (plants/ha)	Basal Area (m ² /ha)	Stem Volume MAI (m ³ /ha/yr)	Above-ground Biomass (t/ha/yr)	Above-ground CO ₂ e Seq.(t/ha/yr)
Acacia retinodes var. retinodes (hill form) [Bull Creek BSC_2004.02]	2004	4	256	1152	8.9	5	0.58	2	43	0.08	0.01	0.02	0.04
Acacia retinodes var. retinodes (hill form) [Clare/Spalding BSC_2004.03]	2004	4	96	432	8.9	2	1.29	2	46	0.31	0.07	0.09	0.17
Acacia retinodes var. retinodes (hill form) [Eden Valley BSC_2004.04]	2004	4	256	1152	8.9	19	2.25	2	165	0.52	0.17	0.23	0.41
Acacia retinodes var. retinodes (swamp form) [BSC_2004.05]	2004	4	256	1152	8.9	2	0.43	1	17	0.02	0.00	0.01	0.01
Acacia retinodes var. uncifolia [Kangaroo Island SFMB_2005.06]	2005	4	96	432	7.9	2	0.37	0	46	0.04	0.00	0.01	0.02
Acacia salicina [Condobolin Milthorpe 01/04]	2004	4	256	1152	8.9	120	1.55	13	1042	1.16	0.15	0.31	0.57
Acacia salicina [Mambray Creek SFMB_2004.04]	2004	4	256	1152	8.9	93	1.76	10	807	0.99	0.13	0.27	0.49
Acacia salicina [threshed 87R 2/88 SFMB_2004.05]	2004	4	96	432	8.9	44	0.90	3	1019	0.46	0.03	0.18	0.32
Acacia saligna ssp. saligna [Mandurah RSU WA CALM_2004.01]	2004	4	256	1152	8.9	146	2.89	51	1267	8.13	1.82	2.46	4.48
Acacia victoriae [Copley CS19334]	2004	4	256	1152	8.9	153	1.31	16	1328	1.15	0.12	0.29	0.54
Agonis flexuosa [WA NS-20608]	2005	4	48	270	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Allocasuarina huegeliana [Katanning NS_2005.01]	2005	4	96	432	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Allocasuarina muelleriana [Crafers SFMB_2005.07]	2005	2	24	108	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Alyogyne huegelii [Yorke Peninsula SFMB_2004.06]	2004	4	96	432	8.9	3	1.51	2	69	0.16	0.04	0.06	0.11
Angophora floribunda [NSWF_2005.02]	2005	2	24	108	7.9	3	0.79	1	278	0.11	0.00	0.03	0.06
Anthocercis littorea [Wanneroo NS-25886]	2005	1	12	54	7.9	1	1.81	3	185	0.24	0.03	0.07	0.12
Atriplex amnicola [Yorke Peninsula SFMB_2005.08]	2005	2	24	108	7.9	22	1.00	57	2037	1.17	0.10	0.34	0.61
Atriplex cinerea [Yorke Peninsula SFMB_2005.09]	2005	2	24	108	7.9	17	1.17	17	1574	1.09	0.10	0.30	0.55
Atriplex paludosa [Port Gawler SFMB_2005.10]	2005	2	24	108	7.9	9	0.86	5	833	0.36	0.02	0.11	0.20
Atriplex rhagodioides [Moorook SFMB_2005.11]	2005	1	12	54	7.9	12	1.64	100	2222	2.57	0.33	0.70	1.29
Atriplex semibaccata [Port Neill SA41067]	2005	2	24	108	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Atriplex semibaccata [SA39527]	2005	2	24	108	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Atriplex semibaccata [SA40804]	2005	2	24	108	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Atriplex semibaccata [SA41313]	2005	2	24	108	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Atriplex vesicaria [Hay EW_2005.02]	2005	4	96	432	7.9	82	0.87	21	1898	0.84	0.05	0.25	0.46

Trial Type, Year, Site / Taxonomy [seedlot]	Establishment Year	Experimental Replicates	Total Planted	Survey Area (m²)	Age (years)	Assessment Observations	Height (m)	Crown Cover (%)	Plant Density (plants/ha)	Basal Area (m²/ha)	Stem Volume MAI (m³/ha/yr)	Above-ground Biomass (t/ha/yr)	Above-ground CO₂e Seq.(t/ha/yr)
Bursaria spinosa [Finnis SFMB_2005.12]	2005	2	24	108	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Callitris gracilis [Murray Bridge SFMB_2004.08]	2004	4	256	1152	8.9	234	1.94	45	2031	3.03	0.42	0.79	1.44
Casuarina obesa [Salt Creek SFMB_2004.09]	2004	4	96	432	8.9	64	2.22	32	1481	3.14	0.57	0.93	1.69
Chamaecytisus prolifer [NSWF_2005.03]	2005	2	24	108	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Chenopodium auricomum [SA39481]	2005	1	6	27	7.9	4	1.03	16	1481	0.87	0.07	0.25	0.46
Chenopodium nitrariaceum [Hay EW_2005.03]	2005	4	96	432	7.9	85	1.50	54	1968	1.98	0.23	0.53	0.98
Codonocarpus cotinifolius [Goodlands WA CALM_2004.03]	2005	4	48	216	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Codonocarpus cotinifolius [Goodlands WA CALM_2004.03]	2004	2	48	216	8.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Codonocarpus cotinifolius [Riverland SFMB_2005.13]	2005	4	96	432	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Codonocarpus cotinifolius [Youanmi WA CALM_2004.04]	2004	2	48	216	8.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Daviesia latifolia [SA40377]	2005	2	24	108	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Daviesia mimosoides [SA40378]	2005	1	6	27	7.9	1	0.83	1	370	0.16	0.01	0.05	0.08
Enchylaena tomentosa [Hay EW_2005.04]	2005	4	48	216	7.9	2	0.35	1	93	0.03	0.00	0.01	0.02
Eremophila bignoniiflora [Riverland SFMB_2005.14]	2005	4	96	432	7.9	15	1.53	5	347	0.45	0.06	0.12	0.23
Eremophila glabra [SFMB_2005.15]	2005	2	24	108	7.9	5	0.76	3	463	0.17	0.01	0.05	0.10
Eremophila longifolia [Mannum SFMB_2005.16]	2005	4	96	432	7.9	57	1.78	36	1319	1.80	0.25	0.50	0.92
Eremophila maculata [Riverland SFMB_2005.17]	2005	2	24	108	7.9	23	1.69	67	2130	2.57	0.33	0.70	1.28
Eucalyptus aromaphloia ssp. sabulosa [Balmoral CS20813]	2005	4	96	432	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Eucalyptus banksii [Tenterfield N_MS_2005.01]	2005	2	24	108	7.9	1	0.80	1	93	0.02	0.00	0.01	0.02
Eucalyptus baxteri [Willunga SFMB_2004.10]	2004	4	256	1152	8.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Eucalyptus blakelyi [Mendooran CS11835]	2005	4	96	432	7.9	67	2.25	36	1551	2.14	0.38	0.70	1.28
Eucalyptus botryoides [Orbost CS15303]	2005	4	96	432	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Eucalyptus bridgesiana [Cullerin Range CS20500]	2004	4	256	1152	8.9	39	2.18	9	339	0.73	0.13	0.21	0.39
Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	2004	4	256	1152	8.9	244	4.77	72	2118	9.19	2.91	4.06	7.40
Eucalyptus chloroclada [Dalby CS17756]	2004	4	96	432	8.9	55	2.78	30	1273	3.14	0.68	1.05	1.92
Eucalyptus citriodora ssp. citriodora [N_M_2005.02]	2005	2	24	108	7.9	2	1.03	2	185	0.15	0.03	0.06	0.11
Eucalyptus cladocalyx [Lower Eyre Peninsula TFL_2005.03]	2005	4	96	432	7.9	76	3.94	91	1759	11.74	3.38	4.61	8.41

Trial Type, Year, Site / Taxonomy [seedlot]	Establishment Year	Experimental Replicates	Total Planted	Survey Area (m ²)	Age (years)	Assessment Observations	Height (m)	Crown Cover (%)	Plant Density (plants/ha)	Basal Area (m ² /ha)	Stem Volume MAI (m ³ /ha/yr)	Above-ground Biomass (t/ha/yr)	Above-ground CO ₂ e Seq.(t/ha/yr)
Eucalyptus cladocalyx [Wirrabara SFMB_2004.11]	2004	4	256	1152	8.9	246	5.50	100	2135	16.35	5.73	7.50	13.67
Eucalyptus conica [Forbes CS16030]	2005	2	24	108	7.9	22	2.70	66	2037	5.66	1.17	1.84	3.36
Eucalyptus cosmophylla [Victor Harbour SFMB_2005.19]	2005	2	24	108	7.9	4	0.93	2	370	0.17	0.01	0.05	0.09
Eucalyptus cyanophylla [Alawoona SFMB_2004.12]	2004	4	256	1152	8.9	220	2.71	83	1910	6.23	1.13	1.76	3.20
Eucalyptus dalrympleana [Lenswood SFMB_2005.20]	2005	4	96	432	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Eucalyptus dealbata [ATSC_2005.03]	2005	4	96	432	7.9	48	2.63	28	1111	2.60	0.58	0.93	1.69
Eucalyptus fasciculosa [Milang SFMB_2005.22]	2005	4	96	432	7.9	82	2.94	66	1898	8.25	1.84	2.71	4.95
Eucalyptus fibrosa ssp. nubila [Gilgandra CS19559]	2005	4	96	432	7.9	70	2.42	32	1620	2.45	0.50	0.87	1.59
Eucalyptus globulus ssp. bicostata [Mt. Bryan CS19864]	2004	4	256	1152	8.9	17	1.34	2	148	0.23	0.04	0.07	0.12
Eucalyptus globulus ssp. bicostata [Mt. Bryan FS_BB055]	2004	4	256	1152	8.9	20	1.52	3	174	0.35	0.07	0.10	0.19
Eucalyptus globulus ssp. globulus [SFMB_2005.23]	2005	4	96	432	7.9	1	0.39	1	23	0.01	0.00	0.00	0.01
Eucalyptus gomphocephala [N_M_2005.03]	2005	2	24	108	7.9	21	3.33	85	1944	14.60	3.80	5.17	9.43
Eucalyptus goniocalyx [Mt. Osmond SFMB_2004.13]	2004	4	256	1152	8.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Eucalyptus grandis [NSWF_2005.04]	2005	2	24	108	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Eucalyptus incrassata [Finnis BSC_2004.06]	2004	4	256	1152	8.9	240	2.95	73	2083	6.28	1.25	1.93	3.53
Eucalyptus incrassata [Jabuk BSC_2004.07]	2004	4	256	1152	8.9	185	2.64	58	1606	4.12	0.74	1.19	2.17
Eucalyptus incrassata [Owen BSC_2004.08]	2004	4	96	432	8.9	86	3.19	67	1991	5.90	1.31	1.99	3.64
Eucalyptus largiflorens [NSWF_2005.05]	2005	4	96	432	7.9	66	2.65	49	1528	3.35	0.69	1.13	2.06
Eucalyptus leucoxylon [Adelaide Hills TFL_2005.04]	2005	4	96	432	7.9	62	3.41	51	1435	8.04	2.16	3.00	5.48
Eucalyptus leucoxylon ssp. leucoxylon [Wirrabara CS20274]	2004	4	256	1152	8.9	220	5.11	76	1910	13.94	4.71	6.20	11.30
Eucalyptus leucoxylon ssp. pruinosa [Northern Mt. Lofty Ranges TFL_2005.05]	2005	4	96	432	7.9	70	3.62	65	1620	8.32	2.52	3.46	6.32
Eucalyptus leucoxylon ssp. stephaniae [Narrung BSC_2005.02]	2005	4	96	432	7.9	60	2.61	55	1389	5.07	1.08	1.62	2.96
Eucalyptus macrorhyncha ssp. macrorhyncha [Clare CS20290]	2004	4	96	432	8.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Eucalyptus maculata [Kangaroo River SFMB_2005.25]	2005	4	96	432	7.9	1	0.84	1	23	0.05	0.01	0.02	0.04
Eucalyptus mannifera ssp. mannifera [Lakes Entrance CS16098]	2005	4	96	432	7.9	1	0.44	0	23	0.01	0.00	0.00	0.01
Eucalyptus megacornuta [SFB_2005.04]	2005	2	24	108	7.9	9	3.75	54	833	4.65	1.22	1.73	3.16

Trial Type, Year, Site / Taxonomy [seedlot]	Establishment Year	Experimental Replicates	Total Planted	Survey Area (m²)	Age (years)	Assessment Observations	Height (m)	Crown Cover (%)	Plant Density (plants/ha)	Basal Area (m²/ha)	Stem Volume MAI (m³/ha/yr)	Above-ground Biomass (t/ha/yr)	Above-ground CO₂e Seq.(t/ha/yr)
Eucalyptus melliodora [SFB_2005.05]	2005	2	24	108	7.9	17	2.76	59	1574	6.12	1.39	2.06	3.75
Eucalyptus microcarpa [Toll Gate SFMB_2005.26]	2005	4	96	432	7.9	93	3.41	81	2153	9.51	2.41	3.49	6.37
Eucalyptus obliqua [Macclesfield SFMB_2004.15]	2004	4	96	432	8.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Eucalyptus occidentalis [Redhill SFMB_2004.16]	2004	4	256	1152	8.9	251	7.51	99	2179	19.80	9.07	11.45	20.89
Eucalyptus odorata [Lower Eyre Peninsula TFL_2005.06]	2005	4	96	432	7.9	79	2.29	59	1829	3.93	0.73	1.20	2.20
Eucalyptus odorata [Two Wells SFMB_2005.27]	2005	4	96	432	7.9	82	3.43	85	1898	7.14	1.86	2.73	4.97
Eucalyptus oleosa [Far North TFL_2005.07]	2005	4	96	432	7.9	79	2.67	91	1829	5.66	1.13	1.78	3.24
Eucalyptus oleosa [Port Wakefield N_TB_2005.01]	2005	2	24	108	7.9	20	3.33	97	1852	7.72	1.90	2.78	5.06
Eucalyptus ovata [Back Valley BSC_2004.09]	2004	4	256	1152	8.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Eucalyptus petiolaris [Ungarra YS_2004.01]	2004	4	256	1152	8.9	250	4.28	99	2170	12.43	3.46	4.75	8.66
Eucalyptus polyanthemos [Bruthen CS15349]	2005	4	48	216	7.9	30	3.13	39	1389	4.13	1.01	1.53	2.79
Eucalyptus polybractea [WA CALM_2004.05]	2004	4	256	1152	8.9	241	4.32	85	2092	7.30	2.10	3.03	5.53
Eucalyptus porosa [Flinders Ranges TFL_2005.09]	2005	2	24	108	7.9	23	3.60	100	2130	10.61	2.83	4.01	7.31
Eucalyptus porosa [Laura BSC_2004.10]	2004	4	96	432	8.9	93	4.48	100	2153	10.55	3.13	4.34	7.92
Eucalyptus porosa [Yorke Peninsula SFMB_2004.17]	2004	4	96	432	8.9	87	3.75	100	2014	12.41	3.13	4.29	7.82
Eucalyptus radiata [Tenterfield N_MS_2005.02]	2005	2	24	108	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Eucalyptus rossii [NSWF_2005.06]	2005	2	24	108	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Eucalyptus rubida ssp. rubida [Boboyan Forest CS19628]	2004	4	96	432	8.9	5	0.86	4	116	0.35	0.08	0.12	0.23
Eucalyptus rudis [Narrogan FPC-N201471A]	2004	4	96	432	8.9	23	2.41	13	532	1.09	0.22	0.35	0.63
Eucalyptus saligna [NSWF_2005.07]	2005	2	24	108	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Eucalyptus sideroxylon [Gilgandra CS19557]	2005	4	48	216	7.9	42	3.59	70	1944	8.05	2.26	3.23	5.89
Eucalyptus socialis [Far North TFL_2005.10]	2005	4	96	432	7.9	87	3.17	98	2014	7.78	1.79	2.67	4.88
Eucalyptus tereticornis ssp. tereticornis [NSWF_2005.08]	2005	2	24	108	7.9	18	2.72	32	1667	2.94	0.64	1.08	1.97
Eucalyptus viminalis ssp. cygnetensis [Williamstown CS16025]	2004	4	256	1152	8.9	7	2.20	3	61	0.10	0.02	0.03	0.05
Eucalyptus viminalis ssp. viminalis [Cleland SFMB_2005.30]	2005	2	24	108	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Eucalyptus viridis ssp. viridis [NSWF_2005.09]	2005	4	48	216	7.9	44	3.75	65	2037	6.65	1.85	2.75	5.02
Geijera parviflora [Mildura Nursery N_M_2005.04]	2005	2	24	108	7.9	1	0.46	2	93	0.05	0.00	0.01	0.03

Trial Type, Year, Site / Taxonomy [seedlot]	Establishment Year	Experimental Replicates	Total Planted	Survey Area (m²)	Age (years)	Assessment Observations	Height (m)	Crown Cover (%)	Plant Density (plants/ha)	Basal Area (m²/ha)	Stem Volume MAI (m³/ha/yr)	Above-ground Biomass (t/ha/yr)	Above-ground CO₂e Seq.(t/ha/yr)
Grevillea leucoptera [Gin Gin NS-26099]	2005	4	96	432	7.9	2	0.24	0	46	0.02	0.00	0.01	0.01
Grevillea robusta [MB State Flora SFMB_2005.31]	2005	2	24	108	7.9	2	0.35	1	185	0.06	0.00	0.02	0.04
Maireana brevifolia [Hay EW_2005.05]	2005	4	48	216	7.9	3	0.21	4	139	0.06	0.00	0.02	0.03
Maireana convexa [SA41358]	2005	2	24	108	7.9	17	1.31	14	1574	1.31	0.14	0.35	0.65
Maireana pyramidata [Hay EW_2005.06]	2005	2	24	108	7.9	24	1.24	58	2222	1.70	0.17	0.46	0.85
Maireana pyramidata [Whyalla SA41087]	2005	2	24	108	7.9	21	1.10	47	1944	1.24	0.11	0.35	0.63
Maireana rohrlachii [N_TB_2005.02]	2005	2	24	108	7.9	6	0.82	3	556	0.23	0.01	0.07	0.13
Maireana sedifolia [Hay EW_2005.07]	2005	4	96	432	7.9	72	1.01	32	1667	0.92	0.07	0.27	0.49
Maireana sedifolia [Morgan SFMB_2005.32]	2005	4	96	432	7.9	44	1.09	14	1019	0.60	0.05	0.17	0.31
Melaleuca armillaris ssp. armillaris [BSC_2005.03]	2005	4	96	432	7.9	11	1.10	4	255	0.25	0.03	0.07	0.12
Melaleuca uncinata [Finnis SFMB_2004.21]	2004	4	96	432	8.9	60	1.05	9	1389	0.81	0.07	0.22	0.39
Melaleuca uncinata [Tumby Bay TFL_2005.11]	2005	4	48	216	7.9	14	1.27	7	648	0.50	0.06	0.14	0.26
Myoporum platycarpum [N_TB_2005.03]	2005	1	12	54	7.9	10	3.25	100	1852	5.77	1.31	2.04	3.72
Nitaria billardierei [Hay EW_2005.08]	2005	2	24	108	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Pultenaea daphnoides [Millbrook SFMB_2005.33]	2005	2	24	108	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Rhagodia candolleana [Yorke Peninsula SFMB_2005.34]	2005	2	24	108	7.9	10	0.84	5	926	0.39	0.02	0.12	0.21
Rhagodia crassifolia [Narung SFMB_2005.35]	2005	2	24	108	7.9	3	1.00	2	278	0.16	0.01	0.04	0.08
Rhagodia parabolica [N_M_2005.05]	2005	2	24	108	7.9	22	1.27	57	2037	1.61	0.16	0.44	0.80
Rhagodia spinescens [Hay EW_2005.09]	2005	4	48	216	7.9	47	0.98	53	2176	1.18	0.09	0.34	0.63
Rhagodia spinescens [Mannum SA41030]	2005	2	24	108	7.9	23	1.03	52	2130	1.25	0.10	0.35	0.65
Rhagodia spinescens [Penong SA41098]	2005	2	24	108	7.9	16	0.93	31	1481	0.74	0.05	0.21	0.39
Senna pleurocarpa var. pleurocarpa [Mt. Newman NS-23836]	2005	2	24	108	7.9	1	0.39	1	93	0.03	0.00	0.01	0.02
Taxandria juniperina [NS SP7]	2005	4	96	432	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Templetonia retusa [Murray Bridge SFMB_2005.36]	2005	2	24	108	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Trymalium floribundum [Harvey NS-25093]	2005	4	96	432	7.9	0	0.00	0	0	0.00	0.00	0.00	0.00
Viminaria juncea [Mt. Compass SFMB_2004.23]	2004	4	256	1152	8.9	0	0.00	0	0	0.00	0.00	0.00	0.00

Trial Type, Year, Site / Taxonomy [seedlot]	Establishment Year	Experimental Replicates	Total Planted	Survey Area (m ²)	Age (years)	Assessment Observations	Height (m)	Crown Cover (%)	Plant Density (plants/ha)	Basal Area (m ² /ha)	Stem Volume MAI (m ³ /ha/yr)	Above-ground Biomass (t/ha/yr)	Above-ground CO ₂ e Seq.(t/ha/yr)
b) Species Trials 2004-2005, Roseworthy													
Acacia iteaphylla [N_M_2005.01]	2005	4	96	432	8.1	65	1.82	58	1505	1.46	0.21	0.45	0.81
Acacia leucoclada [ATSC_2004.01]	2004	3	72	324	9.1	58	4.79	74	1790	9.66	3.10	4.15	7.57
Acacia mearnsii [BSC DO 80104P]	2005	4	96	432	8.1	0	0.00	0	0	0.00	0.00	0.00	0.00
Acacia myrtifolia [Adelaide Hills TFL_2005.02]	2005	4	96	432	8.1	0	0.00	0	0	0.00	0.00	0.00	0.00
Acacia pycnantha [Kuipto CS19346]	2004	4	96	432	9.1	13	4.40	21	301	4.69	1.31	1.64	2.99
Acacia retinodes var. retinodes (hill form) [Clare/Spalding BSC_2004.03]	2004	5	120	540	9.1	43	5.59	62.6	796	11.80	4.03	4.97	9.07
Acacia retinodes var. retinodes (swamp form) [BSC_2004.05]	2004	4	96	432	9.1	0	0.00	0	0	0.00	0.00	0.00	0.00
Acacia salicina [Mambray Creek SFMB_2004.04]	2004	4	96	432	9.1	89	2.24	44	2060	4.44	0.77	1.26	2.29
Acacia salicina [Mambray Creek SFMB_2004.04]	2004	4	96	432	9.1	78	1.72	19	1806	1.65	0.21	0.47	0.85
Acacia saligna ssp. lindleyi [Parkeyerring RSU WA CALM_2004.02]	2004	4	96	432	9.1	43	3.94	36	995	5.36	1.40	1.92	3.50
Callitris gracilis [Murray Bridge SFMB_2004.08]	2004	4	96	432	9.1	93	2.40	73	2153	5.34	0.91	1.46	2.67
Eucalyptus bridgesiana [Cullerin Range CS20500]	2004	4	96	432	9.1	39	4.87	41	903	6.48	2.06	2.72	4.96
Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	2004	4	96	432	9.1	86	6.06	75	1991	13.94	5.52	7.14	13.01
Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	2004	4	96	432	9.1	83	6.21	71	1921	15.95	6.79	8.50	15.51
Eucalyptus cladocalyx [Wirrabara SFMB_2004.11]	2004	4	96	432	9.1	84	7.60	98	1944	20.95	9.93	12.19	22.23
Eucalyptus cladocalyx [Wirrabara SFMB_2004.11]	2004	3	72	324	9.1	66	8.46	100	2037	26.05	13.44	16.18	29.51
Eucalyptus cneorifolia [Kangaroo Island CS20275]	2004	4	96	432	9.1	24	1.63	14	556	0.95	0.19	0.32	0.58
Eucalyptus globulus ssp. bicostata [Mt. Bryan CS19864]	2004	4	96	432	9.1	13	2.13	16	301	2.60	0.74	0.97	1.76
Eucalyptus globulus ssp. bicostata [Wee Jasper CS19283 & Mt. Bryan FS_BB055]	2004	4	96	432	9.1	1	1.80	2	23	0.41	0.17	0.21	0.37
Eucalyptus globulus ssp. globulus [SFMB_2005.23]	2005	4	96	432	8.1	0	0.00	0	0	0.00	0.00	0.00	0.00
Eucalyptus goniocalyx [Mt. Osmond SFMB_2004.13]	2004	4	96	432	9.1	0	0.00	0	0	0.00	0.00	0.00	0.00
Eucalyptus incrassata [Owen BSC_2004.08]	2004	4	96	432	9.1	82	4.28	91	1898	7.36	2.09	2.97	5.41
Eucalyptus loxophleba ssp. lissophloia [Newdegate CLM-11_03-P95]	2004	4	96	432	9.1	87	7.32	100	2014	13.41	5.91	7.67	13.99
Eucalyptus maculata [Kangaroo River SFMB_2005.25]	2005	4	96	432	8.1	3	0.68	1	69	0.15	0.04	0.06	0.11

Trial Type, Year, Site / Taxonomy [seedlot]	Establishment Year	Experimental Replicates	Total Planted	Survey Area (m²)	Age (years)	Assessment Observations	Height (m)	Crown Cover (%)	Plant Density (plants/ha)	Basal Area (m²/ha)	Stem Volume MAI (m³/ha/yr)	Above-ground Biomass (t/ha/yr)	Above-ground CO₂e Seq.(t/ha/yr)
Eucalyptus occidentalis [Redhill SFMB_2004.16]	2004	4	96	432	9.1	81	8.07	94	1875	21.39	11.09	13.38	24.41
Eucalyptus occidentalis [Redhill SFMB_2004.16]	2004	4	96	432	9.1	89	9.01	100	2060	29.31	16.89	19.78	36.07
Eucalyptus oleosa [Port Wakefield N_B_2005.01]	2005	4	96	432	8.1	83	3.47	97	1921	8.51	2.27	3.22	5.88
Eucalyptus ovata [Back Valley BSC_2004.09]	2004	4	96	432	9.1	5	3.18	6	116	1.08	0.32	0.41	0.75
Eucalyptus petiolaris [Ungarra YS_2004.01]	2004	4	96	432	9.1	76	6.04	100	1759	19.92	8.06	9.81	17.89
Eucalyptus polybractea [WA CALM_2004.05]	2004	4	96	432	9.1	88	5.16	97	2037	9.54	3.19	4.37	7.98
Eucalyptus polybractea [WA CALM_2004.05]	2004	4	96	432	9.1	81	4.95	100	1875	8.17	2.61	3.63	6.62
Eucalyptus socialis [Chapman Bore SFMB_2004.18]	2004	4	96	432	9.1	59	2.22	66	1366	4.08	0.85	1.25	2.28
Eucalyptus viminalis ssp. cygnetensis [Williamstown CS16025]	2004	4	96	432	9.1	22	3.66	21	509	3.24	1.07	1.41	2.57
Eucalyptus viridis ssp. viridis [NSWF_2005.09]	2005	4	96	432	8.1	76	4.25	70	1759	7.66	2.65	3.64	6.64
Melaleuca uncinata [Finnis SFMB_2004.21]	2004	4	96	432	9.1	67	1.52	33	1551	1.10	0.12	0.31	0.56
Viminaria juncea [Mt. Compass SFMB_2004.23]	2004	4	96	432	9.1	0	0.00	0	0.00	0.00	0.00	0.00	0.00

Trial Type, Year, Site / Taxonomy [seedlot]	Establishment Year	Experimental Replicates	Total Planted	Survey Area (m ²)	Age (years)	Assessment Observations	Height (m)	Crown Cover (%)	Plant Density (plants/ha)	Basal Area (m ² /ha)	Stem Volume MAI (m ³ /ha/yr)	Above-ground Biomass (t/ha/yr)	Above-ground CO ₂ e Seq.(t/ha/yr)
c) Species Trials 2004-2005, Lucindale													
Acacia dealbata [NS-8096p]	2005	2	12	54	8.2	3	7.90	100	556	21.08	10.96	12.09	22.05
Acacia decurrens [BSC M-30126p]	2005	2	24	108	8.2	3	7.15	65	278	11.26	5.49	6.06	11.05
Acacia implexa [ATSC_2005.02]	2005	2	24	108	8.2	19	5.39	100	1759	25.39	9.72	11.87	21.66
Acacia iteaphylla [N_M_2005.01]	2005	2	12	54	8.2	0	0.00	0	0	0.00	0.00	0.00	0.00
Acacia leucoclada [ATSC_2004.01]	2005	4	96	432	8.2	90	8.04	100	2083	22.64	12.52	15.27	27.85
Acacia leucoclada [ATSC_2004.01]	2004	1	64	288	9.2	63	7.69	100	2188	26.10	13.20	15.76	28.75
Acacia mearnsii [BSC DO 80104P]	2005	4	96	432	8.2	90	11.38	100	2083	46.09	33.75	37.84	69.01
Acacia melanoxylon [Lower South East TFL_2005.01]	2005	4	48	216	8.2	34	3.20	51	1574	4.51	1.24	1.83	3.34
Acacia melanoxylon [Tasmania SFMB_2005.03]	2005	4	48	216	8.2	21	3.81	46	972	6.20	2.35	3.08	5.61
Acacia myrtifolia [Adelaide Hills TFL_2005.02]	2005	2	24	108	8.2	0	0.00	0	0	0.00	0.00	0.00	0.00
Acacia pycnantha [Kuipto CS19346]	2005	4	96	432	8.2	61	5.33	96	1412	11.79	4.28	5.56	10.13
Acacia pycnantha [Kuipto CS19346]	2004	1	64	288	9.2	14	5.78	79	486	9.28	3.27	3.91	7.12
Acacia retinodes var. retinodes (hill form) [Harrogate SFMB_2005.04]	2005	4	96	432	8.2	76	8.30	100	1759	34.54	19.44	22.47	40.98
Acacia retinodes var. retinodes (swamp form) [BSC_2004.05]	2004	1	64	288	9.2	15	8.69	100	521	21.06	10.65	11.64	21.23
Acacia retinodes var. retinodes (swamp form) [Parawa SFMB_2005.05]	2005	4	96	432	8.2	67	8.59	100	1551	29.45	16.80	19.47	35.51
Acacia salicina [Mambray Creek SFMB_2004.04]	2005	4	96	432	8.2	71	2.15	44	1644	4.50	0.87	1.36	2.47
Acacia saligna ssp. lindleyi [Parkeyerring RSU WA CALM_2004.02]	2004	4	96	432	9.2	94	8.11	100	2176	63.00	33.15	36.26	66.13
Casuarina obesa [Salt Creek SFMB_2004.09]	2005	4	96	432	8.2	68	2.34	25	1574	1.63	0.50	0.82	1.49
Chamaecytisus prolifer [NSWF_2005.03] – exotic reference species	2005	2	24	108	8.2	12	5.17	100	1111	5.88	2.22	3.02	5.50
Chenopodium nitrariaceum [Hay EW_2005.03]	2005	2	24	108	8.2	23	1.41	26	2130	0.85	0.10	0.34	0.61
Eucalyptus aromaphloia ssp. sabulosa [Balmoral CS20813]	2005	4	96	432	8.2	88	10.22	100	2037	36.47	26.63	30.38	55.41
Eucalyptus banksii [Tenterfield N_MS_2005.01]	2005	2	24	108	8.2	20	10.09	100	1852	56.75	36.88	40.98	74.74
Eucalyptus blakelyi [Mendooran CS11835]	2005	2	24	108	8.2	21	8.19	100	1944	43.70	24.66	28.35	51.72
Eucalyptus bridgesiana [Cullerin Range CS20500]	2005	4	96	432	8.2	93	8.79	90	2153	31.35	19.73	23.19	42.30
Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	2005	4	96	432	8.2	95	9.03	100	2199	32.07	21.42	24.92	45.46
Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	2004	4	96	432	9.2	86	8.38	100	1991	43.63	26.47	29.18	53.23

Trial Type, Year, Site / Taxonomy [seedlot]	Establishment Year	Experimental Replicates	Total Planted	Survey Area (m²)	Age (years)	Assessment Observations	Height (m)	Crown Cover (%)	Plant Density (plants/ha)	Basal Area (m²/ha)	Stem Volume MAI (m³/ha/yr)	Above-ground Biomass (t/ha/yr)	Above-ground CO₂e Seq.(t/ha/yr)
Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	2004	1	64	288	9.2	62	7.50	100	2153	42.39	26.84	29.19	53.24
Eucalyptus cladocalyx [Lower Eyre Peninsula TFL_2005.03]	2005	4	48	216	8.2	25	8.13	96	1157	17.52	9.18	11.06	20.17
Eucalyptus cladocalyx [Wirrabara SFMB_2004.11]	2005	4	96	432	8.2	51	7.71	75	1181	20.48	13.59	15.75	28.72
Eucalyptus cladocalyx [Wirrabara SFMB_2004.11]	2004	4	96	432	9.2	38	11.38	82	880	26.28	17.83	19.48	35.53
Eucalyptus cladocalyx [Wirrabara SFMB_2004.11]	2004	1	64	288	9.2	30	12.08	100	1042	31.61	22.89	24.82	45.27
Eucalyptus cneorifolia [Kangaroo Island CS20275]	2004	4	96	432	9.2	56	3.83	81	1296	9.59	2.86	3.68	6.71
Eucalyptus cneorifolia [Kangaroo Island SFMB_2005.18]	2005	4	96	432	8.2	61	3.83	63	1412	8.25	3.15	4.05	7.39
Eucalyptus conica [Forbes CS16030]	2005	2	24	108	8.2	24	5.58	100	2222	30.08	13.65	16.31	29.75
Eucalyptus cosmophylla [Victor Harbour SFMB_2005.19]	2005	2	24	108	8.2	16	5.22	100	1481	28.08	11.72	13.75	25.09
Eucalyptus cyanophylla [Alawoona SFMB_2004.12]	2005	2	24	108	8.2	16	1.98	43	1481	1.41	0.23	0.47	0.85
Eucalyptus dalrympleana [SFMB_2005.21]	2005	2	24	108	8.2	20	9.92	100	1852	70.94	49.91	53.58	97.73
Eucalyptus globulus ssp. bicostata [Mt. Bryan CS19864]	2005	4	96	432	8.2	74	5.70	72	1713	17.88	10.49	12.21	22.27
Eucalyptus globulus ssp. bicostata [Mt. Bryan CS19864]	2004	1	64	288	9.2	35	6.97	100	1215	24.53	15.50	16.54	30.17
Eucalyptus globulus ssp. bicostata [Mt. Bryan FS_BB055]	2004	1	64	288	9.2	34	8.09	100	1181	29.25	16.69	18.46	33.68
Eucalyptus globulus ssp. bicostata [Wee Jasper CS19283]	2005	4	96	432	8.2	87	9.54	99	2014	28.43	19.54	22.80	41.59
Eucalyptus globulus ssp. globulus [SFMB_2005.23]	2005	4	96	432	8.2	48	12.07	85	1111	33.79	29.75	31.35	57.19
Eucalyptus goniocalyx [Mt. Osmond SFMB_2004.13]	2005	4	96	432	8.2	32	6.58	40	741	8.06	4.64	5.39	9.82
Eucalyptus goniocalyx [Mt. Osmond SFMB_2004.13]	2004	1	64	288	9.2	8	6.84	31	278	7.04	3.99	4.22	7.70
Eucalyptus grandis [NSWF_2005.04]	2005	4	48	216	8.2	37	11.72	100	1713	34.46	26.93	30.30	55.26
Eucalyptus incrassata [Owen BSC_2004.08]	2004	4	96	432	9.2	65	3.12	46	1505	3.58	0.90	1.34	2.45
Eucalyptus largiflorens [NSWF_2005.05]	2005	2	24	108	8.2	18	2.57	33	1667	2.80	0.80	1.24	2.27
Eucalyptus leucoxylon ssp. leucoxylon [Barossa SFMB_2005.24]	2005	4	96	432	8.2	92	7.52	97	2130	16.25	9.14	11.41	20.81
Eucalyptus leucoxylon ssp. stephaniae [Narrung BSC_2005.02]	2005	2	24	108	8.2	21	5.77	100	1944	28.79	12.16	14.77	26.93
Eucalyptus loxophleba ssp. lissophloia [Newdegate CLM-11_03-P95]	2004	4	96	432	9.2	46	5.16	39	1065	3.54	1.14	1.63	2.98
Eucalyptus maculata [Kangaroo River SFMB_2005.25]	2005	4	96	432	8.2	49	5.77	32	1134	7.33	4.00	4.92	8.98
Eucalyptus occidentalis [Redhill SFMB_2004.16]	2005	4	96	432	8.2	82	10.10	99	1898	19.50	13.54	16.31	29.74
Eucalyptus occidentalis [Redhill SFMB_2004.16]	2004	4	96	432	9.2	78	9.43	100	1806	29.18	20.81	23.12	42.17

Trial Type, Year, Site / Taxonomy [seedlot]	Establishment Year	Experimental Replicates	Total Planted	Survey Area (m²)	Age (years)	Assessment Observations	Height (m)	Crown Cover (%)	Plant Density (plants/ha)	Basal Area (m²/ha)	Stem Volume MAI (m³/ha/yr)	Above-ground Biomass (t/ha/yr)	Above-ground CO₂e Seq.(t/ha/yr)
Eucalyptus occidentalis [Redhill SFMB_2004.16]	2004	1	64	288	9.2	58	9.71	100	2014	29.40	21.74	24.33	44.37
Eucalyptus odorata [Lower Eyre Peninsula TFL_2005.06]	2005	2	24	108	8.2	22	4.16	100	2037	7.00	2.05	2.98	5.44
Eucalyptus oleosa [Port Wakefield SFMB_2005.28]	2005	4	96	432	8.2	67	2.79	52	1551	2.40	0.52	0.89	1.62
Eucalyptus ovata [Back Valley BSC_2004.09]	2005	4	96	432	8.2	78	6.92	100	1806	24.87	15.41	17.70	32.28
Eucalyptus ovata [Back Valley BSC_2004.09]	2004	1	64	288	9.2	8	10.49	89	278	14.94	11.92	11.88	21.66
Eucalyptus petiolaris [Ungarra YS_2004.01]	2005	4	96	432	8.2	95	6.92	100	2199	27.52	14.19	16.99	30.99
Eucalyptus petiolaris [Ungarra YS_2004.01]	2004	1	64	288	9.2	63	6.26	100	2188	28.07	14.53	16.84	30.71
Eucalyptus polybractea [WA CALM_2004.05]	2005	4	96	432	8.2	83	5.74	81	1921	7.41	3.19	4.36	7.96
Eucalyptus polybractea [WA CALM_2004.05]	2004	4	96	432	9.2	91	5.78	98	2106	9.47	3.57	4.82	8.79
Eucalyptus polybractea [WA CALM_2004.05]	2004	1	64	288	9.2	55	4.59	100	1910	8.42	2.97	3.97	7.24
Eucalyptus porosa [Adelaide Plains TFL_2005.08]	2005	4	96	432	8.2	81	6.51	90	1875	14.47	8.05	9.96	18.16
Eucalyptus porosa [Flinders Ranges TFL_2005.09]	2005	2	24	108	8.2	22	3.95	99	2037	10.31	3.94	5.20	9.48
Eucalyptus radiata [Tenterfield N_MS_2005.02]	2005	2	24	108	8.2	0	0.00	0	0	0.00	0.00	0.00	0.00
Eucalyptus saligna [NSWF_2005.07]	2005	4	96	432	8.2	29	7.53	77	671	9.95	6.37	7.19	13.12
Eucalyptus socialis [Chapman Bore SFMB_2004.18]	2004	4	96	432	9.2	82	2.45	93	1898	5.23	0.92	1.44	2.63
Eucalyptus viminalis ssp. cygnetensis [Mount Barker SFMB_2005.29]	2005	4	96	432	8.2	88	10.75	100	2037	44.55	33.59	37.40	68.22
Eucalyptus viminalis ssp. cygnetensis [Williamstown CS16025]	2005	4	48	216	8.2	46	10.30	99	2130	41.22	29.72	33.68	61.44
Eucalyptus viminalis ssp. cygnetensis [Williamstown CS16025]	2004	1	64	288	9.2	28	12.51	100	972	40.35	30.26	31.74	57.89
Eucalyptus viminalis ssp. viminalis [Cleland SFMB_2005.30]	2005	4	48	216	8.2	46	10.18	100	2130	42.51	30.54	34.54	63.00
Melaleuca armillaris ssp. armillaris [BSC_2005.03]	2005	2	24	108	8.2	7	4.20	42	648	1.89	0.53	0.80	1.45
Melaleuca uncinata [Tumby Bay TFL_2005.11]	2005	2	24	108	8.2	6	2.19	18	556	1.43	0.33	0.51	0.93
Taxandria juniperina [NS SP7]	2005	2	24	108	8.2	0	0.00	0	0	0.00	0.00	0.00	0.00
Viminaria juncea [Mt. Compass SFMB_2004.23]	2005	4	96	432	8.2	33	3.75	69	764	8.72	2.38	3.06	5.58
Viminaria juncea [Mt. Compass SFMB_2004.23]	2004	1	64	288	9.2	0	0.00	0	0	0.00	0.00	0.00	0.00

Trial Type, Year, Site / Taxonomy [seedlot]	Establishment Year	Experimental Replicates	Total Planted	Survey Area (m ²)	Age (years)	Assessment Observations	Height (m)	Crown Cover (%)	Plant Density (plants/ha)	Basal Area (m ² /ha)	Stem Volume MAI (m ³ /ha/yr)	Above-ground Biomass (t/ha/yr)	Above-ground CO ₂ e Seq.(t/ha/yr)
d) Species Trials 2004 – Long Cycle													
Murray Bridge													
Callitris gracilis [Murray Bridge SFMB_2004.08]	2004	4	256	2304	8.9	182	1.38	10	790	0.72	0.08	0.18	0.33
Casuarina cunninghamiana ssp. cunninghamiana [Coonabarabran CS15001]	2004	4	256	2304	8.9	8	1.64	1	35	0.18	0.05	0.07	0.12
Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	2004	4	256	2304	8.9	201	5.17	48	872	5.33	1.90	2.50	4.57
Eucalyptus cladocalyx [Wirrabara SFMB_2004.11]	2004	4	256	2304	8.9	231	5.97	81	1003	10.23	3.83	4.87	8.87
Eucalyptus occidentalis [Redhill SFMB_2004.16]	2004	4	256	2304	8.9	247	7.88	80	1072	12.56	5.95	7.34	13.39
Roseworthy													
Callitris gracilis [Murray Bridge SFMB_2004.08]	2004	4	96	864	9.1	93	2.70	43	1076	4.21	0.77	1.15	2.10
Casuarina cunninghamiana ssp. cunninghamiana [Coonabarabran CS15001]	2004	4	96	864	9.1	88	4.62	58	1019	6.89	2.04	2.73	4.98
Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	2004	4	96	864	9.1	89	6.90	52	1030	9.70	4.28	5.35	9.76
Eucalyptus cladocalyx [Wirrabara SFMB_2004.11]	2004	4	96	864	9.1	87	7.73	77	1007	13.80	6.44	7.81	14.24
Eucalyptus occidentalis [Redhill SFMB_2004.16]	2004	4	96	864	9.1	82	9.67	83	949	16.10	9.46	11.01	20.08

Trial Type, Year, Site / Taxonomy [seedlot]	Establishment Year	Experimental Replicates	Total Planted	Survey Area (m ²)	Age (years)	Assessment Observations	Height (m)	Crown Cover (%)	Plant Density (plants/ha)	Basal Area (m ² /ha)	Stem Volume MAI (m ³ /ha/yr)	Above-ground Biomass (t/ha/yr)	Above-ground CO ₂ e Seq.(t/ha/yr)
e) Provenance Trials 2006, Monarto													
Acacia decurrens [Bungonia CS19762]	2006	4	256	1152	6.9	188	3.81	48	1632	5.59	2.16	3.05	5.56
Acacia decurrens [Bungonia CS19762]	2006	4	96	432	6.9	75	4.03	56	1736	6.67	2.65	3.70	6.74
Acacia decurrens [Picton CS15537]	2006	4	96	432	6.9	68	4.52	53	1574	5.80	2.31	3.27	5.97
Acacia decurrens [Picton CS15537]	2006	4	96	432	6.9	68	4.39	50	1574	4.54	1.92	2.75	5.02
Acacia mearnsii [Bairnsdale CS17932]	2006	4	256	1152	6.9	198	3.77	58	1719	7.39	2.91	3.94	7.19
Acacia mearnsii [Bungendore CS18975]	2006	4	256	1152	6.9	210	3.18	42	1823	5.03	1.69	2.45	4.48
Acacia mearnsii [George Town CS15326]	2006	4	256	1152	6.9	178	3.13	33	1545	3.97	1.34	1.96	3.58
Acacia mearnsii [Grampians CS18606]	2006	4	256	1152	6.9	185	3.27	45	1606	6.03	2.40	3.26	5.95
Acacia mearnsii [Kyneton CS18609]	2006	4	256	1152	6.9	219	3.51	46	1901	5.60	1.89	2.76	5.03
Acacia mearnsii [Tantanoola CS17927]	2006	4	256	1152	6.9	171	2.85	27	1484	4.50	1.48	2.09	3.81
Acacia mearnsii [Tantanoola CS17927]	2006	4	96	432	6.9	65	2.57	20	1505	3.09	0.92	1.40	2.56
Acacia retinodes var. retinodes (hill form) [Littlehampton BSC W1001055L]	2006	4	96	432	6.9	70	4.31	78	1620	10.19	3.89	5.16	9.41
Acacia retinodes var. retinodes (hill form) [Littlehampton BSC W1001055L]	2006	4	96	432	6.9	86	4.35	95	1991	11.66	4.34	5.89	10.74
Acacia retinodes var. retinodes (swamp form) [Fryerstown GA Creswick 5774]	2006	4	256	1152	6.9	221	2.93	50	1918	5.90	1.50	2.30	4.20
Acacia retinodes var. retinodes (swamp form) [Fryerstown GA Creswick 5774]	2006	4	96	432	6.9	88	3.47	77	2037	9.39	2.81	4.02	7.33
Acacia retinodes var. retinodes (swamp form) [Grampians/Lake Bellfield DS]	2006	4	256	1152	6.9	164	2.91	34	1424	3.91	0.98	1.53	2.80
Acacia retinodes var. retinodes (swamp form) [Grampians/Lake Bellfield DS]	2006	4	96	432	6.9	58	2.93	31	1343	4.61	1.20	1.80	3.29
Acacia retinodes var. retinodes (swamp form) [Kangaroo Island KI NRM]	2006	4	256	1152	6.9	221	3.46	71	1918	8.75	2.60	3.72	6.78
Acacia retinodes var. retinodes (swamp form) [Kangaroo Island KI NRM]	2006	4	96	432	6.9	81	3.48	67	1875	9.17	2.78	3.96	7.22
Acacia retinodes var. retinodes (swamp form) [Kuitpo CS19345]	2006	4	256	1152	6.9	185	2.63	41	1606	5.04	1.27	1.93	3.52

Trial Type, Year, Site / Taxonomy [seedlot]	Establishment Year	Experimental Replicates	Total Planted	Survey Area (m ²)	Age (years)	Assessment Observations	Height (m)	Crown Cover (%)	Plant Density (plants/ha)	Basal Area (m ² /ha)	Stem Volume MAI (m ³ /ha/yr)	Above-ground Biomass (t/ha/yr)	Above-ground CO ₂ e Seq.(t/ha/yr)
Acacia retinodes var. retinodes (swamp form) [Kuitpo CS19345]	2006	4	96	432	6.9	79	2.68	44	1829	6.32	1.50	2.28	4.15
Acacia retinodes var. uncifolia [Kangaroo Island BSC RG01012KI]	2006	4	256	1152	6.9	243	3.46	70	2109	10.14	3.10	4.40	8.02
Acacia retinodes var. uncifolia [Kangaroo Island BSC RG01012KI]	2006	4	96	432	6.9	88	3.63	77	2037	9.73	3.05	4.32	7.88
Acacia saligna [CALM]	2006	4	128	576	6.9	112	2.86	77	1944	8.27	2.04	3.01	5.50
Atriplex nummularia ssp. nummularia [Lake Galilee]	2007	4	96	432	5.9	69	1.37	33	1597	0.65	-	3.00	5.46
Eucalyptus aromaphloia ssp. aromaphloia [Anglesea GA Creswick 5553]	2006	4	96	432	6.9	55	3.01	39	1273	4.78	1.77	2.44	4.44
Eucalyptus aromaphloia ssp. aromaphloia [Yarram Park GA Creswick 7270]	2006	4	96	432	6.9	60	3.58	36	1389	4.65	1.78	2.52	4.60
Eucalyptus aromaphloia ssp. sabulosa [Balmoral CS20813]	2006	4	256	1152	6.9	155	3.84	38	1345	4.26	1.62	2.34	4.26
Eucalyptus aromaphloia ssp. sabulosa [Balmoral CS20813]	2006	4	96	432	6.9	76	3.74	38	1759	4.70	1.58	2.38	4.34
Eucalyptus aromaphloia ssp. sabulosa [Little Desert FS_CN492]	2006	4	256	1152	6.9	141	2.66	28	1224	1.95	0.49	0.84	1.52
Eucalyptus aromaphloia ssp. sabulosa [Little Desert FS_CN492]	2006	4	96	432	6.9	80	3.20	47	1852	3.79	1.10	1.74	3.18
Eucalyptus camaldulensis [Silverton SFMB]	2006	3	96	432	6.9	89	3.86	51	2060	5.20	1.73	2.63	4.80
Eucalyptus camaldulensis x globulus ssp. globulus [Saltgrow 34 Forrest N]	2006	4	64	288	6.9	62	6.19	68	2153	10.04	5.08	6.91	12.60
Eucalyptus camaldulensis x globulus ssp. globulus [Saltgrow 34 Forrest N]	2006	4	24	108	6.9	23	6.33	65	2130	9.68	4.98	6.78	12.37
Eucalyptus camaldulensis x globulus ssp. globulus [Saltgrow 35 Forrest N]	2006	4	64	288	6.9	51	7.09	59	1771	10.94	6.59	8.56	15.62
Eucalyptus camaldulensis x globulus ssp. globulus [Saltgrow 35 Forrest N]	2006	4	24	108	6.9	19	7.37	66	1759	12.63	7.56	9.73	17.76
Eucalyptus camaldulensis x globulus ssp. globulus [Saltgrow 39 Forrest N]	2006	4	64	288	6.9	57	6.90	62	1979	11.16	6.19	8.23	15.00
Eucalyptus camaldulensis x globulus ssp. globulus [Saltgrow 39 Forrest N]	2006	4	24	108	6.9	20	7.16	63	1852	11.08	6.49	8.47	15.44
Eucalyptus camaldulensis x globulus ssp. globulus [Saltgrow 40 Forrest N]	2006	4	64	288	6.9	57	4.84	60	1979	8.18	3.20	4.54	8.29
Eucalyptus camaldulensis x globulus ssp. globulus [Saltgrow 40 Forrest N]	2006	4	24	108	6.9	19	6.00	60	1759	8.69	4.47	5.98	10.91

Trial Type, Year, Site / Taxonomy [seedlot]	Establishment Year	Experimental Replicates	Total Planted	Survey Area (m²)	Age (years)	Assessment Observations	Height (m)	Crown Cover (%)	Plant Density (plants/ha)	Basal Area (m²/ha)	Stem Volume MAI (m³/ha/yr)	Above-ground Biomass (t/ha/yr)	Above-ground CO₂e Seq.(t/ha/yr)
Eucalyptus camaldulensis x grandis [Saltgrow 06 Narramine T]	2006	4	64	288	6.9	54	6.77	92	1875	14.79	8.27	10.58	19.29
Eucalyptus camaldulensis x grandis [Saltgrow 06 Narramine T]	2006	4	24	108	6.9	16	7.29	87	1481	16.05	9.94	12.16	22.19
Eucalyptus camaldulensis x grandis [Saltgrow 13 Narramine T]	2006	4	64	288	6.9	56	6.93	92	1944	13.23	7.18	9.43	17.19
Eucalyptus camaldulensis x grandis [Saltgrow 13 Narramine T]	2006	4	24	108	6.9	18	7.80	94	1667	15.46	9.37	11.85	21.61
Eucalyptus camaldulensis x grandis [Saltgrow 18 Narramine T]	2006	4	64	288	6.9	57	6.28	79	1979	11.71	6.01	7.99	14.57
Eucalyptus camaldulensis x grandis [Saltgrow 18 Narramine T]	2006	4	24	108	6.9	21	7.32	95	1944	16.52	10.06	12.56	22.91
Eucalyptus camaldulensis x grandis [Saltgrow 21 Narramine T]	2006	4	64	288	6.9	37	6.39	63	1285	8.08	4.30	5.68	10.35
Eucalyptus camaldulensis x grandis [Saltgrow 21 Narramine T]	2006	4	24	108	6.9	18	7.33	88	1667	13.88	8.17	10.38	18.94
Eucalyptus cladocalyx [Cape Border KI FS_CN493]	2006	4	256	1152	6.9	246	6.62	98	2135	16.55	8.86	11.39	20.77
Eucalyptus cladocalyx [Cape Border KI FS_CN493]	2006	4	96	432	6.9	94	6.56	100	2176	17.63	9.36	11.99	21.87
Eucalyptus cladocalyx [Flinders Chase NP CS20267]	2006	4	96	432	6.9	95	6.35	97	2199	18.32	10.12	12.75	23.25
Eucalyptus cladocalyx [SPA Bundaleer CS20846]	2006	4	256	1152	6.9	225	6.11	89	1953	15.40	8.02	10.29	18.77
Eucalyptus cladocalyx [SPA Bundaleer CS20846]	2006	4	96	432	6.9	85	6.86	97	1968	18.52	10.09	12.78	23.31
Eucalyptus cladocalyx [SPA Kersbrook CS20845]	2006	4	256	1152	6.9	238	6.10	89	2066	16.10	8.10	10.46	19.09
Eucalyptus cladocalyx [SPA Kersbrook CS20845]	2006	4	96	432	6.9	90	6.07	90	2083	16.38	8.05	10.44	19.04
Eucalyptus cladocalyx [Wail DPI Horsham 220007S]	2006	4	256	1152	6.9	229	6.01	88	1988	14.80	7.23	9.44	17.22
Eucalyptus cladocalyx [Wail DPI Horsham 220007S]	2006	4	96	432	6.9	85	6.14	92	1968	16.96	8.54	10.91	19.90
Eucalyptus cladocalyx [Wirrabara CS20389]	2006	4	256	1152	6.9	199	5.41	77	1727	11.77	5.35	7.06	12.87
Eucalyptus cladocalyx [Wirrabara CS20389]	2006	4	96	432	6.9	80	5.36	82	1852	13.29	5.97	7.83	14.28
Eucalyptus cneorifolia [Kingscote SFMB]	2006	4	96	432	6.9	83	3.31	62	1921	6.56	1.83	2.76	5.03
Eucalyptus globulus ssp. bicostata [Barkly AS]	2006	4	256	1152	6.9	191	4.52	53	1658	5.70	2.43	3.41	6.23
Eucalyptus globulus ssp. bicostata [Barkly AS]	2006	4	96	432	6.9	81	4.57	60	1875	7.26	2.97	4.16	7.59
Eucalyptus globulus ssp. bicostata [Mt. Bryan CS19864]	2006	4	256	1152	6.9	177	3.87	47	1536	4.48	1.69	2.46	4.49
Eucalyptus globulus ssp. bicostata [Mt. Bryan CS19864]	2006	4	96	432	6.9	84	4.07	58	1944	5.67	2.17	3.14	5.73
Eucalyptus globulus ssp. bicostata [Wee Jasper CS19283]	2006	4	256	1152	6.9	145	2.93	31	1259	2.75	0.81	1.26	2.30
Eucalyptus globulus ssp. bicostata [Wee Jasper CS19283]	2006	4	96	432	6.9	61	2.90	30	1412	3.00	0.93	1.43	2.61
Eucalyptus globulus ssp. globulus [Jeeralong ERA VRD 34]	2006	4	256	1152	6.9	166	4.75	40	1441	4.36	1.93	2.74	5.01

Trial Type, Year, Site / Taxonomy [seedlot]	Establishment Year	Experimental Replicates	Total Planted	Survey Area (m²)	Age (years)	Assessment Observations	Height (m)	Crown Cover (%)	Plant Density (plants/ha)	Basal Area (m²/ha)	Stem Volume MAI (m³/ha/yr)	Above-ground Biomass (t/ha/yr)	Above-ground CO₂e Seq.(t/ha/yr)
Eucalyptus globulus ssp. globulus [Jeeralong ERA VRD 34]	2006	4	96	432	6.9	85	5.45	65	1968	7.86	3.67	5.08	9.26
Eucalyptus globulus ssp. globulus [Ottway ERA VRD 37]	2006	4	256	1152	6.9	197	5.97	65	1710	7.88	4.29	5.73	10.45
Eucalyptus globulus ssp. globulus [Ottway ERA VRD 37]	2006	4	96	432	6.9	82	4.80	52	1898	6.28	2.83	3.96	7.23
Eucalyptus globulus ssp. globulus [Western Bluegum WA FPC]	2006	4	256	1152	6.9	120	4.98	34	1042	4.03	2.15	2.90	5.29
Eucalyptus globulus ssp. globulus [Western Bluegum WA FPC]	2006	4	96	432	6.9	53	5.54	46	1227	6.42	3.72	4.80	8.75
Eucalyptus globulus ssp. globulus [Worrolong 98 Mt. Gambier]	2006	4	256	1152	6.9	151	5.55	49	1311	5.80	3.02	4.06	7.40
Eucalyptus globulus ssp. globulus [Worrolong 98 Mt. Gambier]	2006	4	96	432	6.9	61	5.99	53	1412	7.13	3.94	5.18	9.45
Eucalyptus gomphocephala [Perth ANNG 2007.01]	2007	4	96	432	5.9	88	3.28	60	2037	8.58	2.91	4.23	7.72
Eucalyptus horistes [WA CALM]	2006	4	96	432	6.9	86	2.54	67	1991	4.62	1.02	1.67	3.05
Eucalyptus loxophleba ssp. lissophloia [CALM]	2006	4	96	432	6.9	93	5.95	94	2153	8.18	3.88	5.43	9.91
Eucalyptus occidentalis [Gibson CS13646]	2006	4	96	432	6.9	92	7.22	95	2130	22.38	12.75	15.93	29.07
Eucalyptus occidentalis [Jerdacuttup River CS19925]	2006	4	256	1152	6.9	241	6.77	91	2092	16.53	9.08	11.63	21.21
Eucalyptus occidentalis [Jerdacuttup River CS19925]	2006	4	96	432	6.9	91	6.95	94	2106	17.27	9.75	12.44	22.70
Eucalyptus occidentalis [Jerramungup area CS13638]	2006	4	256	1152	6.9	247	6.59	94	2144	15.73	8.31	10.77	19.64
Eucalyptus occidentalis [Jerramungup area CS13638]	2006	4	96	432	6.9	94	6.29	97	2176	14.31	7.05	9.35	17.06
Eucalyptus occidentalis [Kantanning CS15377]	2006	4	256	1152	6.9	239	6.95	86	2075	18.36	10.63	13.39	24.41
Eucalyptus occidentalis [Kantanning CS15377]	2006	4	96	432	6.9	89	7.42	91	2060	21.39	13.06	16.19	29.53
Eucalyptus occidentalis [Old Newgate Road CS19924]	2006	4	256	1152	6.9	249	6.11	90	2161	15.72	8.12	10.49	19.13
Eucalyptus occidentalis [Old Newgate Road CS19924]	2006	4	96	432	6.9	90	6.45	89	2083	17.02	9.27	11.81	21.54
Eucalyptus occidentalis [Truslove CS15416]	2006	4	256	1152	6.9	251	6.96	89	2179	16.10	8.94	11.54	21.06
Eucalyptus occidentalis [Truslove CS15416]	2006	4	96	432	6.9	95	6.97	90	2199	17.67	9.84	12.63	23.04
Eucalyptus oleosa ssp. ampliata [Port Lincoln ENS]	2006	4	256	1152	6.9	163	2.78	61	1415	4.66	1.20	1.81	3.30
Eucalyptus oleosa ssp. ampliata [Port Lincoln ENS]	2006	4	96	432	6.9	72	3.10	72	1667	5.28	1.45	2.19	3.99
Eucalyptus oleosa ssp. oleosa (syn. repleta) [Menzies NS]	2006	4	256	1152	6.9	170	3.20	65	1476	4.53	1.23	1.89	3.44
Eucalyptus oleosa ssp. oleosa (syn. repleta) [Menzies NS]	2006	4	96	432	6.9	59	3.38	60	1366	3.74	1.06	1.63	2.97
Eucalyptus oleosa ssp. oleosa [Langhorne Creek BSC D130905]	2006	4	256	1152	6.9	226	2.94	85	1962	6.09	1.56	2.40	4.37
Eucalyptus oleosa ssp. oleosa [Mallala BSC B0203NL]	2006	4	256	1152	6.9	229	3.50	73	1988	6.35	1.91	2.86	5.21

Trial Type, Year, Site / Taxonomy [seedlot]	Establishment Year	Experimental Replicates	Total Planted	Survey Area (m²)	Age (years)	Assessment Observations	Height (m)	Crown Cover (%)	Plant Density (plants/ha)	Basal Area (m²/ha)	Stem Volume MAI (m³/ha/yr)	Above-ground Biomass (t/ha/yr)	Above-ground CO₂e Seq.(t/ha/yr)
Eucalyptus oleosa ssp. oleosa [Mallala BSC B0203NL]	2006	4	96	432	6.9	84	3.82	79	1944	6.99	2.31	3.35	6.12
Eucalyptus oleosa ssp. oleosa [Paruna BSC M21111MU]	2006	4	256	1152	6.9	227	3.33	89	1970	6.29	1.77	2.68	4.88
Eucalyptus oleosa ssp. oleosa [Paruna BSC M21111MU]	2006	4	96	432	6.9	86	3.44	88	1991	6.70	1.95	2.91	5.32
Eucalyptus ovata ssp. grandiflora [Mt. Gambier TFL 17527-92]	2006	4	256	1152	6.9	93	2.92	19	807	1.77	0.61	0.91	1.66
Eucalyptus ovata ssp. grandiflora [Mt. Gambier TFL 17527-92]	2006	4	96	432	6.9	53	3.15	27	1227	2.45	0.79	1.23	2.24
Eucalyptus ovata ssp. ovata [Adelaide Hills TFL 25428-542]	2006	4	96	432	6.9	62	3.25	32	1435	2.72	0.88	1.39	2.53
Eucalyptus ovata ssp. ovata [Crookwell]	2006	4	256	1152	6.9	82	4.17	16	712	2.19	0.89	1.27	2.32
Eucalyptus ovata ssp. ovata [Crookwell]	2006	4	96	432	6.9	33	3.41	10	764	1.04	0.36	0.59	1.07
Eucalyptus ovata ssp. ovata [Strathdownie CS20811]	2006	4	256	1152	6.9	198	4.36	45	1719	4.85	2.05	2.96	5.40
Eucalyptus ovata ssp. ovata [Strathdownie CS20811]	2006	4	96	432	6.9	67	3.52	30	1551	2.96	1.06	1.63	2.97
Eucalyptus ovata ssp. ovata [Tasmania WS]	2006	4	256	1152	6.9	167	4.20	39	1450	4.83	2.00	2.84	5.17
Eucalyptus ovata ssp. ovata [Tasmania WS]	2006	4	96	432	6.9	69	3.61	32	1597	3.44	1.28	1.92	3.50
Eucalyptus petiolaris [Cleve Hills ENS]	2006	4	256	1152	6.9	217	4.50	84	1884	10.78	4.10	5.59	10.19
Eucalyptus petiolaris [Cleve Hills ENS]	2006	4	96	432	6.9	81	4.91	86	1875	13.52	5.93	7.72	14.08
Eucalyptus petiolaris [Koppio Hills ENS]	2006	4	256	1152	6.9	229	4.33	90	1988	12.33	4.78	6.39	11.65
Eucalyptus petiolaris [Koppio Hills ENS]	2006	4	96	432	6.9	95	4.82	94	2199	15.79	6.67	8.72	15.91
Eucalyptus polybractea [CLM29]	2006	4	256	1152	6.9	240	4.89	85	2083	8.36	3.36	4.75	8.66
Eucalyptus polybractea [CLM29]	2006	4	96	432	6.9	90	4.76	90	2083	8.64	3.32	4.71	8.59
Eucalyptus polybractea [CLM31]	2006	4	256	1152	6.9	233	4.44	77	2023	7.13	2.67	3.84	7.00
Eucalyptus polybractea [CLM31]	2006	4	96	432	6.9	91	4.02	74	2106	6.58	2.30	3.37	6.14
Eucalyptus polybractea [CLM42]	2006	4	256	1152	6.9	237	4.69	79	2057	7.72	3.00	4.29	7.82
Eucalyptus polybractea [CLM42]	2006	4	96	432	6.9	87	4.65	81	2014	8.31	3.17	4.49	8.19
Eucalyptus polybractea [Inglewood CS19362]	2006	4	96	432	6.9	91	5.24	90	2106	10.16	4.42	6.07	11.06
Eucalyptus polybractea [West Wyalong CS20680]	2006	4	96	432	6.9	84	4.20	70	1944	6.72	2.45	3.53	6.43
Eucalyptus porosa [Fleurieu Penn TFL 11068-947]	2006	4	96	432	6.9	90	3.66	93	2083	9.55	3.01	4.29	7.82
Eucalyptus porosa [Glenloth AS]	2006	4	256	1152	6.9	165	3.45	65	1432	7.30	2.38	3.29	6.00
Eucalyptus porosa [Melton to Price BSC AJ16118YP]	2006	4	256	1152	6.9	233	3.80	92	2023	8.69	2.82	4.02	7.33

Trial Type, Year, Site / Taxonomy [seedlot]	Establishment Year	Experimental Replicates	Total Planted	Survey Area (m²)	Age (years)	Assessment Observations	Height (m)	Crown Cover (%)	Plant Density (plants/ha)	Basal Area (m²/ha)	Stem Volume MAI (m³/ha/yr)	Above-ground Biomass (t/ha/yr)	Above-ground CO₂e Seq.(t/ha/yr)
Eucalyptus porosa [Melton to Price BSC AJ16118YP]	2006	4	96	432	6.9	85	3.77	90	1968	8.82	2.94	4.15	7.57
Eucalyptus porosa ssp. devestiva [Tintinara BSC M280985E]	2006	4	256	1152	6.9	214	3.53	88	1858	7.27	2.27	3.28	5.98
Eucalyptus porosa ssp. devestiva [Tintinara BSC M280985E]	2006	4	96	432	6.9	78	3.63	82	1806	6.38	2.04	2.97	5.41
Eucalyptus rudis [CALM]	2006	4	96	432	6.9	83	3.96	61	1921	7.98	2.75	3.92	7.15
Eucalyptus viminalis (FSA hybrid) [Tintinara cult. FS_PG0127]	2006	4	256	1152	6.9	145	4.03	39	1259	5.16	2.04	2.82	5.14
Eucalyptus viminalis (FSA hybrid) [Tintinara cult. FS_PG0127]	2006	4	96	432	6.9	56	3.67	35	1296	4.05	1.51	2.17	3.96
Eucalyptus viminalis ssp. cygnetensis [Flinders Chase CS16021]	2006	4	256	1152	6.9	203	4.91	66	1762	8.33	3.65	4.99	9.11
Eucalyptus viminalis ssp. cygnetensis [Flinders Chase CS16021]	2006	4	96	432	6.9	86	5.08	69	1991	8.54	3.85	5.25	9.58
Eucalyptus viminalis ssp. cygnetensis [Frances CS20807]	2006	4	256	1152	6.9	183	4.39	55	1589	5.62	2.20	3.14	5.73
Eucalyptus viminalis ssp. cygnetensis [Frances CS20807]	2006	4	96	432	6.9	71	4.41	57	1644	6.15	2.56	3.56	6.50
Eucalyptus viminalis ssp. cygnetensis [Mt. Gambier BSC M16019SE]	2006	4	256	1152	6.9	174	4.18	43	1510	4.49	1.70	2.47	4.50
Eucalyptus viminalis ssp. cygnetensis [Mt. Gambier BSC M16019SE]	2006	4	96	432	6.9	74	4.88	54	1713	7.74	3.64	4.88	8.90
Eucalyptus viminalis ssp. cygnetensis [Onkaparinga River GA]	2006	4	256	1152	6.9	91	3.67	23	790	2.29	0.75	1.11	2.03
Eucalyptus viminalis ssp. cygnetensis [Onkaparinga River GA]	2006	4	96	432	6.9	23	3.20	12	532	1.03	0.34	0.53	0.97
Eucalyptus viminalis ssp. cygnetensis [Port Lincoln CS16020]	2006	4	256	1152	6.9	208	3.58	62	1806	5.25	1.68	2.51	4.58
Eucalyptus viminalis ssp. cygnetensis [Port Lincoln CS16020]	2006	4	96	432	6.9	85	3.67	72	1968	6.92	2.23	3.25	5.93
Eucalyptus viminalis ssp. cygnetensis [Williamstown CS16025]	2006	4	256	1152	6.9	210	3.87	57	1823	6.05	2.15	3.09	5.64
Eucalyptus viminalis ssp. cygnetensis [Williamstown CS16025]	2006	4	96	432	6.9	88	4.13	61	2037	7.33	2.72	3.89	7.10
Viminaria juncea [East of Melbourne Gippsland SGLC]	2006	4	256	1152	6.9	103	2.30	9	894	0.84	0.18	0.36	0.66
Viminaria juncea [East of Melbourne Gippsland SGLC]	2006	4	96	432	6.9	49	2.15	8	1134	1.08	0.23	0.46	0.83
Viminaria juncea [Jervis Bay HS]	2006	4	256	1152	6.9	90	1.94	4	781	0.52	0.10	0.23	0.42
Viminaria juncea [Jervis Bay HS]	2006	4	96	432	6.9	31	1.85	2	718	0.35	0.06	0.16	0.30
Viminaria juncea [McLoughlins Beach SGLC]	2006	4	256	1152	6.9	100	2.08	14	868	0.76	0.15	0.32	0.58
Viminaria juncea [McLoughlins Beach SGLC]	2006	4	96	432	6.9	28	1.40	11	648	0.66	0.13	0.26	0.47
Viminaria juncea [Mt. Burr FS_CN494]	2006	4	96	432	6.9	13	1.47	2	301	0.13	0.02	0.07	0.13
Viminaria juncea [Mt. Gambier FS_CN495]	2006	4	96	432	6.9	33	1.88	4	764	0.38	0.07	0.19	0.34
Viminaria juncea [Nangkita BSC M090115L]	2006	4	256	1152	6.9	100	2.10	7	868	0.66	0.12	0.28	0.51

Trial Type, Year, Site / Taxonomy [seedlot]	Establishment Year	Experimental Replicates	Total Planted	Survey Area (m²)	Age (years)	Assessment Observations	Height (m)	Crown Cover (%)	Plant Density (plants/ha)	Basal Area (m²/ha)	Stem Volume MAI (m³/ha/yr)	Above-ground Biomass (t/ha/yr)	Above-ground CO₂e Seq.(t/ha/yr)
Viminaria juncea [Nangkita BSC M090115L]	2006	4	96	432	6.9	38	2.20	6	880	0.48	0.09	0.23	0.41
Viminaria juncea [Perth TPL 20879]	2006	4	256	1152	6.9	46	1.96	4	399	0.29	0.06	0.13	0.23
Viminaria juncea [Perth TPL 20879]	2006	4	96	432	6.9	23	1.53	6	532	0.49	0.10	0.20	0.37
Viminaria juncea [Wimmera River FS_CN496]	2006	4	256	1152	6.9	177	2.43	17	1536	1.90	0.43	0.79	1.45
Viminaria juncea [Wimmera River FS_CN496]	2006	4	96	432	6.9	36	1.87	3	833	0.40	0.07	0.19	0.34

Trial Type, Year, Site / Taxonomy [seedlot]	Establishment Year	Experimental Replicates	Total Planted	Survey Area (m ²)	Age (years)	Assessment Observations	Height (m)	Crown Cover (%)	Plant Density (plants/ha)	Basal Area (m ² /ha)	Stem Volume MAI (m ³ /ha/yr)	Above-ground Biomass (t/ha/yr)	Above-ground CO ₂ e Seq.(t/ha/yr)
f) Coppice Trials 2007, Murray Bridge													
Acacia salicina [Mambray Creek SFMB_2004.04]	2009	4	256	1152	3.9	221	1.17	9	1918	1.31	0.28	0.78	1.43
Acacia saligna ssp. lindleyi [Parkeyerring RSU WA CALM_2004.02]	2009	4	256	1152	3.9	26	1.26	1	226	0.17	0.04	0.10	0.18
Eucalyptus camaldulensis var. camaldulensis [Lake Albacutya CS20561]	2009	4	256	1152	3.9	225	3.48	58	1953	6.82	3.70	5.46	9.95
Eucalyptus cladocalyx [Wirrabara SFMB_2004.11]	2009	4	256	1152	3.9	239	3.64	77	2075	10.04	5.54	7.87	14.36
Eucalyptus cneorifolia [Kangaroo Island CS20275]	2009	4	256	1152	3.9	247	1.88	49	2144	6.44	2.03	3.30	6.03
Eucalyptus incrassata [Owen BSC_2004.08]	2009	4	256	1152	3.9	244	2.17	47	2118	5.08	1.74	2.92	5.33
Eucalyptus loxophleba ssp. lissophloia [Newdegate CLM-11_03-P95]	2009	4	256	1152	3.9	246	3.99	87	2135	7.34	4.26	6.29	11.47
Eucalyptus occidentalis [Redhill SFMB_2004.16]	2009	4	256	1152	3.9	242	4.56	73	2101	11.79	7.96	10.91	19.90
Eucalyptus polybractea [WA CALM_2004.05]	2009	4	256	1152	3.9	250	3.02	65	2170	7.73	3.50	5.30	9.67
Eucalyptus socialis [Chapman Bore SFMB_2004.18]	2009	4	256	1152	3.9	243	2.07	66	2109	6.77	2.28	3.63	6.63
Indigofera australis [Scott Creek SFMB_2004.19]	2009	4	256	1152	3.9	0	0.00	0	0	0.00	0.00	0.00	0.00
g) Fodder Regrowth Trials 2007													
Murray Bridge													
Atriplex nummularia [N_TL_Eyres Green]	2007	16	256	1152	5.8	231	1.65	70	2005	2.30	0.39	5.38	9.82
Atriplex nummularia [N_TL_Eyres Green]	2007	2	24	108	6.2	24	2.25	100	2222	4.03	0.84	14.66	26.74
Atriplex nummularia [Yando SFMB_2004.07]	2007	16	256	1152	5.8	254	1.95	80	2205	3.28	0.67	7.52	13.72
Roseworthy													
Atriplex nummularia [N_TL_Eyres Green]	2007	4	96	432	6.2	94	1.69	100	2176	1.82	0.25	12.88	23.49
Atriplex nummularia [Yando SFMB_2004.07]	2007	4	96	432	6.2	86	1.89	99	1991	2.00	0.30	8.92	16.27
Lucindale													
Atriplex nummularia [N_TL_Eyres Green]	2007	2	24	108	6.2	15	1.95	79	1389	1.01	0.19	6.77	12.34
Atriplex nummularia [Yando SFMB_2004.07]	2007	4	96	432	6.2	39	1.78	13	903	0.53	0.09	0.99	1.81
Atriplex nummularia [Yando SFMB_2004.07]	2007	4	96	432	6.2	63	1.59	13	1458	0.74	0.12	0.96	1.75



Government of South Australia
Department of Environment,
Water and Natural Resources