

ECONOMIC ASPECTS OF BIODIVERSITY

THE SEARCH PROJECT - MELALEUCAS

Dan Huxtable

What is the SEARCH project?

The SEARCH project aims to develop a range of profitable woody perennial plant crops and products, suited to the different climatic regions and soil types in the WA wheatbelt. The project is being co-ordinated by the Department of Conservation and Land Management Farm Forestry Unit, with funding assistance from the Natural Heritage Trust.

As part of this project, several *Melaleuca* species (commonly known as tea-tree or broombush) have been identified as having commercial potential for leaf oil and biomass production. These are the same products that come from oil mallees. The project wants to further explore this potential by making a significant number of seedlings available for planting, so that farmers can gain experience in using these species and so that the beginning of a commercial resource might be established.

A role for Melaleucas?

Several *Melaleuca* species, all of which occur naturally in the wheatbelt, are being investigated (Table 1). The production system envisaged for Melaleucas is very similar to that of oil mallees. Therefore, there should be good opportunities for Melaleucas to complement the oil mallee resource and utilise oil mallee harvesting, transportation and processing equipment.

What is the 2002 Melaleuca planting package?

Seedlings of several species of *Melaleuca* are available for farmers to plant in 2002, together with fencing assistance where necessary. Landholders will have to prepare the site and be responsible for its on-going management. Details of the package are obtainable from the contact given below.

Further details: contact David Kabay (Project Manager):
Ph (08) 9349 0401 Mb 0417 950 508
Fax (08) 9349 0401 e-mail: dkabay@iinet.net.au

Table 1: Melaleuca species available.

Approximately 2 million seedlings will be available to farmers across the wheatbelt. The availability of each species for individual farmers will be subject to demand. These will be grown from seed collected from parent trees in the wild that have been shown to have above average leaf oil content.

Species	Landscape Position	Soil Texture/Profile	Number available	Comments
<i>M. acuminata</i>	Lower Slopes Valley Floor Hillside seep	Grey/Brown/ Red, shallow duplex soils	220,000	Widespread across the wheatbelt, has high tolerance to waterlogging.
<i>M. lateriflora</i>	Lower Slopes, Valley Floor Hillside seep	Grey/Brown/ Red clays or shallow duplex soils	1.25 million	Widespread across the Wheatbelt, has high tolerance to waterlogging
<i>M. stereophloia</i>	Midslopes Lower slopes Valley Floor	Red/brown loamy or duplex soils	50,000	Occurs in North and NE Wheatbelt.
<i>M. uncinata</i> "hamata"	Midslopes Lower slopes Valley Floor	Brown/yellow duplex soils	50,000	Widespread across the wheatbelt. Medium-high waterlogging tolerance
<i>M. uncinata</i> "spicate"	Upper and Midslopes	Yellow/brown sands/sandy loams	100,000	Occurs in North and NE Wheatbelt.
<i>M. uncinata</i> "stubby leaf"	Midslopes Lower slopes	Red/Brown loamy soils	100,000	Occurs in NE and Eastern Wheatbelt.
<i>M. uncinata</i> "uncinata"	Lower Slopes, Valley Floor Hillside seep	Red/brown clays or duplex soils	230,000	Occurs in South and SE Wheatbelt. Medium-high waterlogging tolerance

Notes on Salt Tolerance:

- **High** - *M.lateriflora*, *M.acuminata* (EM38 horizontal mode <200 mSm⁻¹)
- **Moderate/High** - *M.stereophloia*, *M.uncinata* forms "hamata", "stubby leaf" and "uncinata"(EM38 horizontal mode <150 mSm⁻¹)
- **Moderate/Low** - *M.uncinata* "spicate" (EM38 horizontal mode <100 mSm⁻¹)

Highly saline sites (bare scald, samphire flats) are likely to adversely affect plant growth for all species and are not recommended.