Information Series

No. 15 – Tree Species List

Pages 3 and 4 list tree species that have the potential to grow in Tasmania, site requirements and other factors which form a guide to help you match potential tree species to your proposed tree planting site.

The trees listed can, or have the potential to, be used for timber production. There may be other species not listed here that are also suitable for wood production.

The recognized plantation species*: E. nitens, E. globulus, P. radiata, A. melanoxylon* and *C. macrocarpa* have been proven to suit Tasmania. However, many of the alternative species have been planted in Tasmania on a trial basis by Private Forests Tasmania, landowners and other organisations. While it is to be encouraged, the planting of these or other alternative species in Tasmania should be on a small scale and considered experimental, as their performance is relatively unknown at this stage. It is possible that some alternative species may fill a niche role, such as the production of naturally durable timber that can be used for exterior use without chemical treatment. It is not expected that these alternative species could be planted on a large scale, but rather as smaller plantings on suitable sites. Thus, they may offer landowners an opportunity to enter a high-value niche market that is not dominated by larger industrial scale growers. Landowners should seek further advice regarding species and site selection if considering alternative species.

This information has been collected from published sources. Titles of references are available from Private Forests Tasmania. Gaps in the table indicate where information was not available.

Table 1: Terms used in Table 2a, and 2b.

TERM	DESCRIPTION	PREFERENCE/TOLERANCE
Preferred annual rainfall	Average rainfall required for maximum growth.	Millimetres per year (25mm = 1.0 inch)
Minimum annual rainfall	Approximate average amount of rainfall needed for survival.	Millimetres per year (25mm = 1.0 inch)
Preferred position	Position in the landscape in which the species grows best.	Cool valley, lower slopes, plains, etc.
Preferred soil type	Soils in which the species grows best. This category is problematic because most species grow best in deep, moderately fertile, moist, warm, well-drained soil conditions which many species do not encounter in their natural condition. Further, species such as *Pinus radiata, C. macrocarpa, E. maculata, E. viminalis, A. melanoxylon* and other species are adaptable and will grow well on a wide range of soils provided they are not subject to severe waterlogging, or in some cases frost.	Heavy, light, shallow, deep, well-drained, loams, clays, sands, fertile, moist soils, etc.

Prohibitive conditions for survival and good growth	Soil conditions or other factors (excluding salinity) which prevent good growth.	Wet/heavy clay, infertile, deep sands, poor drainage, etc.
Tolerance of poor drainage	This is a major restriction on the suitability of many species for sites with impermeable clay sub-soil and consequent late winter-spring water-logging. Very high, high, moderate, low, very low (survival or growth).	
Tolerance of a dry site in a favourable rainfall zone	Ability to survive and grow in difficult conditions such as a hot, windy, north-facing position on sandy soil.	Very high, high, moderate, low, very low (survival or growth).
Tolerance to exposure	Ability to cope with strong winds and either very hot or cold conditions.	Very high, high, moderate, low, very low (survival or growth).
Frost resistance	Ability to cope with frost.	Very high, high, moderate, low, very low.
Pest problems	Insect/disease susceptibility. Trees of any species, when stressed, will be more prone to insect attack and disease. It may be helpful to include mixed species in buffer plantings that will provide refuge and food for insectivorous birds and insects, and/or leaf skeletonisers.	**FB** - fireblight larvae **G** - galls **B** - Lyctus borers **C** - cypress canker **A** - autumn gum moth caterpillar **S** - sawfly larvae **D** - dothistroma needle blight

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This information has been prepared by Private Forests Tasmania. Every reasonable endeavor has been used to ensure that the material was accurate at the time of publication. However, Private Forests Tasmania takes no responsibility for the accuracy, completeness or relevance of such information or for matters arising from changed circumstances or information or material which may have become available subsequently. This information is introductory in nature and should not be treated as a substitute for specific advice or relied on as a basis for business decisions. Before undertaking any significant forestry project it is recommended that you seek personal professional advice directly from a forestry professional on the particular matter.

Table 2a: Tree species list - Site requirements and other factors

Botanical Name	Common Name	Preferred Rain (mm)	Minimum Rain (mm)	Preferred Position	Preferred Soil Type for Best Growth	Prohibitive Conditions Survival / Good Growth	Use	Dryland species
Acacia melanoxylon	Blackwood	900+	650	Cool valley	Fertile clay-loam	Infertile heavy clay	Cabinet	N
Eucalyptus glob. sub species glob.	Blue gum	900+	700	Cool valley	Heavy loam-clay		Commodity	N
Eucalyptus nitens	Shinning gum	1000+	700	Cool wet slope	Clay-loam		Commodity	N
Pinus radiata	Radiata pine	800+	500	Slope	Sandy-loam over clay	Fire; wet/heavy clay	Commodity	N
Trees listed below can, or have the potential to, be used for timber production:								
Abies nordmanniana	Caucasian fir	700+	600	Mountainous	Fertile clay-loam	Shallow soil; clay pan	Commodity	N
Abies grandis	Grand fir	>1000	750	Sheltered valleys	Fertile clay-loam	Shallow soil; clay pan	Commodity	N
Abies procera	Noble fir	1200	750	Exposed	Deep, moist, non-calcare-ous	Very dry	Commodity	N
Acacia falciformis	Mountain hick-ory	900	500	Hilly, mountainous	Clay loam		Durable / posts	Y
Allocasuarina cristata / leuhmanni	Belah			Inland plains	Clay		Durable / decking	Y
Alnus cordata	Italian alder			Pioneer, dry sites	Deep calcareous	Acid soils	Cabinet	N
Alnus incana	Grey alder			Riparian	Moist, loam	Drought	Cabinet	N
Callitris endlicheri / glaucophylla							Durable / decking	Y
Castanea sativa	Spanish chest-nut	1000	760	Lower foothills/mtns	Deep, fertile, moist	Shallow soils; wet soils	Durable / Cabinet Fenc-ing	N
Casuarina cunninghamiana	River sheoak	1500	500	Riparian	Deep, fertile, moist	Shallow, dry	Firewood / cabinet	N
Casuarina obesa		700	275	Riparian, sand plains	Loams, sands, clays		Firewood / cabinet	N
Chamaecyparis nootkatensis	Nootka cypress	800		Sheltered slopes/valleys	Fertile, well-drained	Infertile, poor-drain-age	Cabinet	Y
Cryptomeria japonica	Japanese cedar			Sheltered, lowland	Moist, fertile	Waterlogged, dry , ex-posed	Cabinet	N
X Cupressocyparis leylandii	Leyland cypress	1000+	650	Lower slope	Moist, fertile		Cabinet	N
X Cupressocyparis ovensii	Ovens cypress	800		Sheltered slopes/valleys	Fertile, well-drained	Infertile, poor-drain-age	Cabinet	N
Cupressus lusitanica	Mexican cypress	750+	600	Lower slope	Fertile sandy clay-loam	Fire; wet clay	Cabinet	N

Botanical Name	Common Name	Pre-ferred Rain (mm)	Mini-mum Rain (mm)	Preferred Position	Preferred Soil Type for Best Growth	Prohibitive Condi-tions - Survival / Good Growth	Use	Dry-land spe-cies
Cupressus macrocarpa	Monterey cy-press	800+	650	Lower slope	Fertile clay-loam	Fire; deep sand; wet clay	Cabinet	N
Cupressus sempervirens	Mediterranean cypress	800		Sheltered slopes/valleys	Fertile, well-drained	Infertile, poor-drain-age	Cabinet	Y
Cupressus torulosa	Bhutan cypress	800		Sheltered slopes/valleys	Fertile, well-drained	Infertile, poor-drain-age	Cabinet	N
Eucalyptus argophloia	West white gum	1000	7000		High clay content, low-high fertility		Durable / decking fenc-ing	Y
Eucalyptus bosistoana	Coast grey box	1200	700		Better and moist soils		Durable / decking fenc-ing	Y
Eucalyptus cladocalyx	Sugar gum	650	450	Riparian - upper slopes	Skeletal, shallow – deep alluvial		Durable / decking fencing	Y
Eucalyptus fastigata	Brown barrel	1100+	800	Valley/slope	Granite loams		Durable / decking fencing	Y
Eucalyptus macrorhyncha	Red stringybark	600+	500	Hill/slope	Rocky clay-loam	Heavy clay	Durable / decking fencing	Y
Eucalyptus quadlangulata	White top box						Durable / decking fencing	Y
Eucalyptus sideroxylon	Red ironbark	550+	350	Hill/slope	Heavy clay-loam	Deep sand	Durable / decking fencing	Y
Fraxinus americana	White ash	1500	500	Riparian, low-mid slope	Rich, moist, well-drained	Waterlogged or very dry	Cabinet	?
Fraxinus angustifolia	Desert ash	800	400	Riparian			Cabinet	?
Larix kaempferi	Japanese larch	1000		Sheltered, hilly	Well-drained, moist, mod. fertile	Dry, badly drained, exposed	Durable / decking fencing	Y
Metasequoia glyptostroboides	Dawn redwood	900+	750	Cool moist valley	Deep moist, fertile	Drying (hot) winds	Cabinet	N
Nothofagus procera	Rauli	1000	700	Lowlands – hills to 300m	Sands - clays	Exposure, frosts	Cabinet	N
Picea abies	Norway spruce	+750		Lowlands – high mountains	Moist, rushy inc. clays & peats	Drought & calcare-ous	Commodity	N

Botanical Name	Common Name	Pre-ferred Rain (mm)	Mini-mum Rain (mm)	Preferred Position	Preferred Soil Type for Best Growth	Prohibitive Condi-tions - Survival / Good Growth	Use	Dry-land spe-cies
Pinus contorta (Skeena River origin)	Lodgepole pine	900+	450	Gentle slopes/basins	Deep loam	Shade	Commodity	N
Pinus muricata (blue var.)	Bishop pine	+500	400	Arid, steep slopes	Rocky, sandy		Commodity	Y
Pinus nigra var calabrica (mari-tima)	Corsican pine	1500	1000	Lower slope	Deep sands-clays	Shallow, wet soils	Commodity	Y
Pinus pinaster	Maritime pine	1250	500	Coastal	Well-drained sandy-loam	Clay; poor drainage	Commodity	Y
Pinus ponderosa (Plumas)	Ponderosa pine	750+	500	Lower slope/valley	Deep, well-drained	Poor drainage	Commodity	Y
Prunus avium							Cabinet	N
Pseudosuga menziesii	Douglas fir	1000+	800	Humid, wet sites	Fertile sandy-loam	Heavy clay	Cabinet	N
Platanus x acerifolia	London plane	750		Riparian, sheltered valleys	Light soils, good fertility		Cabinet	N
Quercus rubra	Red oak	+1000	750	Low-mid slope & val-leys	Deep, welldrained loam to silty, clay loam		Durable / Fence /Cab-inet	?
Robinia pseudoacacia	Black locust	+1000		Moist rich, loamy slopes	Rich, moist calcareous	Poorly drained, com-pacted	Durable / Fence /Cab-inet	?
Sequoia sempervirens	Coast redwood	1200+	750	Foggy valley	Moist, fertile, deep	Shallow soil; poor drainage	Cabinet	N

Table 2b: Site requirements and other factors continued (note the species list is the same as Table 2a – site requirements and factors differ)

Botanical Name	Common Name	Tolerance of Poor Drainage	Tolerance of Dry Site	Tolerance to Exposure	Frost Resistance	Pest Problems
Eucalyptus globulus sub species globulus	Blue gum	Moderate	Very low	Moderate	Moderate	S, A, B
Eucalyptus nitens	Shinning gum	High	Very low	High (cold)	Very high	S, A
Pinus radiata	Radiata pine	Low	Moderate	High	High	D
Acacia melanoxylon	Blackwood	Moderate	Low	High	High	B
Cupressus macrocarpa	Monterey cypress	Moderate	Moderate	High	Very high	C
Cupressus lusitanica	Mexican cypress	Low	High	Moderate	Very high	
Eucalyptus fastigata	Brown barrel	Low	Very low	Moderate	Very high	
Eucalyptus fraxinoides	White ash	Low	Low	Moderate	Moderate	
Pinus greggii	Gregg's pine				Moderate	
Pinus ponderosa (Plumas)	Ponderosa pine	Low	Moderate	Moderate	High	
Castanea mollissima	Chinese chestnut	Low	Low	Moderate/low	Low (spring frosts)	
Castanea sativa	Spanish chestnut	Low	Very low	Low	Low (spring frosts)	
Castanea dentata	American sweet chestnut	Low	Low	Low	High	
X Cupressocyparis leylandii	Leyland cypress	Moderate	Moderate	Moderate	Moderate	
Eucalyptus macrorhyncha	Red stringybark	Low	High	High	High	
Eucalyptus maculata	Spotted gum	Low	Moderate	High	Low	
Eucalyptus melliodora	Yellow box	Moderate	High	High	High	
Eucalyptus muelleriana	Yellow stringybark	Very low	Moderate	High	High	
Juglans nigra (west coast USA)	Black walnut	Low	Moderate/low	Low	Low (spring frosts)	
Metasequoia glyptostroboides	Dawn redwood	Low	Very low	Very low	High	
Pinus contorta	Lodgepole pine	Low	Moderate	Moderate	Moderate/high	
Pinus nigra var calabrica (maritima)	Corsican pine	Low	Moderate	Moderate	Moderate	
Pinus pinaster	Maritime pine	Moderate	Moderate	Moderate	Low/ moderate	
Pseudotsuga menziesii	Douglas fir or Oregon	Low	Very low	Low	Moderate	
Quercus sessiliflora	Sessile Oak	Moderate	Low	Moderate	Moderate	
Sequoia sempervirens	Coast redwood	Low	Very low	Low		
Abies nordmanniana	Caucasian fir		Low/moderate			
Acacia acuminata	Jamwood wattle	Low	Moderate/high	Moderate	Very low	
Eucalyptus microcarpa	Grey box	High	High	High	Very high	
Eucalyptus occidentalis	Swamp Yate	Very high	Very high	Very high	High	
Eucalyptus sideroxylon	Red ironbark	Low	Very high	Moderate	High	
Eucalyptus viminalis	Manna gum	Moderate	Moderate	High	Very high	
Maclura pomifera	Osage orange	Low	Very high	Moderate/high	Low (spring frosts)	
Pinus pinea	Stone pine	Low	Moderate	High	Low/moderate	