

Species	MAT (°C)	MAP (mm)	Altitude (m)	Soil Depth & Quality	Cold Tolerance	Frost Tolerance	Snow Tolerance	Drought Tolerance	Market	Pest & Diseases	Comments
<i>A mearnsii</i> (Black wattle)	16-19.5	760-850	200-1200	Very shallow soils. Will tolerate moderate levels	Moderate	Poor	Susceptible to snow damage	Good	Pulp & bark	Roots susceptible to termites and white grub. Susceptible to a variety of diseases on humid sites	Improved seed available
<i>E dunnii</i>	15.5-18.5	822-925	700-1300	Can tolerate 50% stone & fairly shallow soil (35cm)	Fairly coldtolerant	Moderate	Sensitive to snow	Can withstand extended periods of low rainfall.	Timber is prone to splitting therefore used for pulpwood.	Suseptible to Snout beetle. Resistant to termites & <i>Phytophthora</i> . Tolerant of <i>Leptocybe invasa</i> .	Usually grown on sites too shallow/ dry/ cool for <i>E grandis</i> . Very good pulpwood properties. Improved seed available.
<i>E smithii</i>	14.5-17.5	819-936	1100-1400	Requires good soils & sub-stratum moisture. Major drainage lines should be avoided. Not suited to shale	Moderate	Moderate to good but avoid frost pockets.	Moderate	Moderate	Pulp and wood chips	Suseptible to Snout beetle & <i>Phytophthora</i> (esp. Humid climates). Resistant to termites. Most families susceptible to <i>Leptocybe invasa</i>	Fast growing when correctly matched to site. Very limited quantities of improved seed available.
<i>E grandis</i>	16.5-21.5	899-1000	0-1200	Moderate soil depth & well drained.	Poor	Poor	Susceptible to snow damage	Poor	Pulp and treated poles	Susceptible to disease when planted off-site. Most families susceptible to <i>Leptocybe invasa</i>	Improved seed available
<i>E macarthurii</i>	15-18	850	>1100	Can tolerate shallow soils (40cm) & 50% stone	High	Extremely frost tolerant	Sensitive	Good	Pulp	Resistant to termites & <i>Phytophthora</i> . Not very susceptible to diseases	Bark is difficult to strip. Improved seed available
<i>E badjensis</i>	14.5-17	800-900	1100-1600	Minimum 30cm	As cold tolerant as <i>E nitens</i>	Good frost tolerance	Good	As drought hardy as <i>E dunnii</i> . Moderate	Pulp	Suseptible to defoliation by Snout beetle but recovery is rapid. >1100m susceptible to <i>Phytophthora</i> Resistant to termites	Minimal breakage due to high winds. Coppices easily.
<i>E benthamii</i>	14.5-17.5	800-900	1100-1600	Minimum 45cm	Very high	Very high	Sensitive to snow	Moderate	Pulp	Resistant to <i>Phytophthora</i> & termites. Moderate resistance to Snout beetle	Not as drought hardy as <i>E macarthurii</i> , but bark strips well in comparison.
<i>E nitens</i>	<16	825 (cool sites) - 950 (warmer sites)	>1400	Prefers deep clay loam to sandy loam well-drained soils (45cm)	Very high	Frost tolerant	Excellent snow tolerance.	Sensitive	Primarily pulp and saw timber	Roots susceptible to termites and juvenile leaves susceptible to <i>Mycosphaerella</i> (leaf spot). Resistant to Snout beetle & <i>Phytophthora</i> . Resistant to <i>Leptocybe invasa</i> .	Does not coppice well. Improved seed available

GxN	15.5-17.5	860-936	1000-1400	Deep, well-drained apedal soils	Good	Moderate (Better than <i>E smithii</i>)	Moderate	Poor	Pulp (Certain clonal ID's are suitable for treated poles)	Some families susceptible to <i>Leptocybe invasa</i>	Improved yields when compared to straight species, provided cuttings are planted on the correct site.
GxU	17-22.5	900-1000	0-800	Deep, well-drained soils but can tolerate moderate depth	Poor	Poor	Very poor	Poor	Pulp and treated poles	Most families resistant to <i>Leptocybe invasa</i>	Improved yields when compared to straight species, provided cuttings are planted on the correct site.
GxC	18.5-22	800-900	0-1000	Shallow soils	Poor	Poor	Poor	Good	Pulp	Can tolerate marginal conditions with low disease risk. Some families susceptible to <i>Leptocybe invasa</i>	Improved yields when compared to straight species, provided cuttings are planted on the correct site.
P patula	14-18	800-875	1000-1400	Deep (30cm-90cm)	Good	Good frost tolerance	Tolerant	Moderate	Saw timber and pulp (good quality, straight timber)	<i>Fusarium circinatum</i> suseptible. Suseptible to <i>Diplodia pinea</i> (after Hail damage). Also suseptible to sirex wasp, aphids and brown tail moth.	4 year canopy closure
P elliotii	>14	825-875	1000-1500	Shallow (<60cm)	Poor	Poor	Poor	Good	Saw timber and pulp	<i>Diplodia pineae</i> tolerance and moderate tolerance to <i>Fusarium circinatum</i> . Less suseptible to Sirex wasp than most pine species.	Less suseptible to fire damage. Timber has a high resin content.
P greggii	10-16	>700	>1400	Shallow <60cm	Very good	Good frost tolerance	Good	Moderate	Saw timber and pulp	Susceptible to <i>Diplodia pinea</i> (after hail damage) and <i>Fusarium circinatum</i> .	Southern greggii faster growing than Northern greggii, but less frost tolerant.
P taeda	14-19	>825	1200-1400	Very deep (>90cm)	Good	Good frost tolerance	Poor	Poor	Saw timber and pulp	<i>Diplodia pinea</i> and <i>Fusarium circinatum</i> tolerant. Suseptible to black pine aphid, less susceptible to sirex than <i>P patula</i>	6-7 years to canopy. Previously prone to wood reaction as a result of pruning - suggest gradual thinning plus wider espacement. This trait has been largely bred out of the species with the latest seed lots.
P elliotii x P caribaea	>16	850	100-1200	Shallow (>60cm)	Very poor	Poor	Poor	Very good	Pulp (information on saw timber properties pending)	Relatively tolerant to <i>Fusarium circinatum</i> .	Up to 30% improvement in yield when compared to <i>P elliotii</i> on a correct site.
P patula x P tecunumanii Low	>16-20	<850	750-1300	>60cm	Poor	Avoid frost hollows	Poor	Moderate	Saw timber and pulp	Moderate tolerance to <i>Fusarium circinatum</i>	Improved yields compared to <i>P patula</i> on a correct site. Avoid low lying compartments and windy sites.
P patula x P tecunumanii High		<850	1350-1600	Deep (30cm-90cm)	Good	Moderate	Poor	Poor	Saw timber and pulp	very clost to P patula, therefore susceptible to <i>Diplodia pinea</i> and <i>Fusarium circinatum</i> .	Improved yields compared to P patula on a correct site.

***Disclaimer: Sutherland seedlings cc has compiled this table to the best of their knowlege and consulted industry experts in the process. Many aspects must be considered when choosing a species and Sutherland Seedlings is in now way responsible for the decision taken. This table is meant to be a broad guideline and a grower uses it at their own discretion.**