

**Trees can be an asset in the landscape if they are selected, planted and managed to fulfil the objectives and aspirations of the landowner. They can provide conservation and ecological benefits, as well as contributing to biodiversity and aesthetic values. For farmers, exotic trees can also provide shade or fodder for livestock, timber or firewood, shelter and erosion control.**

### Selection of species

Exotic tree species can be selected to perform different functions as well as for multiple uses. This Fact Sheet has narrowed the selection down to exotic species for woodlot use (as an alternative to *Pinus radiata*), and exotic species suitable for mixed native/exotic planting regimes in the Bay of Plenty. Exotic trees should be chosen with regard to site limitations (e.g. frost tolerance) or management factors (e.g. proximity to power lines). In addition, availability of plants and establishment factors (e.g. protection from livestock) also need to be considered. Local experience is often helpful, so consult with neighbours, local tree nurseries, and members of the Farm Forestry Association or Tree Crops Association.

### Exotic species for woodlot use

*Acacia* species – including *A. dealbata* and *A. melanoxylon* (Tasmanian blackwood).

*Cupressus* species – The two common cypress trees for woodlot use are *C. macrocarpa* (Monterey cypress) and *C. lusitanica* (Mexican cypress or Lusitanica). Monterey cypress is salt and wind tolerant and produces a slightly darker, grainier wood than Mexican cypress, but is more susceptible to canker disease, particularly in warmer climates, such as the Bay of Plenty.

*Eucalyptus* species – A number of different eucalypts are options for alternative woodlots, but careful consideration should be given to choosing eucalypts before planting. Growth form can vary markedly depending on source of planting stock as well as within a planting site. Eucalypts are a hardwood species and growth stresses can cause distortion in the wood which makes it difficult to mill without twisting the sawn timber. Therefore, it is recommended that eucalypts should only be planted for woodlots if you are confident that you have good planting stock, and the chosen sawmill has experience in milling eucalyptus species. Common eucalyptus species include the ash type eucalypts (*E. saligna*, *E. regnans* and *E. delegatensis*), which produce white timbers, and eastern bluegum types, (*E. botryoides*, *E. fastigata* and *E. obliqua*) which produce reddish timber.

Other main alternative species used in woodlots include Douglas fir (*Pseudotsuga mensiesii*) and black walnut (*Juglans nigra*).

### Mixed native/exotic options

There is often a desire by landowners to carry out mixed native/exotic planting. The reasons for this approach vary, but commonly landowners wish to reduce establishment costs or may want the option of selective production from high values species planted in conjunction with native areas.

*Chamaecytisus palmensis*, (Tagasaste or tree lucerne) is often used as a nurse crop for establishing areas of native bush. This species is a legume, fixing nitrogen and suitable for planting on degraded soils. Tree lucerne tends to be short lived (15-20 years maximum), and is a highly palatable source of fodder for native birds, especially the kereru, which will feed on the flowers and leaves from June through to September. The feeding of such bird species promotes the introduction of additional native plant seed from the bird droppings. Tree lucerne is highly palatable and will be readily eaten by rabbits, hares, wallabies and possums. Extensive animal pest control is necessary prior to planting, with follow up activity (night shooting) during spring and summer.

Interplanting of Tasmanian blackwood with native revegetation is popular if landowners wish to have the option of selectively harvesting the Tasmanian blackwood when it is mature (35 – 40 years). The Tasmanian blackwood merges in with regenerating native species and may be difficult to identify as an exotic tree to a layperson. Therefore, even if the trees are not harvested, the planted area still retains much of the character of a native retirement block.

## Establishing multipurpose exotic species

The key factors in successfully establishing multipurpose exotic species include obtaining good planting stock, and ensuring protection from weeds, pest animals and livestock, until the plants are well established.

## Management Factors

Managing multipurpose exotic species will depend on why the species was chosen – whether for firewood, stock fodder, timber etc. They will all require different pruning systems at

key stages. It is critical that some on-going management be carried out regardless of the species planted. Planting the tree is the easy part – tending and managing for the long term benefits cannot be underestimated.

Further information on multipurpose exotic species is available from a wide range of sources.



*Cypress shelter belt at Slope Point Southland*

Species	Habit		Tolerance					Erosion control				Other uses	Comments		
	Leaf	Form	Height (metres)	Growth	Wind	Salt wind	Dry soil	Frost	Wet soil	Slip	Gully			Stream Bank	
<i>Acacia dealbata</i> Silver wattle	E	S	10-20	F	**	*	***	**		**	***	*	Firewood, timber, bee fodder	N-fixer, coppices, and will sucker from damaged roots. Invasive species - requires careful management.	
<i>Acacia melanoxylon</i> Tasmanian blackwood	E	S	15-30	M	**		**	**	*	**	***	**	Timber, firewood, bee fodder	N-fixer, coppices, prefers moist, fertile acidic soils.	
<i>Chamaecytisus palmensis</i> Tagasaste/ Tree lucerne	E	S	4-6	M	**	**	**	**		*	***		Windbreaks, bee / stock fodder, firewood, nurse crop	N-fixer, coppices. Seedlings are frost tender and highly palatable to rabbits. Limited longevity.	
<i>Pseudotsuga menziesii</i> Douglas fir	E	S	20-40	M	**			***	*	*	**		Windbreaks, timber, amenity	Best for cooler inland areas. Requires moist well drained soils. Ready market for timber.	
<i>Cupressus macrocarpa</i> Macrocarpa	E	S	35-40	M	***	***	**	**		**			Timber, firewood	Durable popular timber species, susceptible to canker disease. Able to tolerate dry, salty, windy conditions.	
<i>Cupressus lusitanica</i> Mexican cypress	E	S	35-40	M	**	*	*	*		**			Timber, firewood	Durable popular timber species.	
<i>Juglans nigra</i> Black walnut	D	S	30-40	F	**	**	**	**		**			Timber, amenity, edible nuts	High value timber and popular as an amenity tree. Not used for erosion control.	
Leaf	Form		Growth					Tolerance				Erosion control (suitability)			
E = Evergreen D = Deciduous	N = Narrow S = Spreading	F = Fast M = Medium S = Slow												*	= Moderate ** = Good *** = High



*Lusitanica and Tasmanian blackwood in a mixed woodlot*



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