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**PLANTING AND CARE OF TREES  
IN THE WHEATBELT**



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# PLANTING AND CARE OF TREES IN THE WHEATBELT

THE climate of South Western Australia includes a long summer drought which subjects trees to considerable moisture stress.

By F. BATINI\*

*Shade trees and shelter belts can be established successfully in the wheatbelt without hand watering, provided a suitable site and variety of tree is selected and a little time is spent in site preparation and care of the young tree.*

*This article, which is adapted from a Forests Department publication "Catalogue of Trees for growing under Western Australian conditions", sets out the best varieties of trees and establishment methods.*

The selection of hardy species adapted to dry summers is the first essential, but success can depend on the attention paid to site selection, site preparation, planting layout, planting method and subsequent tending and protection. This article assumes that young trees will be wholly dependent for their moisture needs on rainfall.

## Site selection

Trees may sometimes receive water by drainage or seepage from other areas, but generally they rely on water stored in the soil during winter. Shallow soils with inadequate moisture storage should be avoided.

## Site preparation

Cultivate the site 12 months in advance, and again just before planting to eliminate competing vegetation and permit soil moisture build up. Cultivate between the trees in late winter for at least two seasons to prevent the re-establishment of scrub or grass.

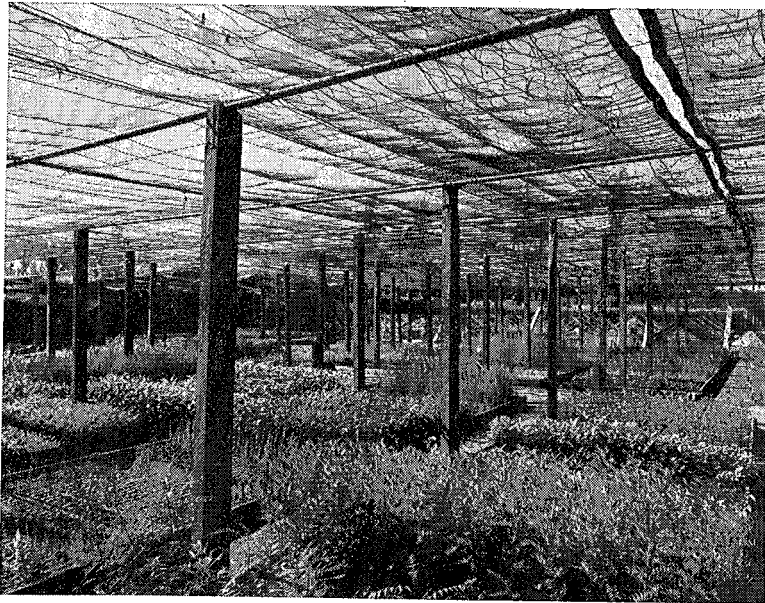
## Planting time

Plant in early winter, as soon as the ground is well soaked. This not only gives the tree longer to establish before the hot weather but also ensures the supply of healthy trees, as those left in nursery containers during long periods of wet weather tend to lose vigour. Best conditions for planting are a soil and subsoil well soaked by rain, but not water-logged, and humid, cloudy weather.

## Spacing

Trees need ample space for full development and the lower the rainfall the greater the space needed. Unless they are planted with a view to timber production, they need seldom be closer than 20 ft. even in the wetter districts. In the drier areas of the wheatbelt, they should be 30 ft. or more apart, and wider on poorer sites. Slightly closer planting can be used for trees in one- or two-line shelter belts where the roots have access to cleared or cultivated land on either side.

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Raising nursery stock for public sale — Forests Department Nursery Hamel, W.A.

Large and wide spreading trees should not be planted close to houses—30 ft. is close enough and a distance equal to the mature height of the tree is better. Don't plant close to septic systems as the roots may penetrate joints in pipes. This applies particularly to pepper trees, white cedars, camphor laurels, poplars and ornamental figs.

#### Soil preparation

Two cultivations, as previously described, are adequate. Where greater attention can be given, for example around the homestead, a hole 2 ft. square and 2 ft. deep filled with topsoil will give the trees a more rapid start, but they will need extra water.

Most trees will benefit from a little fertiliser at planting. This should not be overdone and an ounce or so of superphosphate worked into the soil for a radius of about 2 ft. round the tree should be ample. Nitrogenous fertilisers should not be used in the first year, but complete fertilisers may be used sparingly in the second and later years.

A small quantity of 2 per cent. dieldrin powder worked into the planting spot and dusted on to the soil enclosing the roots will deter root-destroying insects.

#### Planting method

Shape the planting spot into a shallow saucer-shaped depression about 2 or 3 ft. in diameter and a couple of inches deep so that any rain falling on it will concentrate near the

young tree. Plant the tree vertically in the centre of the saucer and about an inch deeper than it was in the nursery.

For open rooted trees, make the hole large enough to direct the taproot down without bending, and spread out the lateral roots.

Trees in containers will usually have some coiled roots that will weaken the anchorage of the tree if not dealt with. Use two shallow vertical cuts on opposite sides of the plant to cut roots coiled around the outside of the ball, but keep the ball otherwise intact. Coiled roots at the bottom should also be cut. Trials have established that, with our eucalypts at least, such apparently drastic treatment does no harm provided all care is taken in other directions.

Trees raised in trays are removed by cutting the soil into small blocks by running a sharp trowel edge or knife in both directions between the rows of trees.

Never allow tree roots to be exposed, especially those of pines, and see that they are kept continually moist before, during and after planting. When trees are received from the nursery, they should be placed in a sheltered shady spot and watered. (If the roots and enclosing soil are wrapped in paper, make sure that the paper is open at the top so that the water will be able to reach the soil.) Give the newly planted tree a gallon or more of water to assist the settling of the soil round the roots.

The planting hole should be large enough to allow the planter to hold the root ball during planting. Fill the hole by working well-broken

moist soil round the roots, gradually withdrawing the hand and pressing the soil in with fingers to eliminate air pockets. A final light pressure with the foot—not too close to the tree—will consolidate the refilled soil.

### Protection

Young trees should be guarded against stock until they are large enough to withstand damage from the type of stock which is allowed access to them.

Severe damage (or even destruction) by cockatoos, which has developed into a serious problem in parts of the wheatbelt, can be prevented by surrounding the young tree with a tube of rabbit netting 3 or 4 ft. long and about 10 in. in diameter. If this is sunk a couple of inches into the ground, pinched together at the top and supported by one or preferably two stakes on opposite sides of the tree, it will protect against cockatoos, rabbits and sheep, and also keep the young tree erect. These guards should be removed as soon as practicable to prevent permanent damage to the tree.

### Planting layout

Probably the best shelter belt is two parallel rows of trees, one dwarf (on the windward side) and the other tall. Shade groups should not be too large and the following layouts with spacings of 30 ft. are suggested:—

- Seven trees, six of them arranged to form a hexagon with one in the centre.
- Nine trees in three parallel rows of three.

Except for the central tree in each arrangement, every tree has root access to the surrounding land. The wide spacing permits the development of large spreading crowns.

Avoid heavy pruning of the stems of young trees as this can cause the trees to become spindly and unable to support their own weight. Pruning should be restricted to the removal of double leaders, and to side limbs only when these are developing abnormally and to the detriment of the central shoot.

Protect trees from fire. Many, particularly those for the drier areas, are very fire tender, and even the burning of grass litter or piles of leaves near them may cause disfigurement, damage or death.

### Species

The following trees are recommended for districts with a rainfall of less than 20 in. but within the agricultural areas (for situations where no additional water is given).

- Trees of low to medium height, suggested for windbreaks or low shelter or for street planting where overhead wires are present. Limited pruning may be necessary when used as street trees.

*Brachychiton diversifolium* Kurrajong  
*Eucalyptus caesia* (L) Gungunnu  
*Eucalyptus campaspe* (H) Silver Gimlet  
*Eucalyptus cladocalyx* var. *nana* (M) Dwarf Sugar Gum  
*Eucalyptus crucis* (L) Southern Cross Silver Mallee  
*Eucalyptus platypus* var. *heterophylla* (L, M) Coastal Moort  
*Eucalyptus platypus* (H) Moort  
*Eucalyptus redunca* var. *melanophloia* (M) Black Barked Marlock  
*Eucalyptus salubris* (H) Gimlet  
*Eucalyptus spathulata* (H) Swamp Mallet  
*Eucalyptus torquata* (M) Coral Gum  
*Schinus molle* (M) Pepper Tree

- Medium to tall trees suitable as shade trees, as the tall components to shelter belts, or for street or avenue planting where no overhead wires are present.

*Callitris calcarata* (L) Black Cypress Pine  
*Callitris glauca* (S) White Cypress Pine  
*Casuarina glauca* (S) Swamp Sheoak  
*Casuarina huegeliana* (L) Rock Oak  
*Eucalyptus gardneri* (M) Blue Mallet  
*Eucalyptus pterocarpa* (H)  
*Eucalyptus wandoo* (M) Wandoo  
*Eucalyptus salmonophloia* (H) Salmon Gum  
*Eucalyptus brockwayi* (H) Dundas Mahogany  
*Eucalyptus camaldulensis* (M) River Gum  
*Eucalyptus cladocalyx* (L) Sugar Gum  
*Eucalyptus dundasi* (H) Dundas Blackbutt  
*Eucalyptus sargentii* (H, S) Salt River Gum  
*Pinus brutia*  
*Tamarix articulata* (syn. *aphylla*) Athel Tree

- Tall, quick-growing trees suitable for shade groups.

*Eucalyptus brockwayi* (H) Dundas Mahogany  
*Eucalyptus camaldulensis* (M) River Gum  
*Eucalyptus cladocalyx* (L) Sugar Gum  
*Eucalyptus dundasi* (H) Dundas Blackbutt

- Ornamental trees.—Practically all of the trees listed have considerable ornamental value but there are certain species which are outstanding for their striking blossoms, picturesque appearance or unusual foliage.

*Eucalyptus caesia* (B) Gungunnu  
*Eucalyptus crucis* (F) Southern Cross Silver Mallee

*Eucalyptus eremophila* (B) Tall Sand Mallee  
*Eucalyptus erythronema* (B) White Mallee  
*Eucalyptus forrestiana* (B) Fuchsia Mallee  
*Eucalyptus kruseana* (B, F) Book Leaf Mallee  
*Eucalyptus macrocarpa* (B) Rose of the West  
*Eucalyptus leucoxydon* (B) Yellow Gum  
*Eucalyptus pyriformis* (B) Pear Fruited Mallee  
*Eucalyptus stoatei* (B) Scarlet Pear Gum  
*Eucalyptus torquata* (B) Coral Gum  
*Eucalyptus woodwardi* x *torquata* hybrid (B)

- Trees suitable for saline areas. While trees will not grow in soils heavily impregnated with salt, a number have shown considerable salt tolerance.

*Callitris glauca* White Cypress Pine  
*Casuarina glauca* Swamp Sheoak

*Eucalyptus loxophleba* York Gum  
*Eucalyptus sargentii* Salt River Gum  
*Eucalyptus spathulata* Swamp Mallet  
*Tamarix articulata* (syn. *aphylla*) Athel Tree  
*Tamarix gallica*  
*Tamarix pentandra*

Note:—

H—recommended for medium to heavy textured soils only.

L—recommended for light to medium soils.

M—adapted to a wide range of soils.

S—salt tolerant.

F—unusual or attractive foliage.

B—attractive blossom (or fruit).