

# TreeNote

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## Pruning trees for sawlogs

### Advantages of pruning

The main reason for pruning is to produce high-value sawlogs free of knots.

Other benefits of pruning are:

- to reduce the risk of fire damaging the tree's crown;
- to let more light in for pasture growth;
- to make stock management easier; and
- to improve access and farm visibility.

### Knots reduce value

Knots are branches that become incorporated into the trunk as it grows. However, once the branches are removed by pruning then all the new timber formed is knot-free. This knot-free wood is known as clearwood. Clearwood produces high-grade sawn timber for furniture, panelling and veneers. The aim of pruning is to produce logs where the knotty core is restricted to a diameter of 10-15 cm, and is surrounded by a large sheath of clearwood.

The future demand for clearwood logs is expected to increase as traditional supplies decline and the use of clearwood veneers increases.

### Spacing affects branch growth

Growing trees close together keeps branches small and produces suitable grades of timber. However, the disadvantage of close spacing is that trees grow slowly and it takes a long time to produce sawlogs. Trees grown at wide spacing grow quickly and develop large branches. Pruning is therefore essential to obtain high quality wood from widely spaced trees.

### Pruning and thinning

If some of the trees are to be thinned, it pays to wait until this has been done before starting pruning. Because pruning is labour intensive it should not be wasted on trees to be culled.

Pruning a proportion of the trees will give a competitive advantage to the unpruned trees. To overcome this, the unpruned trees should be removed. Many growers carry out the first thinning and pruning at the same time.

### Types of pruning

The two main types of pruning are clearwood pruning and form pruning.

#### Clearwood pruning

The aim of clearwood pruning is to minimise the diameter of the knotty core within the trunk.

A simple rule is to prune no higher than the point on the stem where the diameter is 10 cm. Pruning no higher than 50 per cent of the tree height is another useful guideline.

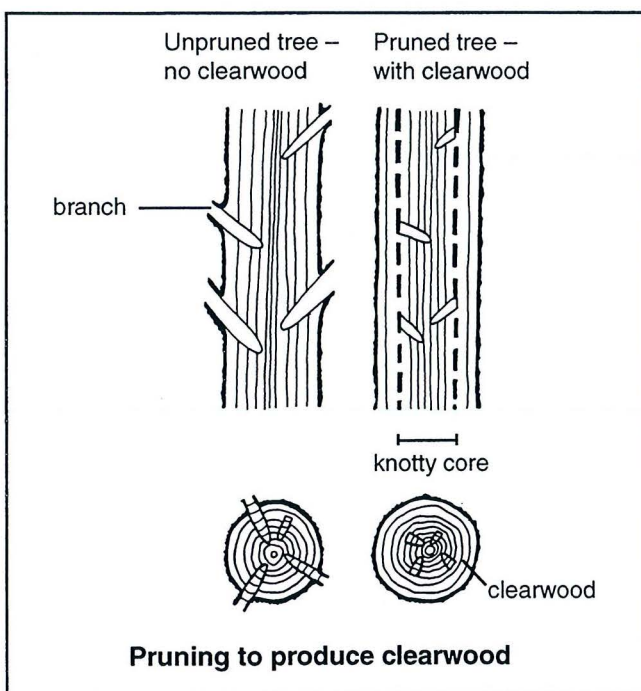
#### Form pruning

The aim of form pruning is to correct the form of a young tree by removing faults such as forks and large branches.

### How to prune

When removing branches do not damage the wrinkly wood around the base of the branch (the collar). This contains tissue which produces new wood cells. If too much of it is removed or torn the pruning will take longer to heal and expose the tree to fungal attack, as well as lowering timber quality.

Avoid leaving branch stubs (coat hangers) on the tree as it takes a long time for the tree to grow over these stubs and they increase knotty core size.



For effective pruning:

- prune close to the trunk without damaging the 'collar'; and
- use sharp equipment for fast, clean cutting.

Before starting to prune it is useful to talk with people who have had pruning experience, or perhaps attend a timber-pruning field day.

## When to prune

It is important to prune on time. Premature pruning wastes time and effort, and slows tree growth unnecessarily. Delayed pruning results in large losses of valuable clearwood as some species develop very large branches. Delays cause the knotty core to increase in size and also allow large branches to develop – which are difficult and expensive to remove.

As a guide, remove branches before they exceed 2.5 cm diameter because they are easier to remove and also the knotty core is minimised. Aim to prune branches while they are still alive and green.

Pruning should begin when the stem diameter reaches 10 cm at about two to three metres from the ground. It continues until the bole or tree trunk is pruned to the desired height – usually six to eight metres. For faster growing species (for example, *E. globulus*) pruning can begin when trees are about three years old.

## Managing the workload

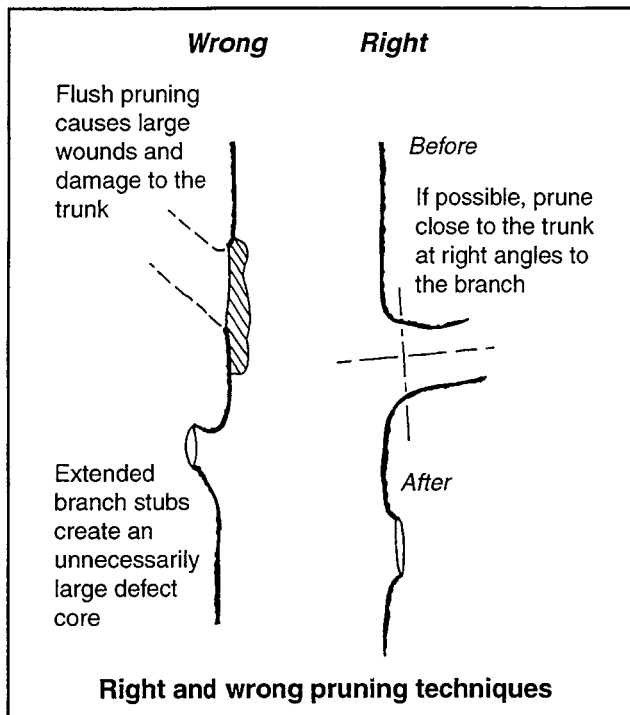
Staggered tree planting over a number of years may also assist the pruning workload, so that not too much pruning need be done at one time. A planting program of 3 to 5 hectares per year may be manageable but this will depend on species planted, amount of labour available, commitment to other farm activities and so on.

## Typical pruning times

Pines for sawlogs are typically pruned three times before harvest; eucalypts twice. For both species, a skilled pruner would take one to two minutes for the first prune (from the ground), and three to six minutes for subsequent, higher prunings. Pruning times will vary according to the species, site, experience of the person and equipment used.

## Pruning season

Pruning in autumn and early winter is recommended as spring or summer pruning places trees under greater stress and can also retard their growth. Tree management should be incorporated into annual farm work programs.



## Pruning equipment

Your choice of equipment depends on the size of the job and the labour available.

Pruning equipment includes:

- small hand shears and saws;
- light chainsaws;
- ladders;
- extended hand shears;
- sawblades on long poles (polesaws); and
- mobile pruning platforms (for example, 'Squirrel').

Calipers to measure the point where the trunk is 10 cm in diameter can easily be home-made.

Check with your local farm forestry adviser about available equipment.

## Safety equipment

Safety equipment should always be used. Equipment includes helmets, face guards, eye protection, ear muffs, gloves and chainsaw chaps.

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