



GROWING EUCALYPTS FOR TIMBER

Form pruning eucalypts

Information Note **3**

Eucalypts being grown for timber need to have a single straight stem. Many species of eucalypts are prone to developing more than one leader (main stem) and occasional large branches. Form pruning removes these defects early in the life of the tree to ensure straight form, upward growth and minimal defect to the timber.

WHEN SHOULD I FORM PRUNE?

Form pruning can begin on fast-growing trees after one year and is best done every year as required until clearwood pruning is completed. The first three years' form pruning can be done from the ground. After that a pole pruner will be required to form-prune double leaders that cannot be reached from the ground. Form prune the crown of the tree for a single leader to at least the height you will prune to and remove double leaders as soon as possible. Once form-pruned, the tree will grow on to develop a single straight trunk.

All pruning should be done during dry conditions, preferably in summer, to lessen the chance of fungal infections to the pruning wound. The fungal disease silverleaf is fatal for eucalypts if it invades a wound at any time of the year.



Removing double-leaders from the tree crown.

HOW MANY TREES DO I NEED TO FORM-PRUNE?

Form pruning is quick and easy if done when the trees are young. Form prune all trees that look like they have potential to be crop trees, i.e. trees with reasonable growth and that have a 'leader'. Often a single form-prune early in the life of a eucalypt will be enough for it to develop a strong central leader, and it will grow into a tall straight tree.

Form pruning can be followed by 2-4 clearwood pruning lifts (removal of all branches from the stem to a given height) to whatever clearwood height the grower wants to go to. If necessary, further form pruning in the crown above the clearwood pruning height can be carried out while clearwood pruning.

WHAT TOOLS DO I NEED?

The standard pruning kit includes secateurs, loppers, and a small jacksaw or pruning saw for 1-3 year-old trees. Pole pruning loppers, and then lightweight pruning ladders, are needed once the trees are too tall to prune from the ground. A harness should be used for any ladder-work above 4 metres. All tools should be kept sharp, and be the right size and weight for the person using them and the job at hand.

PRUNING TECHNIQUE

Form pruning is a significantly different operation to clearwood pruning. Form pruning involves cutting back selected branches from anywhere throughout the crown of the tree, whereas clear pruning simply involves removing all branches to a certain height or stem diameter.

When form pruning, it is best to start by visually evaluating the whole tree, and identifying the main 'culprits' – that is branches that are excessively heavy or that could prevent the formation of a single, straight stem. These are the priorities for removal and include double leaders or other branches likely to compete with the main leader, steep-angled and twisted branches, and any rogue large branches that will cause imbalance in the tree.

- Reduce double-leader trees to one leader by cutting back the more crooked leader, or the one on the leeward side. Do this when the competing leaders are young. The longer they are left competing, the more deviation in form and the more likely both leaders will blow out together in gusty winds.
- Remove steep-angled branches (ramicorns). 'Steep-angled' means stem/branch angle less than 30 degrees. Also remove any twisted branches.
- Remove or shorten any large branches so the tree is well-balanced.
- If pruning is tricky due to the position of the branch, it is better to leave a 10-15mm branch stub than damage the branch collar or main stem.
- Aim to remove sufficient branches to enable a strong central leader to develop. On many trees only one or two branches will need to be removed. At most, try not to remove more than 60% of the total foliage. Removing too much leaf area slows the upward growth of the tree. The more vigorous the upward growth, the better formed your tree will be.
- Multi-leadered or damaged trees can be cut right back to just above ground level and left to produce a new leader from the regrowth (coppice). This coppice does not need to be form pruned, however, because many competing leaders will develop. Choose one to be the main stem and shorten the rest.



Branch stubs of up to 15 mm can be left to avoid damage to the main stem.



Long-handled pole-pruning loppers for higher pruning.



Removing a major fork in a 2-year-old tree (a) before and (b) after.



◀ Removing a steep-angled branch (a) before and (b) after.



◀ Dealing with a major defect early in the life of a tree (a) before and (b) after.

ARE ALL EUCALYPT SPECIES THE SAME WHEN IT COMES TO FORM PRUNING?

Most species require form pruning but the amount of form pruning required does vary between species. Some species require intensive form pruning (*E. bosistoana*, *E. quadrangulata*), some require some form pruning as young trees (e.g. stringybarks such as *E. fastigata*, *E. muelleriana*) whereas other species require little if any (*E. saligna*, *E. sphaerocarpa*).

Some, but not all eucalypt species shed their branches (self-prune), which reduces the need for clear pruning. Trees will be more likely to self-prune if they are densely stocked.

Photos: John Milne, Paul Millen/NZ Dryland Forests Initiative.

MORE INFORMATION

The best source of information on growing eucalypts for timber is the NZFFA Eucalypt Action group. We recommend you join this group.

This information note is one of a series produced by the NZ Farm Forestry Association with funding from the MPI Sustainable Farming Fund. A series of videos is also available.

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