

Silviculture management (all species)



*Stem injection
– tordon axe*

Thinning a forest

Thinning a forest is one of the most important objectives for management of a forest, if the forest has become overstocked and the health of the trees has suffered it is important to manage the area for future forest and grazing activities.

The first activity is mark trees to retain e.g. habitat and recruitment trees. In the Fitzroy Basin, 6 habitat and 2 recruitment trees are to be retained per hectare. A habitat tree must have a 10 cm hollow, recruitment trees are dominant or a co dominant tree with signs of developing hollows. Mark stems for the future crop which has a good crown; the crown of a tree is the most important factor of a trees' health, also suitable species and a straight stem is vital. Trees that are unmarked and have a forest product available can be harvested. If the stand is thick the regeneration would be suppressed, a non-commercial thin (stem injection) to allow the future stems space to grow can be done after harvesting is complete.

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An example of a 'cool' fire



Fire management

Post harvest management can be by top disposal, to reduce the amount of fuel on the ground after logging. To avoid damage to commercial timber and habitat trees, debris from logging is at least two metres from any retained stem. Fire can also be used to control weeds such as rubber vine, lantana and other weeds. A fire permit is needed, from the local fire warden; notify and work with neighbours to reduce the risk of wildfire to properties and assist neighbours with fire fighting on their properties. After completing all burns, it is important to check the boundary of the burnt area regularly over a couple of days to ensure the fire has not escaped the fire break.

Once the habitat and recruitment trees have been marked, mark trees for retention, 100 trees per hectare over 20 cm diameter breast height, will give the best results so that trees have space to grow, the table below gives a general range of dbh and spacing. This is a general rule it is better to leave a few extra in case of damage from insects or storms or natural attrition.

Recommended spacing for hardwood (source Cant 2000)

Hardwood dbh (cm)	Spacing (m)	No. of trees/ha
10-20cm	7.5 X 7.5	178
20-40cm	10 X 10	100
40-60cm	12 X 12	70
60-80cm	15 X 15	44

Thinned forest



Biodiversity

Biodiversity is defined as 'the variety of all life forms-the different plants, animals and micro-organisms, the genes they contain, and the ecosystems of which they form a part.

It is not static, but constantly changing; it is increased by genetic change and evolutionary processes and reduced by processes such as habitat degradation, population decline, and extinction'. (Source EPA website)

Biodiversity can be enhanced by protecting the natural habitat of the forest. Continuous use of a single fire regime over a property will not benefit biodiversity. The best way to encourage biodiversity on the property is to use a varied fire regime, manage a percentage of the property primarily to conserve and encourage flora and fauna. Burn intervals can be longer apart than in areas that are used in the grazing areas of the property. Protect fire sensitive areas such as riparian vegetation from hot fires by maintaining fire breaks and more frequently burning areas that surround these areas to reduce the risk of wildfire. Manage forest areas to encourage native wildlife by the use of corridors; these areas should be close to other forested areas on the property with links to neighbouring properties which are of similar forest types. This will provide larger areas of feeding and breeding habitat; also wildlife can escape fire using links such as watercourses and boundary fences.

Biodiversity can be maintained through the protection of native tree species, all shrubs and fallen logs. When clearing weed areas such as lantana, blades should be raised and vegetation is only pushed down rather than pushing debris into heaps. Lantana can be pulled by tractor as long as it does not lead to erosion.

Protect hollow trees with nest sites also feed trees for species such as the yellow-bellied glider. After harvesting tracks must be drained and logging dumps covered by debris that has been pushed aside during harvesting.

Spotted gum forest with good biodiversity

