

Regeneration Burns



Key points

- Each autumn, Sustainable Timber Tasmania undertakes regeneration burns of recently harvested native forest.
- Research has demonstrated that fire is by far the most effective method of regenerating healthy eucalypt forests.
- Most of these burns occur in lowland wet eucalypt forest.



Regenerated native eucalypt forest after clearfell, burn and sow.



Research has shown that regeneration of wet eucalypt forest relies on major disturbance to open the canopy and increase the amount of sunlight reaching the forest floor, prepare a mineral earth seedbed, initiate seed-fall, and reduce the local number of insect and mammal browsers. In nature, this disturbance is usually bushfire.

Without this disturbance, the dense understorey and large amount of litter in lowland wet eucalypt forest prevents the continuous regeneration of eucalypts.

Regeneration burns following harvesting are designed to achieve a similar result to what nature achieves through bushfires. This enables successful regeneration and regrowth of the forest.

The burn prepares a mineral earth seedbed free of litter. Seed is then applied aerially. Ongoing research has confirmed that eucalypt seedlings establish readily and grow more rapidly on burnt ground than elsewhere.

Many native understorey species also respond positively to fires, with ground-stored seed triggered to germinate by the heat of the fire or by chemicals in smoke. Understorey species also colonise the site through dispersal by wind and birds. Other species regenerate from basal sprouts even when the stems appear to have been killed by fire or mechanical disturbance.

Some nutrients are lost to the atmosphere during burning while others are released and remain in the ash. Rainfall is also a source of nutrients so that over time, nutrient levels are balanced, thus supporting plant growth.

Absence of fire after harvesting not only inhibits regeneration, it increases the fire risk for many years as large amounts of fuel remain at the site.

Research has demonstrated that fire is by far the most effective method of regenerating healthy eucalypt forests.

While it is possible to mechanically rearrange or mulch eucalypt litter and harvesting debris, this increases the amount of soil disturbance and compaction, and leaves much of the site under heaps of mulch.

Eucalypts will not establish in unburnt mulch. Mechanical disturbance of the soils also promotes the regeneration of cutting grass, rather than the regeneration of trees and shrubs which follows fire.



In 2012 measurements show that the young trees in Picton 39A have reached a height of 28 metres and have a diverse complement of understorey tree and scrub species.

Forest coupe Picton 39A



Harvested in 1988 for veneer, sawlog and pulpwood. Logging debris was burnt in March 1989. The area was sown with eucalypt seed collected locally.



Regrowing forest, photograph in 1994.



The same forest in 2006.