

Why do we need regeneration burns in Tasmanian forests?

Each autumn, Forestry Tasmania undertakes regeneration burns of recently harvested native forest. Most high-intensity burns occur in lowland wet eucalypt forest.

These forests have a tall, open canopy over a dense secondary layer of small trees and tall shrubs. If this understorey contains rainforest species such as myrtle or sassafras the forest is "mixed forest", while if it contains broad-leaved shrubs such as dogwood or musk the forest is "wet sclerophyll forest".

The dense understorey and large amount of litter in lowland wet eucalypt forest prevent the continuous regeneration of eucalypts. Instead, regeneration relies on major disturbance to open the canopy and increase the amount of sunlight reaching the forest floor, prepare a mineral-soil seed-bed, initiate seed-fall, and reduce the local number of insect and mammal browsers. In nature, this disturbance is usually wildfire.

Regeneration burns following harvesting are designed to achieve the same results as nature achieves through wildfires, and establish abundant vigorous regeneration. The burn prepares a mineral-soil seed-bed free of litter. Seed is then applied aerially. Eucalypt seedlings establish readily and grow more rapidly on burnt ground than elsewhere (the 'ashbed' effect).



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. Nutrients lost to the site during the fire are replaced in the growing forest by inputs in rain. The fire also releases nutrients from the soil, which stimulate plant growth.



Absence of fire after harvesting will cause an increased fire risk for many years as large amounts of fuel will be left at the site. Burning some of the fuel off-site to generate energy may reduce this risk, and make the necessary regeneration burn of the harvested area easier to manage.

Alternatives to burning are not as effective. 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 shrubs which follows fire.



Fire is by far the most effective method of regenerating healthy forests. Tasmania's wet eucalypt forests are born out of fire, and the ecology of our forests is in balance when there is fire.

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