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Regrowing our South West native forest

The Forest Products Commission (FPC) replants and regenerates forest areas where harvesting takes place to ensure our forests grow back for the use and enjoyment of future generations, to provide habitat for native fauna and to maintain and enhance the biodiversity of the forest.

Regrowing our forests is a critical part of sustainable forest management.

How does this process work?

Eucalypt trees regrow from seed and when conditions are suitable, thousands of seeds germinate naturally in the forest. However, it is only when a disturbance, such as a wildfire, occurs that competition for moisture, light and nutrients are reduced and germinating seeds become established seedlings and continue to develop into young trees.

Jarrah is a common tree species in the South West and is well adapted to dealing with disturbance. Jarrah trees develop lignotubers – woody swellings at the base of the seedlings that act as a store of nutrients and dormant buds. If a jarrah seedling is damaged by fire or grazing by wild animals, it can quickly reshoot from the lignotuber. In the jarrah forest it is common for a pool of lignotubers to be lying dormant on the forest floor awaiting their chance to grow into trees.

Karri, another common tree species in the South West, is different to jarrah in that it does not form a lignotuber and grows directly from seedlings. For a karri seedling to grow they too require disturbance at the time of establishment otherwise most seedlings are suppressed and die from the surrounding forest competition.

As young trees grow they must compete with each other for growing space, sunlight, water and nutrients. In our South West forests these requirements are limited. When there is not enough to go around the more vigorous healthy trees suppress the weaker. Gradually over time the weaker trees will die leaving the stronger to continue to grow. This process continues over the life of the trees until in old age, where less than 100 per hectare may remain.

Interestingly, the tree species in our South West forest do not continue to grow to the same great age like some other forest trees of the world. Studies have shown that large old trees in the South West are usually in the vicinity of 300 to 400 years, with very few exceeding this age mainly because of natural environmental factors such as fire.

Silvicultural guidelines

Regrowing of the forest following timber harvesting is modelled on the natural processes by which the forest would normally regenerate from disturbance.

Based on years of research, observation and independent reviews, the Department of Biodiversity, Conservation and Attractions (DBCA) have developed comprehensive silvicultural guidelines for the main forest types subject to timber harvesting.

Silviculture is the practice of managing the establishment, growth, composition, health and quality of forests to meet diverse needs and values. A number of objectives are considered when developing silvicultural prescriptions for a given area.



Jarrah seedlings begin to emerge following a controlled regeneration burn.





Fire as a natural tool

Because Western Australia's eucalypt forests regenerate naturally following fire, the use of controlled fire is a key element of silvicultural practice following timber harvesting. It is also important for maintaining biodiversity.

Prescribed burning is used to:

- stimulate seed germination;
- create a suitable seed bed;
- release important nutrients back into the soil;
- temporarily remove understorey competition so that seedlings can grow; and
- reduce fuels following thinning to provide protection to young vigorous forests from wildfire.

More general prescribed burning can also help to protect all of our forests from potentially devastating wild fires by removing thick understorey growth and debris.

Monitoring

FPC harvesting and regeneration operations are closely monitored internally by the FPC and externally by DBCA staff to ensure regeneration outcomes are achieved.

Additionally, both the DBCA and the Conservation and Parks Commission frequently conduct independent audits of FPC operations to ensure compliance with requirements and standards are maintained.

Record keeping

A key element of the regeneration process is the collection and storage of operational outcomes so that future regeneration requirements can be planned and scheduled. This important activity is managed by DBCA who maintain a computer based program called SILrec, which captures all of FPC's harvesting and regeneration operations on regular basis.

Sustainable forest management

The FPC is certified to the Australian Forestry Standard (AS4708:2013) and the international standard for Environmental Management Systems (ISO 14001:2015). Through regular, third party, independent audits every part of FPC's business is scrutinised and FPC's operations are continuously improved.

These certifications and FPC's sustainable forest management practices ensure our forests continue to provide not only a sound supply of renewable timber for present and future generations, but also maintain their environmental values and social services.



Young karri regeneration at Rainbow Trail (part of Big Brook Dam recreation area) in 1934. The area was harvested in the late 1920s.



The same spot 64 years later in 1998.



The same spot 78 years later in 2012.

