Forest thinning enhances jarrah growth

By GEOFF STONEMAN

MOST of the Northern Jarrah Forest and much of the Southern Jarrah Forest carry dense stands of regrowth jarrah trees.

These stands have long been recognised as slow growing due to the intense competition for water and nutrients, and the slow process of natural selection for dominance (thinning).

Thinning is a well recognised forestry practise in managed stands of trees.

It is often found that by removing the slower growing trees the growth rate of the remaining trees can be increased without reducing the growth rate of the whole stand.

WA research has found that this general principal applies for jarrah.

By reducing the density of a stand of pole-sized trees from 35 sq m per/ha to 10 sq m per/ha the growth rate of the final 'sawlog trees' is doubled, while the nett growth of the whole stand is maintained at the same level.

In effect, the timber growth that would be spread thinly on up to 1200 trees a hectare can be accumulated on as few as 120 trees a hectare, without a loss in nett stand growth.

Without thinning, the pole-sized crop trees in dense stands would require a further 80 years before they reached sawlog size.

By thinning, this time is halved and 'crop' trees will take only a further 40 years to reach sawlog size.

This is a similar period to that taken by a newly planted pine.

In reducing the density of the forest a lot of trees are removed.

Unfortunately, at present, there is a very limited market for the sort of wood removed in the thinning operation.

Research results show that some 20 cubic m per/ha of the thinned wood can be used as sawlogs.

Of the other 90 cubic m per/ha, about two thirds is believed to have potential as small sawlogs, firewood, fence posts, strainers, reconstituted wood products, and charcoal, etc.

CALM'S Wood Utilisation Research Centre at Harvey is investigating some of these alternatives.

If markets are developed for the wood removed, then a thinning operation would become an attractive commercial proposition.

If the wood cannot be sold, thinning is still reasonably attractive because of the increased growth rate of crop trees.

The bulk of the trees that would be culled are so slow growing that they could not ever be realistically considered as quality sawlogs.

Researchers have measured up to 900 trees per hectare, growing at less than 1mm a year.

These trees would take at least another 300 years to reach a sawlog size, but if we thin we transfer that growth onto trees that will take only a further 40 years to reach a sawlog size.

Many foresters believe that somewhere between 10,000-20,000 ha of jarrah forest (about 10 per cent) is suitable for thinning.

These areas are characterised by dense even-aged regrowth pole stands, freely draining lateritic soils, high rainfall, and particular associations of understory vegetation species.

Other areas are unsuitable because wood production is in conflict with the primary land use (for example conservation of flora and fauna), or because the soils and topography are such that thinning may lead to intensification of dieback on these sites.

Research has shown that the fastest growing trees can be selected for retention when thinning a stand.

Trees should be selected for retention on the basis of their crown size (crown depth and width).

The trees with the largest crowns are usually those which respond best to a thinning.

Catchments in the high rainfall zone which are densely stocked with regrowth jarrah trees have been shown to be consuming more water than the old growth forest they replace.

By thinning we believe we can reverse this trend and increase stream flow from these catchments, thereby increasing the amount of water going into dams for metropolitan and country water supply.

Kalbarri road program

A THREE-year road improvement programme in the Kalbarri National Park is expected to be completed before the August school holidays.

The programme has upgraded existing roads and installed new ones to enhance the park's attractions.

The final stages included scenic lookouts on a new road leading to the Murchison Gorge, and the installation of a new road to Meanarra Hill which provided views over the National Park, the Murchison estuary and Kalbarri townsite.

Tourist funds were provided by the Main Roads Department for the Programme.

The new roads will provide all-weather access for tourist coaches and conventional vehicles.

The Department of Conservation and Land Management is aware of the importance of national parks to the tourist industry and has provided additional management resources.

This will provide improved opportunities for tourism and recreation in the Kalbarri National Park which will enhance the economic growth of the region.

— RICHARD MAY

Management plan for Swamp

A draft management plan is being drawn up for Benger Swamp near Harvey.

The swamp is a breeding ground for the freckled duck as well as a habitat for waterbirds that used the once extensive wetlands of the coastal plain.

Work on the draft management plan will start in September and be available for public comment in January, 1986.

About 90 per cent of Benger Swamp had been bought by the Government, and much of this is vested in the Department of Conservation and Land Management as a 'C' class nature reserve.

The remaining areas of the swamp will be bought as they become available.

In the past the swamp has been used for potato production, but this had proved to be economically unviable.

Vegetable and stock fodder are still grown.

A survey of biological values and agricultural uses had been carried out at the swamp over the past three years to determine management options.

A consultant had met farmers and people living in close proximity of the swamp.

Local and other interest groups will be consulted during the preparation of the draft management plan.

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