

# Native forestry

## Option for Lockyer Valley uplands

### Timber regrowth: a resource

Timber regrowth is common in many areas that have been historically cleared in the grazing landscape of the Lockyer catchment. The traditional response has often been to poison or fell this regrowth (young trees) with the aim of maintaining a grazing resource. However a number of landholders are now seeing the potential of regrowth timber as a valuable resource on their property.

If regrowth is allowed, managed well and not overgrazed, then these returned timbered areas will help protect the healthy functioning of the catchment. An added bonus is that the timber could be harvested in the future and provide an additional income for the landowner while grazing can continue if well managed.

In 1974, a Queensland Government land use study found that the Lockyer and Bremer uplands accounted for 60% of erosion in the Moreton region, whilst only covering 10% of the total catchment area. The authors recommended that these upland areas should be returned to more conservative uses, such as forestry.

These cleared upland areas have the potential to support regenerated native forests. Benefits of this are many.

- Integrating forestry and conservative grazing can maintain excellent groundcover and help restore and further protect the upland landscapes.
- The reduction in cultivation enterprises on upland areas contributes to the reduced rates of erosion.
- Valued timber species such as Spotted gums (*Corymbia citriodora*) and ironbarks (*Eucalyptus crebra*, *E. siderophloia*), grow well in the upland



Good option: A low rise to the south of Gatton growing both trees and grass provides the opportunity for grazing, timber production and catchment protection.

areas of the Lockyer catchment. Existing stands of these native hardwoods have the potential to support further natural regeneration.

- The benefits of retaining and increasing native forest areas for productive purposes are:
  1. Native forestry has an extremely low impact on the environment.
  2. Native forestry facilitates natural propagation, requiring minimal chemical use and mechanical intervention is only required at approximately twenty year intervals.
  3. Alternative streams of income from sustainable resource management.
- Provision of habitat for wildlife and contribution to linkages in the landscape (wildlife corridors).

### Native timber or grazing?

Managing areas for timber production is sometimes seen to be in financial conflict with grazing usage. However recent studies show that an integrated timber/grazing operation can provide greater returns per hectare than grazing alone.

In the Autumn/Winter 2007 issue of *BeefTalk*, Bundaberg-based beef advisor and Department of Primary Industries and Fisheries officer, Bill Schulke, examined how financially worthwhile timber production can be, either as a pure timber production exercise or when mixed with beef production.

At a value of \$80 to \$100 per cubic metre for timber and growing one cubic metre per year, Bill Schulke showed that timber generates more income than beef from cleared areas of either ironbark or spotted gum on duplex soils and loams, or spotted gum and wattle on sandy duplex soils.

Only on the productive forest red gum (*Eucalyptus tereticornis*) flats will a greater return be achieved by beef, with an estimated gross margin of \$112.52/ha/year compared with only \$80 to \$100/ha/yr for timber. This estimate assumes the red gum flats produce one cubic metre of timber/ha/year (as for poorer country) and the liveweight gain in the cattle is valued at \$1.50/kg.

# Guidelines for managing native forest

## Managing tree spacing for sustainable native forest management

- Optimise individual tree growing space. A stand of dry forest, such as spotted gum or ironbark, in which most of the trees are 10 to 20 centimetres in diameter, should have a maximum of 180-200 trees per hectare.
- As the forest grows, thinning will be needed. When trees have reached an average diameter greater than 30 centimetres at chest height, the number of retained trees should reduce to 100 to 150 trees per hectare (i.e. 8-10 metres between trees).
- Strategies will vary depending on the initial condition of the forest. Previously heavily logged forest areas may have a very dense collection of young stems, with some older trees that were deemed not suitable during previous harvests. Thinning of these areas may be required.
- Ensure the regeneration of the undergrowth to increase the viability of the resource in the future.
- Thinning will be necessary every 10 to 15 years, with the decision driven by the range of products that can be produced.
- The selection of trees for retention should be based on preferred species (such as ironbark, spotted gum, forest red gums), quality specimens (straight log length and limited defects such as scars, bumps or insect damage), healthy dense tree crown, limited dead branches and mistletoe, and dominant (or at least co-dominant) crown placement in the canopy.



Thinning of a native forest stand. Allowing co-existence of grazing and forestry resource.



Overgrazed: Forested areas can be easily overgrazed, such as this one near Withcott. Tree cover does not alone ensure ground protection.



Lighting a control burn.

## Managing regeneration

- Regeneration of eucalypt forests generally relies on a combination of seed fall, lignotubers and coppice (growth from stumps).
- In areas where there is poor regeneration history it is recommended that the time of harvest operations coincide with the retained trees having a mature crop of seed.
- Many eucalypts coppice. This can be a good alternative to seedling regeneration if stump heights are less than 30 centimetres to ensure that future stems are not lost to wind throw.
- Once a tree height of two metres is reached, coppice regeneration can be thinned to one shoot (preferably one that originates from ground level).

## The role of fire

Fire has an important and positive role to play in maintaining the diversity of native plants and animals in our landscape. For many of our native plants however, being adapted to fire does not mean that they will flourish under any burning regime. Positive effects of fire include; opening up the foliage canopy, allowing sunlight to reach the ground, creating an ash bed that is rich in nutrients for germinating seedlings and potentially eliminating insects and fungal diseases. Some guidelines for fire management are:

- Periodic fuel reduction burning should be undertaken in the milder months.
- Regeneration areas should be protected from fire for at least the first three years. Care should be taken with the first fire after regeneration establishment in order to ensure that the fire does not harm it.
- If possible, never burn the whole of a patch at any one time. Unburnt areas can provide refuges for wildlife.
- Seek expert advice before undertaking control burns (e.g. from your local Rural Fire Brigade)

## Legislation

Landholders need to be aware of the implications of the *Vegetation Management Act 1999* on their management of native vegetation. Restrictions do apply where vegetation is mapped as remnant by the Queensland Herbarium. It is advisable to contact a Vegetation Management officer from the Queensland Department of Natural Resources and Water before undertaking any vegetation management activities.

Adapted from Private Forests SEQ training for native forest management.