Oil Mallee Association of WA Inc.

Best Practice Fact
Sheet No. 6

Mallee Code of Practice
Ongoing Management of Mallee Plantings

INTRODUCTION

Integrating mallees into agricultural systems requires minimal intense management beyond the first two years after establishment. Their hardiness makes them an attractive option for landowners in medium to lower rainfall areas where large scale broadacre cropping and grazing is common agricultural practice. However despite the relative ease with which mallees are established and their general maintenance free growth habit, some basic management techniques should be applied, regardless of whether they are intended for harvest or not.

This fact sheet outlines the ongoing management requirements to achieve Best Practice mallee plantings and includes the following aspects:

- Survival monitoring
- Infilling and re-planting
- Weed competition and control
- Grazing
- Adjacent land uses and their potential impacts upon mallees

SURVIVAL MONITORING

Although the aim with any tree planting project is to achieve a 100% survival rate, this is very rarely achieved. The same applies to mallees. An acceptable survival rate could expect to be in excess of 85% while an excellent result would be in excess of 90%.

If it is intended to harvest your mallees, a high level of survival (in excess of 85%) is essential to ensure maximum harvesting efficiency is achieved. Likewise, a high level of survival will ensure the trees are contributing their maximum environmental benefit such as utilizing groundwater, uninterrupted shelter and windbreak benefits or aesthetics.

The accuracy of your survival assessment depends on what level of sampling you carry out. For small plantings a higher intensity (up to 100%) of sampling is both cost efficient and practical, whereas for larger plantings, a lower intensity (as low as 3% but often 15%) will be adequate to achieve a realistic idea of survival. It is important to understand the distribution of areas of poor survival ie. occasional dead gaps or several small gaps requiring infilling or larger patches which have not survived requiring re-planting. Survival assessments should always be carried out after the first significant rains in the year after planting.

In carrying out a survival assessment you need to know:

- The size of the area planted which is being sampled OR the number of trees initially planted.
- The intended or desired stocking level.
- The number of trees dead or alive in the area being sampled.
- Surviving trees should be obviously alive, healthy and vigorous. Trees which are alive but stunted should be considered to be dead or unlikely to grow vigorously.

Survival is the number of dead or alive trees as a percentage of the number initially planted.

INFILLING AND RE-PLANTING

Having determined your survival and its distribution, you will know if you need to infill or re-plant areas of poor survival. This is generally done by hand unless survival is poor and it is easy for a machine planter to work. Areas requiring infilling or re-planting need to be weed free (as per normal establishment practice). For larger areas, total re-planting may be necessary.

WEED COMPETITION AND CONTROL

To maintain growth and vigour and to ensure mallee plantings remain healthy and free of disease, it is recommended weeds be controlled. Competition for moisture and nutrients MUST be kept to a minimum. Second year weed control in May – July of the year following establishment is recommended (see Fact Sheet 3). Beyond second year, crown growth and eventual canopy closure will shade the ground below and result in a reduction of re-germinating weeds.

GRAZING

The hardiness of mallees and the ease with which they are integrated into existing agricultural systems makes them a popular choice for sheep graziers. Mallees can tolerate some grazing pressure placed upon them, however the ability of mallees to recover from grazing pressures is related to the trees vigour and size. Damage to mallees usually results from premature defoliation through grazing, trampling, rubbing and exposure of root systems.

To achieve the best results, mallee plantings should not be grazed for the first 18 months after establishment or for three months after harvest. This will allow sufficient time for young trees to develop solid root systems without being compacted and damaged, while the crowns will grow vigorously and free from grazing pressure. Good planning can minimize the chance of ongoing damage from grazing. This includes avoiding areas of high stocking pressure such as watering points, access gates and transit routes.

ADJACENT LAND USES AND THE EFFECTS ON MALLEES

Planting mallees into a cropping farming system can cause some conflicts in land use, particularly with regard to weed control and herbicide usage. Sound initial planning and caution in carrying out operations, the potential for such conflict can be minimised. Planting mallees will have positive effects on adjacent landuses, such as providing shelter to crops and stock and using excess groundwater.

The following practices should be applied when spraying alongside trees and in order to minimise the potential for spray drift damage:

- Always carry out spraying operations within the safe working limits for weather and always use compatible chemicals
- Reduce the vehicle speed at which spraying is carried out
- Reduce spray pressure and increase nozzle size
- Increase the amount of oil used in spray mixes (where applicable)
- Use air induction nozzles & shrouded booms where possible.

FIRE MANAGEMENT

Fire is unlikely to occur within a mallee planting unless caused by machinery at the time of harvesting or establishment. However it is important to manage fuel loads and minimise the likelihood of fire spread and damage to the crop through reduction of fuel loads. Access for fire vehicles and ground based fire crews will be necessary.

To minimise the risk of fire:

- Maintain plantings as weed free as possible, either chemically or through the introduction of grazing after suitable grazing free period.
- Leave gaps 10m wide every 200m to permit access and create escape routes.
- Leave firebreaks of at least 3m surrounding block plantings.
- Maintain weed free buffers around belt plantings.
- If crown coverage is very thick, undertake harvesting operations if possible.

For more information contact the Oil Mallee Association on 1800 625 511 or email info@oilmallee.com.au

Disclaimer: The Mallee Code of Practice Best Practice Fact Sheets are based on the best available information at the time of publication and are provided as a general guide only.