MALLEE CODE OF PRACTICE
SITE ESTABLISHMENT

Best Practice Fact Sheet No. 3

October 2003

INTRODUCTION

Adequate preparation of your site for planting is essential for young seedlings to get established quickly and grow rapidly. Most importantly, effective ground preparation will ensure high levels of survival contributing to the maximisation of biomass production and ultimately the commercial viability of your planting.

This fact sheet will detail the methods available to achieve Best Practice site establishment and include the following:

- Ripping
- Mounding
- Cultivation
- Furrowlining and Scalping

RIPPING

All soil types benefit from ripping. Ripping will assist with the absorption and retention of soil moisture and create conditions to enable tree roots to quickly establish themselves. Therefore ripping slightly deeper than the agricultural hardpan can be beneficial. A depth of 400mm is recommended. Deep ripping (>700mm) may be beneficial on specific sites particularly in higher rainfall zones, however this would be determined by the depth of hardpan encountered. In all cases it is essential ripping does not result in the creation of air pockets beneath the soil. A press wheel or roller should be attached behind the ripper to enable any clods to be broken up and air pockets to be pushed out. Alternatively, track or wheel rolling riplines will assist in this process.

Ripping may be carried out prior to planting using either a bulldozer or agricultural tractor, Preferably such ripping should be carried out in summer or autumn when maximum shatter may be achieved or preferably, the year before planting to enable riplines to settle and become moist. Alternatively, ripping may be carried out at the time of planting as a single pass operation. It is important if this latter method is used, enough horsepower on the machine pulling the ripping implement exists ensuring only one pass is required and that the recommended depth is reached.

In the event of significant clods, roots and rocks being brought to the surface, particularly if harvesting of the mallees is intended, these should be removed. This may be done by rolling, ploughing or using scarifier or stick rake to remove the debris. Manual removal is also possible, although this is time consuming and expensive.

In undertaking ripping:

- Ripping should occur close to or on the contour to minimise the potential for erosion.
- Ripping should not occur across or within waterways or drainage lines
- Ripping should not be deeper than 500mm unless there is a rippable hardpan.

MOUNDING

Mounding provides a cultivated bed into which mallees can be planted. Mounds provide a stockpile of topsoil and nutrients as well as aeration, but are necessary only where an area of planted mallees is expected to be subject to seasonal waterlogging. Areas permanently inundated by water are not suitable for planting mallees and should be avoided.

Mounding is best carried out using a trailed mounder of 4 - 8 offset disc configuration. Mound width and height may vary depending on the type of disc used and the arrangement of the mounder, however it is essential the soil be adequately cultivated and the size of clods minimised as far as possible. The use of a press wheel to assist with developing the mound profile and compacting the soil is an efficient way of achieving this.

The benefits of mounding can be countered through incorrect implementation and construction.Points to remember include:

- Mounding must not interfere with surface water movement as this can cause erosion and increase waterlogging. Mounds should have a slight fall so that they allow water to runoff along contours and not create a 'dam' effect.
- Mounding should not occur across or within waterways or drainage lines
- Mounding is not a substitute for proper drainage work.
- Mounding is not suited to areas prone to wind erosion ie. light sandy soils

CULTIVATION

Cultivation is often used as a grooming technique after ripping to remove or breakdown clods and to fill in large, exposed riplines in heavier soils. There is a risk of erosion by both wind and water, particularly in light soil types. It is essential the risks be assessed and weighed up against any potential benefits when carrying out this site establishment technique.

FURROWLINING AND SCALPING

Furrowlining and scalping involve the creation of a trench into which the mallee seedling is planted through the removal of several inches of topsoil to the side of the trench. The trench acts primarily as a moisture catchment but also provides shelter to young seedlings from wind and drying effects. Furrowlining and scalping may be carried out at the time of ripping or at any stage as a separate operation nearer to the time of planting. More commonly it occurs as part of a single pass planting operation where ripping, furrowlining and planting all occur with the use of a single machine eg. Chatfield Tree Planter

Furrowlining and scalping is an efficient method of mechanical weed control through the removal of the surface soil and associated seed bank away from the newly established seedlings.

In undertaking scalping and furrowlining it must be understood:

- Furrowlines will collect and move water. It is essential they be located along or close to the contour to minimise the potential for erosion.
- Furrowlines may act as catchments for weed seeds. Monitoring weed growth and spread is essential.
- Furrowlines should not occur across or within waterways or drainage lines

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