



ADVICE FROM THE SEEDLING GROWERS ASSOCIATION OF SOUTH AFRICA

PLANTING

The planting procedures implemented in the establishment of plantations are important as they have a direct effect on initial seedling survival and growth. This impacts on stand uniformity and ultimately on the volume of utilisable timber that is harvested. One of the main factors affecting the yields of plantations is the failure to achieve full stocking at planting.

1. General

1.1 The aim is quality rather than quantity. Good supervision is absolutely essential. Planting gangs should be limited to 15 - 20 labourers per supervisor and no task work given; it is essential that the gang be kept together thus preventing the work being spread out over a wide area. It is useful to have the planting gang operating in unison in a long line. This prevents slow workers becoming separated from fast workers and enables the supervisor to perform his task efficiently and to easily check the work of each individual.

1.2 Planting positions should be well prepared with a favourable soil tilth (i.e. No hard clods). This is important as it is essential that there is good contact between the root plug and mineral soil.

1.3 Plant with the root collar 4 - 8cm below the soils surface.

1.4 No planting within 1,5m of the lower side of the road.

2. Time of Planting

In Natal and Transvaal best results have been obtained by planting from September to January (October to January) in frost susceptible areas. Earlier plantings grow faster, achieve more height before winter and are usually less susceptible to frosts. February plantings grow slowly, respond to fertilizer less and suffer greater mortality.

Planting *P.patula* should be avoided from December to March because of high post-planting temperatures and, in some cases, the activity of *Hylstes augustatus*.

In the Zululand coastal area, the best planting time is during the cool months from March to September.

3. Frost Susceptibility

All vigorously growing tree saplings are susceptible to frost damage. Progressively shortening day lengths and reducing minimum temperatures confer frost hardiness to some species. Most frost hardy are the pines and some of the cold tolerant eucalypts. It is essential to plant frost-prone areas first to enable the trees to become established and attain reasonable growth before the first frosts of the following season. Frost susceptible areas should not be planted after the end of February.

4. Watering

All seedlings should be watered immediately after being planted unless exceptionally good rains have fallen. This operation ensures that good contact is made between the mineral soil and the root plug, encouraging rapid root development out of the plug. One to two litres of water can be applied, depending on soil moisture and weather conditions.

5. Winter Planting (April to July)

Should only be attempted when planting pine into frost-free areas where soil moisture has been conserved. These sites should receive a complete cover spray of herbicide before the end of March. Seedlings must be watered at planting (2 litres) and the seedling collar must be at least 100mm below the soil surface.

6. Blanking

Newly planted areas should be inspected within 2 - 3 weeks of planting (2 weeks in coastal Zululand). Where survival has been less than 90%, dead plants should be replaced immediately. The same species must be used and, if possible, seedlings or rooted cuttings of the same stock number and approximately the same size should be used. Late plantings should be inspected and blanked, if necessary, in September. A compartment, or large areas within a compartment, achieving survival of 60% or less by the following growing season, should not be blanked but should be replanted.

7. Insect pests at establishment

Insect pests are often responsible for early seedling mortalities. Pesticides can be used on a preventative basis, at establishment. Table 1 summarises the main insect pest and the preventative measures that can be implemented to minimise damage.