

TREE PLANTING ON HILL COUNTRY

must be felled within the next 5 years or so or they may compete with the eucalyptus crowns and reduce the general growth rate.

Eucalyptus gigantea

This eucalypt was planted in a pure stand in the sheepyard plantation in 1917 by the same strip method as used for *E. regnans*. It has made heavy timber growth with good height.

Eucalyptus obliqua

On an area where deciduous trees had been planted and failed *Eucalyptus obliqua* was sown in 1909. The seed was sown in strips and seedlings transplanted on the spot, and this plantation now carries a crop of trees with clean, straight stems, having made the highest volume increment of all eucalypt species on the area. The space between stems is now about 12ft., and with the spreading crown development of this species this crop requires a light selective thinning, which would leave a widely-spaced final crop to mature in possibly another 20 years.

The timber of *E. obliqua* is reputedly of good quality for large-dimension sawn boards or scantling, and a trial of this 40-year-grown timber should be made to establish its degree of maturity on this site. Tests for durability would furnish useful information, as trials in some parts of New Zealand indicate that mature timber of *E. obliqua* may furnish post timber durable up to 15 years.

On Puketiti this timber has been split fairly easily and is in use as rails and battens on station fences, but it has not been in use long enough to supply evidence of its durability.



A corner of Te Wake plantation planted with *Eucalyptus sieberiana* in 1924 at about 9ft. spacing.

Eucalyptus saligna

A crop planted 24 years ago on a southerly slope in the northern area of Te Wake plantation has made only fair growth. The height growth is low for this species at this age and the tree form is poor, stems being unduly branched and not of the clean, straight type characteristic of this species when growing under suitable conditions.

A few trees growing in mixture with broad-leaved trees in the home plantation on brown loam soil are of good height and form growth. In Te Wake plantation the poor growth is probably a result of too high an altitude, an exposed southerly aspect, and a shallow, clay-mudstone soil; this species prefers a deep silt or loam soil.

Eucalyptus sieberiana

Apparently well suited to the conditions at Puketiti, *Eucalyptus sieberiana* is one of the most silviculturally - promising species which has been tried.

In Te Wake plantation this species was planted 24 years ago on moving land of mudstone clay loam soil at about 9ft. spacing. It has now produced a tree crop of good height and uneven diameter growth up to about 18in.

An older block on the main roadway, planted 32 years ago, indicates the possible growth of this species. It was planted on a north-west slope on clay loam of the brown loam group at a spacing of 5 to 6ft. Growth has been excellent and, though the stocking is rather uneven, a full crop has been produced, now spaced at 10ft.,



The central area of Te Wake plantation, which was fixed by the planting of pollard willows (*Salix babylonica* and *S. fragilis*) and then Lombardy poplar.