



GROWING EUCALYPTS FOR TIMBER

Some example regimes

Information Note **6**

This Information Note provides some examples of the different regimes growers are adopting around New Zealand to produce timber from eucalypts. It reinforces the message that there is no single right way to grow eucalypts, but there are some key elements of ‘best practice’ which growers need to understand when embarking on establishing a eucalypt crop.

If you want to see and learn more about some of the different options for growing eucalypts, join your local branch of the NZ Farm Forestry Association. This will give you the chance to talk to experienced growers in your region, visit other properties, and learn from others’ experiences.

GROWER 1 – LOCATION : SOUTHLAND

Significant site features including frost risk	Mostly alluvial gravel with relatively high water tables close to river.
Objectives/target markets	Sawlogs (but currently considering biomass – firewood and chipwood).
Species planted	<i>E. nitens</i> and <i>E. regnans</i> .
Target rotation length	30 years plus (currently no sawlog market).
Pre-planting preparation	Deep soil cultivation with mechanical ripper.
Month/season of planting	Spring/summer.
Numbers planted stems per hectare (sph)	200 (agroforestry regime).
Post-planting operations	Versatil/Gallant release spray when needed.
Target final stocking spha	100.
Form pruning (yes/no) and age	No.
Triggers/age for first clearwood pruning	Pruning as required from year 2 to year 6.
Triggers/frequency of subsequent pruning	–
Target pruned height	6-7 metres.
Age at first thinning and target sph remaining	One thin only by year 4 to 100 sph.
Age at second thinning and target sph remaining	N/A
Any further thinning?	N/A
Production thinning?	No.
Other comments	Future planting may be at 600-800 sph for chip or firewood regime.

GROWER 2 — LOCATION : NORTH CANTERBURY

Significant site features including frost risk	North-facing side of a gully; frost to -5°C.
Objectives/target markets	Sawlogs.
Species planted	<i>E. muelleriana</i> , <i>E. bosistoana</i> (and other durable eucalypts).
Target rotation length	25-30 years.
Pre-planting preparation	Gorse controlled with Tordon for two years before pre-planting spot-spray.
Month/season of planting	September (would plant earlier on drier sites).
Numbers planted stems per hectare (sph)	1100 (3m x 3m).
Post-planting operations	Post-planting spray with Gardoprim (low rates) plus knock-down chemicals.
Target final stocking spha	200.
Form pruning (yes/no) and age	Small amount needed, mainly on <i>E. bosistoana</i> .
Triggers/age for first clearwood pruning	First lift at age 6 after first thin. 250 stems/ha pruned to 2m approx.
Triggers/frequency of subsequent pruning	Final crop of 200 sph. Will prune annually using a calliper down to 8cm dbh.
Target pruned height	6-7m at least.
Age at first thinning and target sph remaining	Age 6; thinned to approx. 500 sph.
Age at second thinning and target sph remaining	Age 10, thinned to approx. 250 sph.
Any further thinning?	Age 14, final thin to 200 sph.
Production thinning?	Yes, will use thinnings for temporary posts and firewood. Also feeding foliage from thinnings to deer; proving surprisingly palatable.
Other comments	Currently experimenting with planting mixtures of durable eucalypts; planting at least 1100 sph; will thin heavily to best stems.



GROWER 3 — LOCATION : NORTH CANTERBURY

Significant site features including frost risk	Flat, land with good fertility, heavy clay soils, frost to -5°C.
Objectives/target markets	Sawlogs.
Species planted	<i>E. nitens</i> .
Target rotation length	25-30 years.
Pre-planting preparation	Ripping.
Month/season of planting	Spring.
Numbers planted stems per hectare (sph)	In this case the eucalypts were originally nurse crop trees for blackwoods, 3m by 6m, then subsequently kept for timber trees.
Post-planting operations	Post-plant spray around tree with a mix of Versatil, Gallant and Gardoprim.
Target final stocking spha	200.
Form pruning (yes/no) and age	No. None was needed.
Triggers/age for first clearwood pruning	Branch size less than 25mm and DOS of about 110mm.
Triggers/frequency of subsequent pruning	Every 3-4 years.
Target pruned height	6 metres.
Age at first thinning and target sph remaining	–
Age at second thinning and target sph remaining	–
Any further thinning?	–
Production thinning?	No.
Other comments	–



John Fairweather processing *E. nitens*, North Canterbury (see video in this series).

GROWER 4 — LOCATION : EAST WAIRARAPA

Significant site features including frost risk	Sheltered fertile rolling ex grassland; heavy clay soils; occasional frosts down to approx. -5°C.
Objectives/target markets	Ground-durable posts and poles.
Species planted	<i>E.quadrangulata</i> , <i>E.globoidea</i> , <i>E.bosistoana</i> .
Target rotation length	20 years.
Pre-planting preparation	Pre-planting spot spraying (glyphosate and terbuthylazine).
Month/season of planting	October.
Numbers planted stems per hectare (sph)	1600.
Post-planting operations	None needed.
Target final stocking spha	400.
Form pruning (yes/no) and age	Yes, @ 2yrs. All trees with final crop potential. Double leaders and large branches removed.
Triggers/age for first clearwood pruning	Age 4-5. Approx 30-40% of trees pruned to approx. 2m. Good height growth, lower branches dead, largest branches @ 3+ cm diameter. No more than 40% green crown removed. Further form prune at same time if needed.
Triggers/frequency of subsequent pruning	Further pruning should not be necessary for post/poles crop. Edge trees may need further pruning.
Target pruned height	2 metres.
Age at first thinning and target sph remaining	Age 5. Remove poor form trees/runts. Target sph remaining - 1000.
Age at second thinning and target sph remaining	Age 7-8 or as crowns start to touch. Thin to best stems - target sph remaining - 400.
Any further thinning?	Unlikely.
Production thinning?	Possibly, for firewood.
Other comments	Cut stumps (following thinning) allowed to coppice; may allow to regrow for small diameter firewood or cut back to waste with scrub bar later on if causing a problem.



GROWER 5 — LOCATION : BULLS, MANAWATU

Significant site features including frost risk	Dry, low fertility, but warm, and mostly frost free, north facing sand dune slopes.
Objectives/target markets	Stringybark eucalypts and others grown primarily for sawn timber.
Species planted	<i>E. muelleriana</i> , <i>E. laevopinea</i> , <i>E. globoidea</i> , <i>E. microcorys</i> , <i>E. cladocalyx</i> , plus <i>E fastigata</i> on southern slopes.
Target rotation length	30-40 years.
Pre-planting preparation	Generally on cut-over from harvested radiata pine. Rows of pine are planted first winter after harvest, and eucs interplanted 12-15 months later.
Month/season of planting	Late September into October.
Numbers planted stems per hectare (sph)	500-600 inter-planted with rows of radiata pine.
Post-planting operations	Post-plant spraying round, but never over, seedlings.
Target final stocking spha	100-200.
Form pruning (yes/no) and age	Yes, progressively from about age 3 along with clear lift pruning.
Triggers/age for first clearwood pruning	From age 3, maybe 4. All pruning done in dry conditions, preferably mid-summer to mid-autumn. Prune to about a 10-12 cm. trunk diameter, sometimes severe pruning required for poorer form trees and especially <i>E. fastigata</i> .
Triggers/frequency of subsequent pruning	Aim to visit stands every year from 3-4 until pruned to approx. 6.5 metres.
Target pruned height	6-7 metres, sometimes bit more.
Age at first thinning and target sph remaining	Progressively remove many of the pines and poorer eucalypts.
Age at second thinning and target sph remaining	–
Any further thinning?	–
Production thinning?	Often production thin most or all of radiata pine at around 15-20 years. Eucalypts may be production thinned for post material, (especially <i>E. microcorys</i>) and/or small sawlogs.
Other comments	–

Photos: John Milne.

MORE INFORMATION

This information note is one of a series produced by the NZ Farm Forestry Association with funding from the MPI Sustainable Farming Fund. A series of videos is also available.

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