



# Private Forests Tasmania

## Farm Forestry Series - Eucalypts



This series on Eucalypt Farm Forestry has five parts. Each part can be read individually or as part of the series.

1. Overview
2. Establishment
3. Clearwood Regimes
4. Pulpwood Regimes
5. Cost and Labour Estimates

### **COST & LABOUR ESTIMATES** Note: See important explanatory notes on page 2

Activity Silvicultural Operation	Year	Timing	Cost \$/ha	Labour Hours/ha	
<b><i>Establishment (Planning and silvicultural activities to ensure successful establishment)</i></b>					
FPP / Management Planning <sup>1</sup>	-1	~12 months prior to planting	75	-	
Seedlings <sup>2</sup>	-1		250 - 300	-	
Weed Control <sup>3</sup>	-1		0 - 100	0 - 2	
Plantation Layout <sup>4</sup>	0	Late Summer to Early Autumn	20 - 30	1	
Weed Control <sup>5</sup>	0		50 - 100	1 - 2	
Cultivation <sup>6</sup>	0		100 - 250	1 - 2	
Fencing & Browsing Control <sup>7</sup>	0		250 - 800	2 - 5	
Weed Control <sup>8</sup>	0	Late Autumn to Early Spring	80 - 120	1 - 2	
Planting <sup>9</sup>	0		140 - 220	7 - 10	
Fertilising <sup>10</sup>	0		120 - 160	4 - 5	
Weed Control <sup>11</sup>	1		175 - 200	4 - 5	
<b><i>TOTAL - Establishment</i></b> (Approx. \$1.25-\$2.40/tree for pulpwood @ 1000 stems/ha ) (Approx. \$8-\$16/tree for clearwood production @ 150 stems/ha)			<b>1260-2375</b>	<b>21-34</b>	
<b><i>Management (Pruning &amp; Thinning)</i></b>					
Form Pruning <sup>12</sup>	2	Spring	40 - 60	2 - 3	
Pruning <sup>13</sup>	1 <sup>st</sup> Lift		3	180 - 220	11 - 14
	2 <sup>nd</sup> Lift		4	190 - 225	10 - 12
	3 <sup>rd</sup> Lift		5	195 - 225	8 - 11
	Final Lift		6	100 - 115	4 - 5
<i>Pruning (Total for pruning to 6.4m)</i>			705 - 845	35 - 45	
PSC (total for 4 lifts) <sup>14</sup>	3-6		100 - 120	2 - 3	
Non-Commercial Thinning <sup>15</sup>	6	425 - 510	17 - 21		
<b><i>TOTAL - Management (Pruning &amp; Thinning)</i></b> Approx. \$8-\$10/tree for clearwood production @ 150 stems/ha			<b>1230 - 1475</b>	<b>54 - 69</b>	
<b><i>TOTAL - Establishment &amp; Management</i></b> Approx. \$16-\$26/tree for clearwood production @ 150 stems/ha			<b>2490 - 3850</b>	<b>75 - 103</b>	



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*NB Estimates are a guide only and may vary depending upon a number of factors.*

*Virtually all operations can be undertaken by landowners with basic training in silvicultural techniques.*

Estimated cost (\$/ha) is for contractors to undertake silvicultural work. Actual costs will vary from site to site and quotes should be obtained. Labour (hours/ha) is estimated time required for landowners to undertake silvicultural operations and will vary between landowners, depending upon experience and site conditions. Fencing (if required) is usually the greatest cost associated with establishment and can vary considerably depending upon type of fence, terrain and area to perimeter ratio. Costs such as Forest Practice Plans and Pruned Stand Certification tend to have fixed costs rather than being dependent upon the area established. Costs for these activities have assumed establishment of a 10 ha site.

1. Forest Practice Plan (FPP) and management plan by consultant @ \$750. Cost can vary depending upon the level of planning required. Planning permission from local council (if required) will increase costs.
2. Seedlings - 1000 *E.nitens*/ha @ \$0.25-0.30 each.
3. Conducted ~12 months prior to planting to control woody weeds such as blackberry (not required all sites).
4. Marking of planting lines for strip application of knockdown herbicides prior to cultivation. Materials (eg: coloured markers) are required for layout. Very useful if limited experience with establishment to ensure correct spacing and stocking is achieved.
5. Strip application of knockdown herbicides (pre-cultivation). Chemical cost of \$20-30/ha.
6. Cultivation (ripping and mounding) in accordance with FPP. Steep sites and soil erodibility may place restrictions upon cultivation. Small equipment (eg: PFT mound plough and farm tractor) at the lower end of the cost range. Large dozer at the high end of the range. Total costs may be \$100-\$250/ha
7. Fencing to exclude stock and native animals. Labour requirement is very variable. Costs are based on 1400m of fencing required for a 10 ha site (500m x 200m).
  - Electric fencing to exclude stock @ \$1500/km (~\$200/ha).
  - Wildlife-proof fencing @ \$6000/km (~\$800/ha).
  - Poisoning program (~\$50/ha) and/or shooting required if fencing is not wildlife-proof.
8. Strip application of residual herbicide applied to planting mounds @ ~\$50/ha chemical cost (strip application amounting to ~50% of total area).
9. Planting of containerised stock. Pottiputki used for planting flat cultivated ground is at the lower end of the cost range. Planting spade used for uncultivated soil and steep slopes is at higher end of the cost range. Labour rate is based on planting 100-150 trees/hour. Planting conditions can greatly affect cost and rate of planting.
10. Fertiliser @ ~\$60/ha (based on 100g/tree). Labour rate based on fertilising 200-250 seedlings/hour.
11. Post-planting weed control with Eucmix granular herbicide. Chemical cost of ~\$100/ha for granules. Labour rate based on releasing 200-250 trees/hour.
12. Light form pruning from the ground. Not required on all sites.
13. Variable lift clearwood pruning based on 14-18 trees/hour. Fourth and final lift assumes the completion of pruning to 6.4m on 50% of trees.
  - a) First lift @ \$0.90-\$1.10/tree (200 trees pruned/ha)
  - b) Second lift @ \$1.10 - \$1.30/tree (175 trees pruned/ha)
  - c) Third & Fourth lift @ \$1.30 - \$1.50/tree (150 trees pruned/ha)
14. Pruned Stand Certification - Estimate of \$250-300/lift for consultant to establish and measure all PSC plots or \$150 for audit following landowner measurements. Landowner labour rate based upon 5-6 hours/lift to establish and measure PSC plots. See Private Forests Tasmania for more informaton.
15. Non-Commercial thinning @ \$0.50-\$0.60/tree to the final stocking of 150 pruned stems/ha (assuming an initial stocking of 1000 stems/ha). Labour rate based upon felling 40-50 stems/hour.

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 Date May 2004

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