

From Seed to Sawn Timber

An Agroforestry Journey

Philippa and Simon Noble

Brimin Lodge













Galaxy A33 5G



Sydney Blue Gum *E Saligna*

Spotted Gum, *Corymbia maculata*



















Farm Forestry Cost Benefit Analysis of Single Row Trees 2024.				
Brimin Lodge -Harvesting 50 high pruned trees per year >50 cm dbh				
Costs per tree			\$	
Purchase\$1/tree x 2 for cull	\$2/tree		2	
Planting	\$1/tree		1	
2 rows of electric fencing-1km (wire \$300, posts \$400,insulators \$100, labour)	\$1/tree	\$1,400/km	1	
Lifetime Pruning	0.5hr/tree	\$30/ hr	15	
Lifetime Plantation and coppice mngt	0.5hr/tree	\$30/hr	15	
Final Harvest 50 trees	6min/tree	\$80/hr	10	
Final Harvest Top & Trim logs	0.5hr/tree	\$30/hr	15	
Cut to length & Cart to loading area	0.5hr/tree	\$30/hr	15	
Home Sawing of top logs < 35cm	0.5hr/tree	\$30/hr	15	
Reject logs and limbs > 10cm - Firewood cutting & splitting	0.5hr/tree	\$80/hr	40	
			129	\$129/tree
			(if labour all \$80/hr = \$250)	
Timber sales/tree				
Sawlogs to mill	\$220+GST		242	
Firewood	0.8m³/tree		150	
Home Sawn timber from reject logs - pickets/fencing etc.			50	
			442	\$442/tree
Net return per tree				\$313/tree
Return per 50 trees/yr				\$15,650/yr





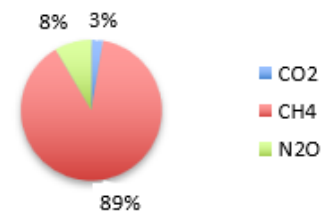


Other farm returns from the trees per year			\$	\$ per tree For 50 trees
600 ewes,5% increase in lambs -30 lambs@\$150/lamb			4500/yr	
2 kg extra wt per lamb -2 kg@\$8/kg x 600 lambs			9600/yr	
			14100/yr	\$282/tree
Pasture lost from tree line =extra pasture grown from tree shelter and nutrient cycling			0	
Farm amenity- good work and shade environment (& not spent on offsite recreation) \$100/wk			5200/yr	\$104/tree
Net Farm Forestry Return /tree				\$699/tree
Net Farm Forestry return/yr@50 trees harvested/yr				\$34,950/yr

Beef & Sheep Greenhouse Accounting Tool

Outputs	beef t CO ₂ e/farm	sheep t CO ₂ e/farm	total t CO ₂ e/farm	Summary of Scope 1 t CO ₂ e/farm	
Scope 1 Emissions					
CO ₂ - Fuel	0.00	5.63	5.63	CO ₂	5.7
CO ₂ - Lime	0.00	0.00	0.00	CH ₄	186.7
CO ₂ - Urea	0.00	0.04	0.04	N ₂ O	17.7
CH ₄ - Fuel	0.00	0.00	0.00		
CH ₄ - Enteric	0.00	176.87	176.87		
CH ₄ - Manure Management	0.00	9.78	9.78		
CH ₄ - Savannah Burning	0.00	0.00	0.00		
N ₂ O - Fertiliser	0.00	0.42	0.42		
N ₂ O - Urine and Dung	0.00	9.74	9.74		
N ₂ O - Atmospheric Deposition	0.00	0.97	0.97		
N ₂ O - Leaching and Runoff	0.00	6.59	6.59		
N ₂ O - Savannah Burning	0.00	0.00	0.00		
N ₂ O - Fuel	0.00	0.03	0.03		
Scope 1 Total	0	210	210		

Breakdown of GHGs



Scope 2 Emissions			
Electricity	0.77	0.05	1
Scope 2 Total	1	0	1

Scope 3 Emissions			
Fertiliser	0.00	0.91	0.91
Purchased mineral supplementation	0.00	0.05	0.05
Purchased feed	0.00	0.00	0.00
Herbicides/pesticides	0.00	0.00	0.00
Electricity	0.09	0.01	0.10
Fuel	0.00	1.39	1.39
Lime	0.00	0.00	0.00
Purchased livestock	0.00	4.49	4.49
Scope 3 Total	0	7	7

Carbon Sequestration			
Carbon sequestration in trees	0.00	-301.12	-301.12

Net Farm Emissions	1	-84	-83
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Using the(SB-GAF)
Sheep & Beef GHG
Accounting
Framework
((SB-GAF) Seasonal
V2.6

Based on

- 650 breeding ewes,
- No brought in food
- 15 ha trees
- Avg tree age 23 years
- 20 kW solar system

Characteristic	<i>Corymbia maculata</i> Spotted Gum	<i>Eucalyptus saligna</i> Sydney Blue Gum
Frost sensitive when small	Yes, but regrow if good lignotuber	No
Shade	Good thick	Bit sparse
Pasture competition	Minimal	Minimal
Flowering	Flowers young, not annually	Not annually
Nectar producing	Excellent	Good
Palatability to stock when young	Low	Medium
Bark shedding	Flaky, breaks down quickly	Some strappy bark can contaminate hay crops.
Branch drop – pasture contamination for hay	Little	Lots of 2-5 cm branches and some larger storm throw
Aesthetics	Excellent, new growth is red and new bark green	Good
Select seed available	Yes	Yes
Form when young	Mostly good, but prone to have double leaders	Good
Branching	Few, mostly small and self-pruning	Few but larger, must be pruned early
Growth rate	Medium	Good
Straightness when open grown	Excellent	Excellent
Straightness in plantation	Excellent	Excellent
Coppice when young	Excellent, thinned stumps need poisoning	None

Characteristic	<i>Corymbia maculata</i> Spotted Gum	<i>Eucalyptus saligna</i> Sydney Blue Gum
Stump coppice after harvest	Good	Good
Drought susceptible	No	Does stress
Epicormic growth on trunk if stressed	No- coppices from lignotuber at base.	Yes- requires some pruning, no lignotuber.
Sunburning of trunk	No	Yes, occasionally
Milling off saw	Good	Good
Colour of timber heartwood	Light to dark honey	Pink
Colour of sapwood	Pale honey	Pale yellow
Pruned branch rot	None	None
Air drying shrinkage	Little (25 mm dries to 22mm board, dressed to 19mm)	Medium (27mm dries to 22mm board dressed to 19mm)
Lyctid borer susceptible	Sapwood - yes	Sapwood- Not seen yet
Machining	Good	Good
Gluing	Good	Good
Durability of untreated thinning poles as rails	10 yrs	?
Durability of heartwood	In ground – Class 2 Above ground Class 1 (<i>Ref Bootle.</i>)	In ground – Class 3 Above ground Class 2 (<i>Ref Bootle.</i>)





