

Rotation (years)	30
Annual 'Diameter' Growth Maintained after First Thinning (inches)	0.34
Annual Merchantable Height Growth in Feet after First Thinning (Merch. Ht.)	1.0
Acres	100
Seedlings per Acre (Arkansas Native 1st Generation)	681
Mortality between establishment and 1st Thinning	30%
Mortality between thinnings (after 1st Thinning)	10%
Discount and Reinvestment Rate (alternative investment rate)	5.31%
Management Expenses	15%
After thinning dbh increase (inches; smaller trees removed)	0.50
Seedling Cost per Seedling (pickup, storage, & delivery)	\$ 0.041
Planting Cost per Seedling	\$ 0.090
Cumulative Reforestation Cost	\$ (254)
Intermediate Treatment Investments	\$ (100)
Regular Thinning Target Basal Area	.70
Seed Tree Thinning Target Basal Area	NA

Chemical/Burn - Planting - Return Analysis

Rotation Length: 30
Acres: 100
Rate of Return: 6.8%
Net Present Value: \$ 308

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Teddy Reynolds, BSF, RF, SR

Year	Age	Treatment	Trees	Thinned Trees	Diameter & Height Growth			Harvest Volumes per Acre		Ton Rate	Numbers below do not include appreciation									
					Dbh. (inches)	Merch. Ht. (feet)	Logs (16 feet)	Per Tree			Per Acre		Harvest		Investment		ROR	NPV	NAV	
								CF	Tons		CF	Tons	Per Acre	Total	Per Acre	Total	Per Acre	Per Acre	Per Acre	
																				Per Acre
30	2004	0 Land																		
30	2004	0 Chemical Spray																		
30	2004	0 Burn																		
30	2004	0 Seedlings	681																	
30	2004	0 Plant	681																	
30	2004	0 Grass Spray	681																	
29	2005	1 Seedling Survival	477	204																
14	2020	16 Thinning #1	177	270	8.5	32	2.00	4.5	0.15	1,214	41	\$ 6	\$ 209	\$ 20,861			\$ 73	\$ 91	\$ 430	
13	2021	17 Fertilization	177		8.8	33	2.06													
12	2022	18	177		9.2	34	2.13													
11	2023	19	177		9.5	35	2.19													
10	2024	20	177		9.9	36	2.25													
9	2025	21	177		10.2	37	2.31													
8	2026	22	177		10.5	38	2.38													
7	2027	23 Thinning #2	99	70	11.4	39	2.44	15.5	0.52	1,088	37	\$ 20	\$ 623	\$ 62,337			\$ 138	\$ 190	\$ 895	
6	2028	24	99		11.7	40	2.50													
5	2029	25	99		12.1	41	2.56													
4	2030	26	99		12.4	42	2.63													
3	2031	27	99		12.7	43	2.69													
2	2032	28	99		13.1	44	2.75													
1	2033	29	99		13.4	45	2.81													
0	2034	30 Final Harvest Seed Trees	99	89	13.8	46	2.88	28.1	0.95	2,504	84	\$ 42	\$ 3,012	\$ 301,219			\$ 420	\$ 638	\$ 3,012	
0	2034	30 Land Sale											\$ 400	\$ 40,000			\$ 56	\$ 85	\$ 400	
Total (without appreciation)											\$ 4,244	\$ 424,417	\$ (754)	\$ (75,421)	\$ (0)	\$ 308	\$ 48			
Rate of Return - ROR (without appreciation*)																	6.8%			
Net Present Value - NPV (without appreciation*)																	\$ 308			

Note:

- 1) Cost of land was included in the analysis and sold at the end without appreciation (\$400/acre).
- 2) Analysis was after costs, without tax treatment, and with no appreciation or inflation added.
- 3) 15% management expense was removed for administrative costs.
- 4) Alternative investment rate was based on August 25, 2003 30-Year Treasury Bill rate of 5.31%.
- 5) ROR = Rate of Return
- 6) NPV = Net Present Value
- 7) NAR = Net Annual Value

* Add 5% to include appreciation.