Subsoil/Chemical - Planting - Return Analysis

Rotation (years)	28
Annual 'Diameter' Growth Maintained after First Thinning (inches)	0.38
Annual Merchantable Height Growth in Feet after First Thinning (Merch. Ht.)	1.0
Acres	100
Seedlings per Acre (Arkansas Native 2nd Generation)	545
Mortality between establishment and 1st Thinning	20%
Mortality between thininnings (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)	$ 0.050
Planting Cost per Seedling	$ 0.080
Cumulative Reforestaton Cost	$ (316)
Intermediate Treatment Investments	$ (100)
Regular Thinning Target Basal Area	70
Seed Tree Thinning Target Basal Area	NA

Rotation Length: 28
Acres: 100
Rate of Return: 7.3%
Net Present Value: $ 458

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						Diameter & Height Growth			Harvest Volumes per Acre: Per Tree		Per Acre			Numbers below do not include appreciation						
														Harvest		Investment		ROR	NPV	NAV
	Year	Age	Treatment	Trees	Thinned Trees	Dbh. (inches)	Merch. Ht. (feet)	Logs (16 feet)	CF	Tons	CF	Tons	Ton Rate	Per Acre	Total	Per Acre	Total	Per Acre	Per Acre	Per Acre
28	2004	0	Land													$ (400)	$ (40,000)	$ (400)	$ (400)	$ (1,703)
28	2004	0	Chemical Spray													$ (95)	$ (9,500)	$ (95)	$ (95)	$ (404)
28	2004	0	Burn													$ (35)	$ (3,500)	$ (35)	$ (35)	$ (149)
28	2004	0	Subsoil (rip)													$ (80)	$ (8,000)	$ (80)	$ (80)	$ (341)
28	2004	0	Seedlings	545												$ (27)	$ (2,725)	$ (27)	$ (27)	$ (116)
28	2004	0	Plant	545												$ (44)	$ (4,360)	$ (44)	$ (44)	$ (186)
28	2004	0	Grass Spray	545												$ (35)	$ (3,500)	$ (35)	$ (35)	$ (149)
27	2005	1	Seedling Survival	436	109															
14	2018	14	Thinning #1	177	233	8.5	33	2.06	4.5	0.15	1,049	35	$ 6	$ 180	$ 18,028			$ 67	$ 87	$ 372
13	2019	15	Fertilization	177		8.9	34	2.13								$ (100)	$ (10,000)	$ (35)	$ (46)	$ (196)
12	2020	16		177		9.3	35	2.19												
11	2021	17		177		9.6	36	2.25												
10	2022	18		177		10.0	37	2.31												
9	2023	19		177		10.4	38	2.38												
8	2024	20		177		10.8	39	2.44												
7	2025	21	Thinning #2	94	75	11.7	40	2.50	17.3	0.58	1,292	44	$ 20	$ 740	$ 74,036			$ 167	$ 250	$ 1,063
6	2026	22		94		12.0	41	2.56												
5	2027	23		94		12.4	42	2.63												
4	2028	24		94		12.8	43	2.69												
3	2029	25		94		13.2	44	2.75												
2	2030	26		94		13.6	45	2.81												
1	2031	27		94		13.9	46	2.88												
0	2032	28	Final Harvest Seed Trees	94	85	14.3	47	2.94	33.0	1.11	2,792	94	$ 42	$ 3,359	$ 335,879			$ 462	$ 789	$ 3,359
0	2032	28	Land Sale											$ 400	$ 40,000			$ 55	$ 94	$ 400
													Total (without appreciation)	$ 4,679	$ 467,943	$ (816)	$ (81,585)	$ 0	**$ 458**	**$ 70**

Rate of Return - ROR (without appreciation*)	**7.3%**
Net Present Value - NPV (without appreciation*)	**$ 458**

* Add 5% to include appreciation.

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 Prestent Value
7) NAR = Net Annual Value