



**2000 CHRISTMAS TREE PRODUCTION BUDGET <sup>1</sup>**  
**Scotch and White Pine**  
**Hand Planted - 10 year Rotation <sup>2</sup>**  
**Wholesale Sales**

ITEM	YEAR										TOTAL	YOUR BUDGET
	1	2	3	4	5	6	7	8	9	10		
Christmas Trees (percent sold) <sup>3</sup>							10%	25%	35%	30%	100%	
<b>INCOME</b>												
Christmas Trees							840	2,100	2,940	2,520	8,400	
600 trees sold over entire rotation												
\$14 per tree <sup>4</sup>												
<b>VARIABLE COSTS</b>												
Seedlings <sup>5</sup>	300	45									345	
Fertilizer	30										30	
Herbicides	60	60	60	40	40	40	40	40	40	40	240	
Insecticides			20	30	40	50	50	50	50	50	290	
Shearing <sup>6</sup>			106	97	175	175	175	175	175	175	1050	
Hired Labor <sup>7</sup>	378	243	81	81	81	81	81	81	81	81	1269	
Fuel, Oil, Grease	13	12	11	11	11	11	11	11	11	11	113	
Repairs	6	5	5	5	5	5	5	5	5	5	51	
Harvesting <sup>8</sup>							60	150	210	180	600	
Miscellaneous <sup>9</sup>	15	15	15	15	15	15	15	15	15	15	150	
Interest on Oper. Cap.	68	32	26	24	32	33	39	47	52	49	402	
<b>TOTAL VARIABLE COSTS</b>	<b>828</b>	<b>385</b>	<b>315</b>	<b>294</b>	<b>390</b>	<b>401</b>	<b>467</b>	<b>565</b>	<b>630</b>	<b>597</b>	<b>4872</b>	
<b>FIXED COSTS</b>												
Operator Labor Charge <sup>7</sup>	90	90	54	54	72	72	90	90	72	72	756	
Mach. And Equip. Charge <sup>10</sup>	31	31	31	31	31	31	31	31	31	31	310	
Land Charge	85	85	85	85	85	85	85	85	85	85	850	
Management Charge <sup>11</sup>	50	50	50	50	50	50	42	105	147	126	720	
<b>TOTAL FIXED COSTS</b>	<b>256</b>	<b>256</b>	<b>220</b>	<b>220</b>	<b>238</b>	<b>238</b>	<b>248</b>	<b>311</b>	<b>335</b>	<b>314</b>	<b>2636</b>	
<b>TOTAL COSTS</b>	<b>1084</b>	<b>641</b>	<b>535</b>	<b>514</b>	<b>628</b>	<b>639</b>	<b>715</b>	<b>876</b>	<b>965</b>	<b>911</b>	<b>7508</b>	
<b>RETURN ABOVE VARIABLE COSTS</b>	<b>-828</b>	<b>-385</b>	<b>-315</b>	<b>-294</b>	<b>-390</b>	<b>-401</b>	<b>373</b>	<b>1535</b>	<b>2310</b>	<b>1923</b>	<b>3528</b>	
<b>RETURN OVER TOTAL COSTS</b>	<b>-1084</b>	<b>-641</b>	<b>-535</b>	<b>-514</b>	<b>-628</b>	<b>-639</b>	<b>125</b>	<b>1224</b>	<b>1975</b>	<b>1609</b>	<b>892</b>	
<b>PRESENT VALUE RETURNS <sup>12</sup></b>	<b>-1084</b>	<b>-583</b>	<b>-442</b>	<b>-386</b>	<b>-429</b>	<b>-397</b>	<b>71</b>	<b>628</b>	<b>921</b>	<b>682</b>	<b>-1019</b>	

- <sup>1</sup> No charges for marketing are included due to the wide range of marketing situations found in Ohio. However, marketing costs should be added to your budget. These costs should include the labor, advertising, supplies, and facilities used in the marketing of the trees. Marketing costs may be minimal up to \$5/tree in operations with an extensive marketing program.
- <sup>2</sup> No costs are included for reclamation of the ground after the final year of the Christmas Tree stand. Reclamation may be necessary depending upon the future use of the ground.
- <sup>3</sup> 1000 trees originally planted, 600 harvested, 400 trees died or were not suitable for sale
- <sup>4</sup> Average price for White Pine. Scotch Pine may be closer to \$10/tree.
- <sup>5</sup> 1000 seedlings planted first year, 150 re-planted second year. Cost per seedling= \$0.30.
- <sup>6</sup> Shearing costs= \$0.125/tree year 3 and 4, \$0.25/tree following years.
- <sup>7</sup> Labor does not include harvesting, marketing or shearing. See table below for labor requirements and rate.
- <sup>8</sup> Harvesting includes cutting, baling, transporting to loading area, and loading on vehicle. Retail harvesting cost = \$1.50/tree. Wholesale harvesting costs= \$1.00/tree.
- <sup>9</sup> Includes small tools, soil tests, etc...
- <sup>10</sup> Includes depreciation, interest, and insurance costs.
- <sup>11</sup> Year 1-6 management charge = \$50. Year 7-10 management charge= 5% of sales.

	Labor Requirements (hours)										TOTAL	
	Year											
	1	2	3	4	5	6	7	8	9	10		
Hourly Charge = \$9.00 /hour												
Hired Labor	42	27	9	9	9	9	9	9	9	9	141	
Operator Labor (Management)	10	10	6	6	8	8	10	10	8	8	84	

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<sup>12</sup> **Returns Over Life of Stand and Time Value of Money**

Since a Christmas tree operation occurs over as many as ten years, it is important to examine the time value of money associated with the enterprise. Time value of money is based on the premise that \$1 today (present value) is worth more than \$1 in the future. This is basically because the \$1 today can be invested and appreciate in value until some time in the future. Therefore in regards to the Christmas tree enterprise, \$1 of return in year one would be worth more than \$1 of return in year ten. Returns in future years need to be discounted to reflect the time value of money. The following table lists the returns and present value of returns from the enterprise.

	<b>Future Value</b>	<b>Present Value</b>	<b>Discount Rate = 10%</b>
Year 1	-\$1,084	-\$1,084	<i>The discount rate is the degree to which the future values are discounted to reflect current values. It is generally assumed to be equivalent to the amount you could earn in alternative investment opportunities.</i>
Year 2	-\$641	-\$583	
Year 3	-\$535	-\$442	
Year 4	-\$514	-\$386	
Year 5	-\$628	-\$429	
Year 6	-\$639	-\$397	
Year 7	\$125	\$71	
Year 8	\$1,224	\$628	
Year 9	\$1,975	\$921	
Year 10	\$1,609	\$682	
<b>TOTAL</b>	<b>\$892</b>	<b>-\$1,019</b>	

Over the life of the tree stand, the enterprise will generate \$892 in returns. However, since much of the return comes in future years, it is not the same as having \$892 in the operator's pocket today. The present value column indicates that if the operator was given the equivalent return in one lump sum today (present value), it would be worth -\$1,019. The difference of the total returns and the present value returns is a result of the time value of money.