

MONTEREY PINE CHRISTMAS TREE PLANTATION

Cost Analysis Work Sheet - 1983

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This work sheet was developed to show sample costs for establishing a Monterey Pine plantation in Fresno County. These costs are useful as a guide. Be aware, however, that your costs will vary depending upon cultural techniques. This cost study was based on the following factors.

1. Costs are based on a planting of 3-5 acres, 1740 trees per acre on a 5' x 5' spacing, furrow irrigated and assumed to be part of a farm for which machinery and water are available.
2. Income is based on the sale of 3, 4, and 5 year old trees at an average value of \$3.50 per foot from a "choose and cut" operation.
3. Tree loss with furrow irrigation was calculated at 25% of the original stand. Under sprinkler or drip irrigation system, the mortality rate can be lowered considerably.
4. The accumulated net profit as shown at the end of the fifth year must be interpreted with caution. The reason being that at this time the potential Christmas tree market has passed the saturation point.
5. With the number of plantations now established in Fresno County and other surrounding counties, a grower must look at the area market potential. At this time, approximately 20,000 trees are sold seasonally from "choose and cut" operations in Fresno County.
6. With an increase in the number of Christmas trees reaching merchantable size in the next two or three years, the cost of marketing and advertising will increase significantly. If a surplus of Christmas trees materializes and many trees remain unsold, the net return will be reduced to a non-profitable basis.

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These are sample costs to establish a Monterey Pine Christmas tree plantation in Fresno County. Trees are planted on a 5' X 5' spacing. Planting density is 1740 trees per acre. Labor costs are based on hand labor at \$5.50 per hour, equipment operator \$6.50 per hour including social security and Workman's Compensation Insurance. The irrigation is by flooding. Adjustments can be made for drip or sprinkler irrigation.

	Costs Per Acre				
	1st Year	2nd Year	3rd Year	4th Year	5th Year
Yield: Harvested trees			290	875	325
CULTURAL COSTS:					
Land preparation					
Disc 2 times & harrow 1 hr. labor & tractor	\$ 14.46	\$	\$	\$	\$
Ridges on 5' centers 1/2 hr. labor & tractor	7.23				
Trees: 1740 @ \$837 thousand	147.90				
Planting: 90 hrs. labor	495.00				
Replant: Starting 2nd year		148.50	33.00		
Replace harvested trees				88.00	264.00
Irrigate 7 times	30.25	41.25	55.00	66.00	66.00
Fertilize, starting 2nd year					
Material: 75 lbs. N @ 22¢		16.50	16.50	16.50	16.50
Labor		16.50	16.50	16.50	16.50
Weed Control	40.00	40.00	40.00	40.00	40.00
Spray		23.90	27.70	31.50	31.50
Shaping & pruning		460.00	740.00	824.00	264.00
Advertising & promotion			100.00	100.00	100.00
Taxes	30.00	30.00	42.00	42.00	42.00
Repairs, except tractor	12.00	6.00	15.00	15.00	15.00
Misc. labor, materials, field power	8.00	8.00	8.00	8.00	8.00
Removal of unsalable trees					30.00
Office, insurance, business costs	62.72	63.25	87.50	99.80	71.48
TOTAL CULTURAL COSTS	\$ 847.56	\$ 853.90	\$1181.20	\$ 1347.30	\$ 964.98
DEPRECIATION:					
Irrigation system & well \$260 - 20 yrs.	13.00	13.00	13.00	13.00	13.00
Equipment, except tractor \$150 - 10 yr. life	15.00	15.00	15.00	15.00	15.00
Tractor	3.88	2.91	2.91	2.91	2.91
TOTAL DEPRECIATION	\$ 31.88	\$ 30.91	\$ 30.91	\$ 30.91	30.91
INTEREST ON INVESTMENT AT 12%:					
Irrigation system: 1/2 cost \$130	15.60	15.60	15.60	15.60	15.60
Equipment, except tractor: 1/2 cost \$75	9.00	9.00	9.00	9.00	9.00
Tractor	2.32	1.74	1.74	1.74	1.74
Land: \$3000	360.00	360.00	360.00	360.00	360.00
Interest on accumulated costs		151.96	322.74	49.28	
TOTAL INTEREST ON INVESTMENT	\$ 386.92	\$ 538.30	\$ 709.08	\$ 435.62	\$ 386.54
TOTAL COST FOR THE YEAR	\$1266.36	\$1423.11	\$1921.19	\$ 1813.83	\$ 1382.23
Total accumulated costs	\$1266.36	\$2689.47	\$4610.66	\$ 2824.49	\$16593.28
Tree sales			\$3600.00	\$10800.00	\$ 4200.00
Accumulated net profit	\$1266.36	\$2689.47	\$1010.66	\$ 7975.51	\$10793.28