

PRODUCTION COSTS FOR CHRISTMAS TREES
1 9 7 8

Based on a 100 Acre Plantation Selling 2,000 Trees Per Acre.

	DOUGLAS FIR	WHITE FIR	SCOTCH PINE
Rotation-Years	8	11	9
<u>CULTURAL COSTS:</u>			
Clearing & Rip	\$ 200	\$ 200	\$ 200
Planting	475	475	475
Fertilizer Tablets	50	50	50
Shading	25	25	-
Herbicide	184	253	207
Maintenance	75	77	72
Replant (30% Douglas & White) (10% Scotch Pine)	150	150	50
Shearing (5X Douglas & Scotch) (4X White Fir)	750	600	750
Fertilization (5Y-Doug. & Scotch) (6X-White Fir)	235	329	235
Transportation	80	110	90
Insect & Disease	40	55	45
Basal Pruning	200	200	200
Misc. Cultural	120	165	135
TOTAL CULTURAL COSTS	\$2584	\$2689	\$2509
<u>HARVEST COSTS:</u>			
Harvest	600	600	600
Load	200	200	200
Security	63	63	63
TOTAL HARVEST COSTS	\$ 863	\$ 863	\$ 863
<u>OVERHEAD COSTS:</u>			
Taxes - Land	80	154	99
- Trees	400	400	400
Management	480	660	540
Depreciation - Equipment	200	275	225
- Rabbit Fence	100	99	99
- Buildings	32	44	36
Total Depreciation	\$ 332	\$ 418	\$ 360
Interest - Land	384	528	432
- Equipment	80	110	90
- Rabbit Fence	32	44	36
- Buildings	16	22	18
- On Accum. Cost	1667	2799	1912
Total Interest	\$2179	\$3503	\$2488
TOTAL OVERHEAD COSTS	\$3471	\$5135	\$3887
TOTAL ACCUMULATED COSTS	\$6918	\$8687	\$7259
COST PER TREE SOLD	\$3.465	\$4.35	\$3.63

INVESTMENT FOR CHRISTMAS TREE PRODUCTION

	PER ACRE	ANNUAL DEPRECIAT.	COST INTEREST
LAND	\$ 600		48.00
BUILDINGS	60	4.00	2.40
RABBIT FENCE	100	9.00-12.00	4.00
EQUIPMENT			
	TOTAL		
SMALL TOOLS	\$ 300		
PLANTING EQUIPMENT	200		
CHAIN SAWS - 3	900		
BACK PUMPS - 5	500		
BOOMS	500		
KNIVES	100		
PICKUP	9,000		
TRACTOR-10 HP WHEEL	6,000		
SPRAY RIG.	3,000		
TRAILER-FOUR WHEEL	2,500		
MISC.	2,300		
TOTAL	25,300	<u>253.00</u>	<u>25.30</u> <u>10.12</u>
		\$1,013.00	\$38.30- \$64.52
			\$41.30

**DOUGLAS FIR PLANTATION
PRODUCTION COSTS - 1978**

2500 TREES PLANTED - 2000 HARVESTED, BASED ON 100 ACRES

CULTURAL COSTS:	YEAR							
	1	2	3	4	5	6	7	8
Clearing & Rip	\$ 200							
Planting	475							
Fert. Tablets	50							
Shading	25							
Herbicide	23	23	23	23	23	23	23	23
Maintenance	10	10	10	9	9	9	9	9
30% Replant		150						
5 Shearing			150	150	150	150	150	
5 Fertilization				47	47	47	47	47
Transportation	10	10	10	10	10	10	10	10
Insect & Disease	5	5	5	5	5	5	5	5
Basal Pruning				200				
Misc. Cultural	15	15	15	15	15	15	15	15
TOTAL CULTURAL COSTS	\$ 813	213	213	459	259	259	259	109

<u>HARVEST COSTS:</u>								
Harvest						150	300	150
Load						50	100	50
Security						21	21	21
TOTAL HARVEST COSTS	\$					221	421	221

<u>OVERHEAD COSTS:</u>								
Taxes - Land	10	10	10	10	10	10	10	10
- Trees						100	200	100
Management	60	60	60	60	60	60	60	60
Depreciation-Equip.	25	25	25	25	25	25	25	25
-Rab.Fen.	12	12	12	12	13	13	13	13
-Build.	4	4	4	4	4	4	4	4
Interest -Land	48	48	48	48	48	48	48	48
-Equip.	10	10	10	10	10	10	10	10
-Rab.Fence	4	4	4	4	4	4	4	4
-Buildings	2	2	2	2	2	2	2	2
ON ACCUMULATED COST	\$	79	116	157	220	272	355	468
TOTAL OVERHEAD COSTS	\$ 175	254	291	332	396	548	731	744
TOTAL COST PER ACRE	\$ 988	467	504	791	655	1028	1411	1074
ACCUMULATED COST	\$ 988	1455	1959	2750	3405	4433	5844	6918

<u>INVESTMENT:</u>	
LAND	\$ 600
BUILDINGS	60
EQUIPMENT	253
RABBIT FENCE	100
TOTAL	\$1013

WHITE FIR PLANTATION
 PRODUCTION COSTS-1978

2500 Trees Planted - 2000 Harvested, Based on 100 Acres

YEAR

CULTURAL CST:	1	2	3	4	5	6	7	8	9	10	11
Clear-Rip.	\$ 200										
Planting	475										
Fert. Tablets	50										
Shading	25										
Herbicide	23	23	23	23	23	23	23	23	23	23	23
Maintenance	7	7	7	7	7	7	7	7	7	7	7
30% Replant		150									
4 Shearing							150	150	150	150	
7 Fertilize			47	47	47	47	47	47	47		
Transport.	10	10	10	10	10	10	10	10	10	10	10
Insect-Dis.	5	5	5	5	5	5	5	5	5	5	5
Basal Prun.							200				
Misc. Cult.	15	15	15	15	15	15	15	15	15	15	15
TOTAL CULT- URAL COSTS	\$ 810	210	107	107	107	107	457	257	257	210	60

HARVEST CST:

Harvest									150	300	150
Load									50	100	50
Security									21	21	21

TOTAL HAR-
VEST COSTS

221 421 221

OVERHEAD CST:

Taxes-Land	14	14	14	14	14	14	14	14	14	14	14
-Trees									100	200	100
Management	60	60	60	60	60	60	60	60	60	60	60
Deprec.-Equip.	25	25	25	25	25	25	25	25	25	25	25
-Rab.Fen.	9	9	9	9	9	9	9	9	9	9	9
-Building	4	4	4	4	4	4	4	4	4	4	4
Interest-Land	48	48	48	48	48	48	48	48	48	48	48
-Equip.	10	10	10	10	10	10	10	10	10	10	10
-Rab.F.	4	4	4	4	4	4	4	4	4	4	4
-Build.	2	2	2	2	2	2	2	2	2	2	2

ON ACCUM.

COSTS	\$ -	79	116	147	181	218	258	329	390	481	600
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TOTAL OVER-
HEAD COSTS

\$ 176 255 292 323 357 394 434 505 666 854 876

TOTAL COST

PER ACRE \$ 986 465 399 430 464 501 891 762 1144 1485 1157

ACCUMULATED

COST \$ 986 1451 1850 2280 2744 3245 4136 4898 6042 7527 8684

INVESTMENT:

LAND	\$ 600
BUILDINGS	60
EQUIPMENT	253
RAB. FENCE	100
	<u>\$1013</u>

CHRISTMAS TREE PLANTATION COSTS
NORTHERN-EASTERN CALIFORNIA

WHITE FIR - DOUGLAS FIR - SCOTCH PINE

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This study represents production from forest land cleared of brush species.

The costs do not represent what necessarily would apply to any individual operation.

The information should be used as a guide to analyze an individual operators Christmas Tree production and provides a means of studying various costs.

Equipment investment is based on minimum equipment necessary to operate a 100 acre plantation. Larger equipment was contracted for clearing and ripping.

The production costs are based on a 100 acre plantation of either White Fir, Douglas Fir or Scotch Pine with rotations to produce an average 6 foot tree in 11, 8 and 9 years respectively with harvest planned over the last 3 years of the rotation.

Because of various mortality situations over the rotation the studies show a planting of 2,500 trees per acre with an eventual harvest of 2,000 trees per acre.

CULTURAL COSTS: Including labor, whether hired or family.

Clearing and Rip - These costs represent complete removal of existing vegetation and loosening the soil prior to planting.

Planting and Replant - These costs are based on securing container or bare root stock for planting by hand methods. The necessary replanting has average 30% for Douglas Fir and White Fir and 10% for Scotch Pine.

Fertilization - Some growers utilize a fertilizer tablet placed at root depth adjacent to the root system at time of planting for added initial nutrients. Additional applications of nitrogen are made to improve growth and foliage color.

Shading - This practice appears of benefit in early survival of Douglas Fir and White Fir. Immediately following planting, two, six to eight inch width shakes approximately 12" in length are placed on the south and west sides of the tree.

Herbicides and Maintenance - Annual applications may be necessary for weed control, mainly grasses. Brush resprouting may require treatment periodically to insure continued control of competition.

Shearing - A necessary item to obtain desired high quality trees. The costs represent 5 annual shearings for Douglas Fir and Scotch Pine and 4 for White Fir.

- 1 -

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Transportation - This cost includes travel to and from the plantation from headquarters, obtaining supplies, equipment and transporting workers.

Insects and Diseases - These figures identify the probability for needed control measures during the rotation. This item can be highly variable, depending upon problems encountered. The cost includes possible need for animal damage control.

Basal Pruning - This one year cost is for establishing the desired handle for a merchantable tree and identity of the best lower whorl of branches.

Misc. Cultural - The cost includes expenses as office, telephone, insurance, etc.

HARVEST COSTS:

The cost of harvest represents removal from the field to the stock pile. The loading identifies cost of loading out to buyers.

Security costs reflect the need to invest in a means of protection during the Christmas tree season.

OVERHEAD COSTS:

Taxes on land were calculated under the Yield Tax System for Site III land. Taxes on trees are the present rate established by State Board of Equalization for Plantation trees.

The management charge is to cover costs for decision making, planning, marketing, and directing the operations.

Depreciation was figured for the items at the following estimated years of life: Building - 15, Equipment 10, Rabbit Fence - life of plantation.

Interest on land - Equipment, fences, buildings and accumulated costs, was calculated at 8%.

The study demonstrates the costs associated with producing a tree to be sold.

The difference between cost of production and actual sale value is net profit.

SCOTCH PINE PLANTATION
PRODUCTION COSTS - 1978

CULTURAL COSTS:	YEAR								
	1	2	3	4	5	6	7	8	9
Clearing & Rip	\$200								
Planting	475								
Fertilizer Tabs.	50								
Herbicide	23	23	23	23	23	23	23	23	23
Maintenance	8	8	8	8	8	8	8	8	8
1.0% Replant		50							
5 Shearing				150	150	150	150	150	
5 Fertilization				47	47	47	47	47	
Transportation	10	10	10	10	10	10	10	10	10
Insect & Disease	5	5	5	5	5	5	5	5	5
Basal Pruning					200				
Misc. Cultural	15	15	15	15	15	15	15	15	15
TOTAL CULTURAL COSTS	\$786	111	61	258	458	258	258	258	61
HARVEST COSTS:									
Harvest							150	300	150
Load							50	100	50
Security							21	21	21
TOTAL HARVEST COSTS							221	421	221
OVERHEAD COSTS:									
Taxes - Land	11	11	11	11	11	11	11	11	11
- Trees							100	200	100
Management	60	60	60	60	60	60	60	60	60
Depreciation-									
- Equipment	25	25	25	25	25	25	25	25	25
- Rabbit Fen.	11	11	11	11	11	11	11	11	11
- Building	4	4	4	4	4	4	4	4	4
Interest - Land	48	48	48	48	48	48	48	48	48
- Equipment	10	10	10	10	10	10	10	10	10
- Rabbit Fen.	4	4	4	4	4	4	4	4	4
- Buildings	2	2	2	2	2	2	2	2	2
- On Accum.									
Costs		77	106	133	178	243	297	381	497
TOTAL OVERHEAD COSTS	\$175	252	281	308	353	418	572	756	772
TOTAL COST PER ACRE	\$961	363	342	566	811	676	1051	1435	1054
ACCUMULATED COST	\$961	1324	1666	2232	3043	3719	4770	6205	7259
INVESTMENT									
Land	\$600								
Buildings	60								
Equipment	253								
Rabbit Fence	100								
TOTAL	\$1013								