



*Sample Costs to
Establish and Produce*
WINE GRAPES
*in the
North Coast Counties*

1978

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This publication shows sample costs to establish a vineyard, to produce cane-pruned, trellised wine grapes with sprinkler protection, and to produce older, head-trained wine grapes. The data were collected in Mendocino, Napa and Sonoma Counties for cane-pruned varieties such as Cabernet Sauvignon, White Riesling, Pinot Noir, and Chardonnay, and head-trained varieties such as Carignane, Zinfandel, and Petite Sirah.

Costs were calculated on the basis of a 40 acre block with the vines planted at an 8 x 12 foot spacing giving a net of 413 vines per acre after allowing for avenues and turning space.

Labor costs were calculated at \$4.75 and \$5.25 per hour including fringe benefits.

Investments are based on current replacement costs. Some growers may reduce their investment by buying used equipment.

Site Conversion: Very little open land is available, so most vineyards are planted on old orchard or vineyard sites. The old trees or vines must be removed, the soil ripped, the land rough leveled and fumigated.

Yield: Yields of 4 tons per acre are above average for the area, but are below that attained in some vineyards. These figures are typical of an attainable annual average for better vineyards planted with certified stock and cared for in accordance with the recommended cultural practices included in the costs shown.

Fencing: Temporary fencing for rabbits may be needed for the first 2 or 3 years of the vineyard. In some locations, permanent fencing may be necessary for protection from deer and should be built when the vineyard is planted. Permanent fencing costs for deer and rabbit control will vary considerably with the individual situation. Growers have reported costs of \$3.00 to \$4.00 per foot of installed fence. Annual overhead and maintenance costs would vary from \$35 to \$50 an acre.

WINE GRAPES
 SAMPLE COSTS TO ESTABLISH A CANE-PRUNED, TRELLISED
 VINEYARD IN THE NORTH COAST COUNTIES - 1978

	Cost per acre		
	1st year	2nd year	3rd year
<u>Cultural Cost</u>			
Pre-plant tillage	\$ 26		
Layout and mark	24		
Distribute & set stakes @ 14¢	58		
Stakes 7' treated - 413 @ 65¢	268		
Rootstocks (certified) - 413 @ 65¢	268		
Store and trim @ 9¢	37		
Plant vines	60		
*Bud and cover, including rubber ties	158	\$ 40	\$ 13
*Budwood (certified) @ 5¢/bud	20	2	2
*Uncover and prune rootstocks		38	4
*Cut rubbers and tops, place collars		154	16
End posts (treated) 11 @ \$4			44
End posts, set @ \$2.50			28
String 2 wires and staple			24
Wire - 164 lbs. @ 32¢/lb			52
Train and prune		120	58
Dusting - labor and materials		10	10
Irrigation labor 2X - 1 man-hour	5	5	5
Water - pumping power 1/2 acre ft.	16	16	16
Repairs on irrigation system	18	18	18
Cultivation and hand hoe	34	34	34
Frost protection - labor		5	5
" " - power for 6" water		16	16
Misc. labor, materials, etc.	35	35	35
Int. on operating capital, 9%, 1/2 yr.		92	164
TOTAL CULTURAL COST	1,027	585	544
<u>Overhead</u>			
Miscellaneous cash	62	35	35
Taxes	120	140	156
Management	120	120	120
Interest - on investment	514	514	514
" - on vines		164	304
Depreciation	202	202	202
TOTAL OVERHEAD	1,018	1,175	1,331
TOTAL COST	2,045	1,760	1,875
ACCUMULATED COST	2,045	3,805	5,680
<u>Investment Cost</u>			
Land	4,000		
Site conversion	900		
Irrigation & frost control	1,800		
Buildings	250		
Equipment	1,000		
	<u>7,950</u>		

Total cost for 3 years is \$5,680.

*If bench grafted vines are used instead of field budding, the cost is about \$1.85 per vine.

SAMPLE COSTS TO PRODUCE
CANE-PRUNED, TRELLISED WINE GRAPES
NORTH COAST COUNTIES - 1978

Yield: 4 tons per acre

Operation	Hours per acre	Cash and labor cost per acre				
		Labor	Fuel and repairs	Materials		Total
				Kind and quantity	Cost	
Dollars						
Cultural Costs						
Pruning -413 vines/acre	26.0	124.00				124.00
Brush disposal (chopper)	.5	2.65	2.35			5.00
Tying canes	4.0	19.00				19.00
Sulfuring 4X	1.2	5.70	4.30	Sulfur 50# @ 5¢	3.00	13.00
Insect control				Application 300 gal. @ 3-1/2¢	10.50	
				Materials	23.50	34.00
Fertilize	.5	2.40	2.10	Nitrogen 30# @ 25¢	7.50	12.00
Suckering	5.0	24.00				24.00
Vine row spray to control annual weeds				Materials	11.00	
				Application	4.00	15.00
Cultivate 4X	3.0	15.75	8.25			24.00
Irrigation 2X	1.0	4.75	17.25	Pumping 6"	16.00	38.00
Frost protection	1.0	4.75	17.25	Pumping 6"	16.00	38.00
Misc. labor, supplies, etc.		10.00	5.00		17.00	32.00
Interest on operating capital 9%					17.00	17.00
TOTAL CULTURAL COSTS		213.00	56.50		125.50	395.00
Harvest Costs						
Picking - 4 tons @ \$55/ton		220.00				220.00
Supervision	4.0	21.00				21.00
Move gondolas, misc.	2.0	12.00	3.00			15.00
Haul to winery				4 tons @ \$10/ton	40.00	40.00
TOTAL HARVEST COSTS		253.00	3.00		40.00	296.00
Cash Overhead						
Misc., office, etc.					40.00	
Taxes					172.00	
TOTAL CASH OVERHEAD						212.00
TOTAL CASH COST		466.00	59.50		377.50	903.00
Management						120.00
Investment Cost						
		<u>Per acre</u>		<u>Annual cost</u>		
Land		\$4,000		<u>Depreciation</u>	<u>Interest @ 8%</u>	
Vineyard		5,680		\$ 189	227	
Irrigation system		1,800		90	72	
Buildings		250		12	10	
Equipment		1,000		100	40	
Site conversion		900		72		
		<u>\$13,630</u>		<u>\$ 391</u>	<u>\$ 741</u>	<u>1,132.00</u>
TOTAL COST PER ACRE						2,155.00
Cost per ton @ 4 ton yield						538.75

COST PER TON AT VARYING YIELDS
CANE-PRUNED, TRELLISED WINE GRAPES

Tons	Picking cost		Haul	Other costs	Total cost	
	Per ton	Per acre	Per acre	Per acre	Per acre	Per ton
2	\$100	\$200	\$20	\$1,895	\$2,115	\$1,058
3	60	180	30	1,895	2,105	702
4	55	220	40	1,895	2,155	539
5	45	225	50	1,895	2,170	434
6	45	270	60	1,895	2,225	371

SAMPLE COSTS TO PRODUCE
 OLDER, HEAD-TRAINED WINE GRAPES
 NORTH COAST COUNTIES - 1978

Yield: 4 tons per acre

Operation	Hours per acre	Cash and labor cost per acre				Total
		Labor	Fuel and repairs	Materials		
		Kind and quantity			Cost	
Dollars						
<u>Cultural Costs</u>						
Pruning, average 600 vines @ 15¢		90.00				90.00
Brush disposal (chopper)	.5	2.65	2.35			5.00
Sulfur 4X	1.2	5.70	4.30	Sulfur 50# @ 5¢	3.00	13.00
Insect control spray				Application 300 gal. @ 3-1/2¢	10.50	
				Materials	23.50	34.00
Fertilizer	.5	2.40	2.10	Nitrogen 30# @ 25¢	7.50	12.00
Cultivation 4X	4.0	21.00	11.00			32.00
Misc. labor, materials, etc.		10.00	5.00		17.00	32.00
Interest on operating capital 9%					10.00	10.00
TOTAL CULTURAL COSTS		131.75	24.75		71.50	228.00
<u>Harvest Costs</u>						
Picking - 4 tons @ \$35/ton		140.00				140.00
Supervision	4.0	21.00				21.00
Move gondolas and misc.	2.0	12.00	3.00			15.00
Haul to winery				4 tons @ \$10/ton	40.00	40.00
TOTAL HARVEST COSTS		173.00	3.00		40.00	216.00
<u>Cash Overhead</u>						
Misc., office, etc.					27.00	27.00
Taxes					120.00	120.00
TOTAL CASH OVERHEAD						147.00
TOTAL CASH COST		304.75	27.75		258.50	591.00
Management						120.00
<u>Investment Cost</u>						
		<u>Per acre</u>		<u>Annual cost</u>		
Land		\$4,000		<u>Depreciation</u>	<u>Interest @ 8%</u>	
Vineyard		2,800		\$ 93	112	
Buildings		250		12	10	
Equipment		1,000		100	40	
		<u>\$8,050</u>		<u>\$205</u>	<u>\$482</u>	687.00
TOTAL COST PER ACRE						1,398.00
Cost per ton @ 4 ton yield						349.50

COST PER TON AT VARYING YIELDS
 OLDER, HEAD-TRAINED WINE GRAPES

Tons	Picking cost		Haul	Other costs	Total cost	
	Per ton	Per acre	Per acre	Per acre	Per acre	Per ton
2	\$100	\$200	\$20	\$1,218	\$1,438	\$719
3	55	165	30	1,218	1,413	471
4	45	180	40	1,218	1,438	360
5	35	175	50	1,218	1,443	289
6	35	210	60	1,218	1,488	248
8	35	280	80	1,218	1,578	197

Soil Requirements: Grapes grow fairly well in many different soils. The deeper and more fertile soils usually produce the heaviest crops but some varieties reach higher quality on soils of limited depth. Avoid very heavy clays, very shallow soils, poorly drained soils, and soils with relatively high concentrations of alkali salts, boron, and other toxic materials.

Frost Protection: All areas except those with excellent air drainage will require frost protection. Such protection can be provided by heaters, wind machines, or sprinklers. We have used sprinklers for our calculations. See University of California Cooperative Extension Leaflet 2743, Frost Protection for North Coast Vineyards.

Rootstocks and Scion Wood: Plant only rootings and use only bud wood certified free of known virus disease by the Seed and Nursery Service of the California Department of Food and Agriculture.

Investment	Per acre	Annual cost per acre	
		Depre- ciation	Interest 8%
Land	\$4,000		\$320.00
Site conversion (includes tree or vine removal, ripping and fumigation)	900		72.00
Irrigation and frost control equipment	1,800	90.00	72.00
Buildings	250	12.00	10.00
Equipment:	<u>Total</u>		
Tractor - 50 HP wheel	\$15,000		
Pickup	6,250		
Disc 8'	2,200		
Chopper 6'	1,375		
Duster	1,125		
Gondolas - 2	6,250		
Miscellaneous*	<u>8,000</u>		
Total equipment	\$40,000	1,000	40.00
Total investment per acre	7,950	202.00	514.00

*Includes pruning equipment, small tools, shop equipment and other items necessary for the operation of a vineyard.

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