



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

1976

Division of Agricultural Sciences
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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 for irrigated trellised wine varieties and 5 tons per acre for nonirrigated standard varieties 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 both deer and rabbit control will vary considerably with the individual situation. Growers have reported costs of \$2.00 to \$3.00 per foot of installed fence. Annual overhead and maintenance costs would vary from \$25 to \$40 an acre.

WINE GRAPE CULTURAL BRIEFS

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.

Planting Dates: Vines can be set anytime during the dormant season. Set before growth starts in the spring.

Harvest Dates: September to November.

Varieties: Check with wineries to find out what varieties they need and would be willing to purchase. Use only certified rootstock.

Planting Distance: Customary plantings are 10 x 10 feet or 8 x 12 feet with 20 foot avenues on each side and at 1/4 mile intervals.

Fertilizer: About 50 pounds of nitrogen per acre are usually sufficient. Excess fertilizer may cause the plants to produce excessive vegetative growth rather than fruit.

Irrigation: Grapes will require about 6 inches of irrigation water per year, providing the soil is filled to capacity at the end of the rainy season.

Weed Control: Use cultivation and herbicides as necessary to control weeds.

Insect Control: Control measures may be necessary for grape leafhopper and the Pacific mite. If nematodes are a problem in your soil, consider fumigation before planting and use resistant rootstocks.

Diseases: Possible disease problems include oak root fungus, leaf roll, corky bark, Phylloxera, yellow mosaic and yellow vein. Obtain accurate diagnosis and use recommended treatments. Check with your farm advisor as to whether you need Phylloxera resistant rootstocks.

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.

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IRRIGATED, TRELLISED WINE GRAPES
SAMPLE COSTS TO PRODUCE
North Coast Counties - 1976

Yield 4 tons per acre.

Operation	Hours per acre	Cash and labor cost per acre				Total
		Labor	Fuel & repairs	Materials		
				Kind and quantity	Cost	
Dollars						
Cultural Cost						
Pruning - 413 vines/A	26.0	91.00				91.00
Brush disposal (chopper)	.5	2.00	1.25			3.25
Tying canes	4.0	14.00				14.00
Sulfuring 4X	1.2	4.20	3.00	Sulfur 50# @ 5-1/2c	2.75	9.95
Insect control				Application 300 gal. @ 3c	9.00	
Fertilize	.5	1.75	1.25	Materials	18.00	27.00
Vine row spray to control annual weeds		15.00		Nitrogen 50# @ 30c	15.00	18.00
Cultivate 4X	3.0	12.00	6.60	Material	9.00	24.00
Irrigation 2X	1.0	3.50	14.00	Pumping 6"	8.00	25.50
Frost protection	1.0	3.50	14.00	Pumping 6"	8.00	25.50
Misc. labor, supplies, etc.		8.00	4.00		13.00	25.00
Interest on operating capital 9%					12.50	12.50
TOTAL CULTURAL COSTS		154.95	44.10		95.25	294.30
Harvest Cost						
Picking - 4 tons @ \$55 ton		220.00				220.00
Supervision	4.0	16.00				16.00
Move gondolas, misc.	2.0	7.50	2.10			9.60
Haul to winery				4 tons @ \$5/ton	20.00	20.00
TOTAL HARVEST COSTS		243.50	2.10		20.00	265.60
Cash Overhead						
Misc., office, etc.					36.15	
Taxes					144.00	
TOTAL CASH OVERHEAD						180.15
TOTAL CASH COST		398.45	46.10		295.40	740.05
Management						100.00
Investment Cost						
		<u>Per Acre</u>		<u>Annual cost</u>		
Land		\$ 3,500		<u>Depreciation</u>	<u>Interest 8%</u>	
Vineyard		4,224		\$140.75	168.90	
Irrigation system and frost control		1,670		83.00	66.80	
Buildings		100		5.00	4.00	
Equipment		725		72.50	29.00	
Site conversion		700			56.00	
		<u>\$10,919</u>		<u>\$301.25</u>	<u>\$604.70</u>	905.95
TOTAL COST PER ACRE						1,746.00
Cost per ton @ 4 ton/A yield						436.50

COST PER TON AT VARYING YIELDS

Tons	Picking cost		Haul	Other costs	Total cost	
	Per ton	Per acre	Per acre	Per acre	Per acre	Per ton
2	\$100	\$200	\$10	\$1,502	\$1,712	\$856
3	60	180	15	1,502	1,697	566
4	55	220	20	1,502	1,742	435
5	45	225	25	1,502	1,752	350
6	45	270	30	1,502	1,802	300

NONIRRIGATED WINE GRAPES
SAMPLE COSTS TO PRODUCE
North Coast Counties - 1976

Yield 5 tons per acre.

Operation	Hours per acre	Cash and labor cost per acre				Total
		Labor	Fuel & repairs	Materials Kind and quantity	Cost	
Dollars						
<u>Cultural Cost</u>						
Pruning, average 600 vines @ 12¢		72.00				72.00
Brush disposal (chopper)	.5	2.00	1.25			3.25
Sulfur 4X (powder dust)	1.2	4.20	3.00	Sulfur 50# @ 5-1/2¢	2.75	9.95
Insect control spray				Application 300 gal @ 3¢	9.00	
				Material	18.00	27.00
Fertilizer applied	.5	1.75	1.25	Nitrogen 50# @ 30¢	15.00	18.00
Cultivation 4X	4.0	16.00	8.80			24.80
Misc. labor, materials, etc.		8.00	4.00		13.00	25.00
Interest on operating capital 9%					7.90	7.90
TOTAL CULTURAL COSTS		103.95	18.30		65.65	187.90
<u>Harvest Cost</u>						
Picking--\$35/ton		175.00				175.00
Supervision	4.0	16.00				16.00
Move gondolas and misc.	2.0	7.00				7.00
Haul to winery				5 tons @ \$5/ton	25.00	25.00
TOTAL HARVEST COSTS		198.00			25.00	223.00
<u>Cash Overhead</u>						
Misc., office, etc.					23.60	
Taxes					100.00	
TOTAL CASH OVERHEAD						123.60
TOTAL CASH COST		301.95	18.30		214.25	534.50
Management						100.00
<u>Investment Cost</u>						
	<u>Per Acre</u>			<u>Annual cost</u>		
Land	\$3,500			<u>Depreciation</u>	<u>Interest @ 8%</u>	
Buildings	100			\$ 5.00	4.00	
Equipment	725			72.50	29.00	
Vines	2,300			77.00	92.00	
	<u>\$6,625</u>			<u>\$154.50</u>	<u>\$405.00</u>	559.50
TOTAL COST PER ACRE						1,194.00
Cost per ton @ 5 ton/A yield						238.80

COST PER TON AT VARYING YIELDS

Tons	Picking cost		Haul	Other costs	Total cost	
	Per ton	Per acre	Per acre	Per acre	Per acre	Per ton
2	\$100	\$200	\$10	\$994	\$1,204	\$602
3	55	165	15	994	1,174	391
4	45	180	20	994	1,194	298
5	35	175	25	994	1,194	239
6	35	210	30	994	1,234	206
8	35	280	35	994	1,309	164

This publication shows sample costs to establish a vineyard and to produce irrigated, trellised wine grapes and sample costs to produce non-irrigated wine grapes.

Costs are 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 \$4.00 and \$3.50 per hour including fringe benefits.

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

Investment	Per Acre	Annual Cost Per Acre	
		Depre- ciation	Interest 8%
Land	\$ 3,500	\$	\$280.00
Site conversion (includes tree or vine removal, ripping and fumigation)	700		56.00
Irrigation and frost control equipment	1,670	83.00	66.80
Buildings	100	5.00	4.00
Equipment:	<u>Total</u>		
Tractor - 50 HP wheel	\$12,000		
Pickup	5,000		
Disc 8'	1,750		
Chopper 6'	1,100		
Duster	900		
Gondolas - 2	5,000		
Miscellaneous	<u>3,250</u>		
Total Equipment	\$29,000	725	29.00
Total Investment Per Acre	6,695	160.50	435.80

Wine Grapes--
 Sample Costs to Establish an Irrigated, Trellised
 Vineyard in the North Coast Counties - 1976

	Cost per acre					
	1st year	Your costs	2nd year	Your costs	3rd year	Your costs
Planting Cost						
Pre-plant tillage 2X	\$ 20					
Lay out and mark	18					
Distribute and set stakes @ 11¢	45					
Stakes 7' treated - 413 @ 55¢	227					
Dig holes (power auger)	18					
*Rootstocks (certified) - 413 @ 50¢	206					
Heel in and trim @ 7¢	29					
Plant vines	37					
TOTAL PLANTING COST	600					
Cultural Cost						
*Bud and cover, including rubber ties	120		30		10	
*Budwood (certified) @ 5¢/bud	20		2		1	
*Uncover and prune rootstocks			29		3	
*Cut rubbers and tops, place collars			117		12	
End posts (treated) - 11 @ \$3.75					41	
End posts, set @ \$1					11	
String 2 wires and staple					18	
Wire - 200 lbs. @ 25¢ lb.					50	
Train and prune			91		44	
Dusting - labor and material			7		7	
Irrigation labor 2X - 1 man-hour	4		4		4	
Water - pumping power 1/2 acre ft.	8		8		8	
Repairs on irrigation system	14		14		14	
Cultivation and hand hoe	26		26		26	
Frost protection - labor			4		4	
" " - power for 6" water			8		8	
Misc. labor, materials, etc.	25		25		25	
Interest on operating capital - 9%, 1/2 year			75		133	
TOTAL CULTURAL COST	217		440		419	
Overhead						
Miscellaneous cash	50		22		17	
Taxes	100		119		132	
Management	120		100		100	
Interest	436		436		436	
Depreciation	160		160		160	
TOTAL OVERHEAD	866		837		845	
TOTAL COST	1,683		1,277		1,264	
ACCUMULATED COST	1,683		2,960		4,224	
Investment Cost						
Land	3,500		3,500		3,500	
Site conversion	700		700		700	
Vineyard			1,683		2,960	
Irrigation & frost control	1,670		1,670		1,670	
Buildings	100		100		100	
Equipment	725		725		725	
Total	6,695		8,378		9,655	

Total cost for 3 years \$4,224.

*If bench grafted vines are used instead of field budding, the cost is about \$1.50 per vine.

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