

WINE GRAPE PRODUCTION ⁱⁿ CALAVERAS COUNTY

PREPARED BY -

DANIEL M. IRVING

FARM ADVISOR

CALAVERAS COUNTY

PHILLIP S. PARSONS

AGRICULTURAL ECONOMIST

UNIVERSITY OF CALIFORNIA

A.N. KASAMATIS

EXTENSION VITICULTURIST

UNIVERSITY OF CALIFORNIA

AGRICULTURAL EXTENSION SERVICE

Old Court House Building - Main Street
P.O. Box 837
SAN ANDREAS, CALIFORNIA 95249

TELEPHONE: 209 - 754-4160
754-3213

MARCH, 1970

WINE GRAPES

The Jenny Lind district is considered to be in Region IV for wine grape production. Grapes have long grown here for wine purposes under dryland conditions; some vineyards were well established by 1905. Fascinating stories are told of home wineries and wines that add to the color and history of the early Gold Rush Days. Large commercial wineries are now centered in the Lodi areas serving as a market for locally produced grapes.

One of the oldest and time proven wine grapes varieties of value here is the Zinfandel. It has a good sugar acid balance if picked at the proper time but has a tendency to develop bunch rot. Therefore, only well drained locations are suitable for plantings with carefully timed irrigations and effective control of mites. Four ton yields are considered state average. This cost analysis is based on yields of 6 tons.

Other varieties that may be considered are Barbera, French Colombard and Carignane. These are moderately vigorous, to very vigorous - productive and versatile varieties for wines that may be adapted to the lower foothills. These varieties may produce greater yields than Zinfandels and are widely used for blending with other wines.

SOILS: - In selecting soils for grapes it is well to avoid heavy clays, very shallow soils and poorly drained soils. The deeper more fertile soils usually produce the heaviest yields.

Field tests in the wine vineyards of the Sierra foothills indicate that nitrogen is the main nutrient soil deficiency that requires fertilization. Sometimes, deficiencies of boron and zinc are found. Soil and tissue tests indicate that phosphorous and potassium in the soil are adequate.

CULTURAL PRACTICES: - Other factors influencing yield and quality of grapes are pruning, irrigation and pest and disease control.

Proper pruning controls the level of crop production and maintains shape and the number of fruit buds on the plant. In vineyards of 80 acres or less, the grower usually does most of the work other than pruning and harvesting. One man
UC Cooperative Extension

may prune 20-30 acres during the winter vine-dormant season.

Irrigation provides needed water for the plant to maintain growth and to mature the grapes. Generally, 1 to 2 acre feet of water is applied through the growing season; applications should be made in June, July and August as required by the moisture storage capacity of the soil and condition of the vines.

Pests and diseases of grapes require control each year. In our study, control costs for mites and mildew are expected and included. The interested reader is directed to the many publications on this and other subjects of wine vineyard production that are available from Farm Advisors' offices.

The future of wine grape production will largely depend upon the ability of each grower to produce a quality product needed by the wine industry in a rapidly expanding varietal wine market.

PRICE: - The local prices of wine grapes vary widely from year to year. For this analysis, \$75 per ton was used. The most recent five year average price in California was \$62 per ton while in a local county, \$102 per ton was reported.

CALIFORNIA WINE GRAPE PRODUCTION STATISTICS

Crop Year	<u>Acreage</u>		Total Production 1,000 Ton	Yield per bear- ing acre	<u>Growers' returns*</u>	
	Bearing	Non Bearing			Per bear- ing acre	Per ton
1960	118,072	8,429	511 Tons	4.3	236	54.60
1961	116,393	11,041	474	4.1	316	77.50
1962	120,008	9,677	643	5.4	348	64.90
1963	121,341	9,847	624	5.1	282	54.90
1964	120,060	12,137	608	5.1	366	72.20
1965	123,013	13,745	750	6.1	294	48.30
1966	126,200	15,820	665	5.3	297	56.30
1967	125,650	17,520	630	5.0	311	62.10
1968	128,260	13,160	650	5.2	360	71.10
1969	131,000		780	5.95		83.70

* Returns for fruit at growers' first delivery point on a fresh basis.
Source: U.S. Government Publications and others
California Agricultural Extension Service, University of California.

SAMPLE COSTS TO PRODUCE WINE GRAPES IN CALAVERAS COUNTY
March 1970

25

YIELD: 6 Tons - Zinfandels

Operation	Hours Per Acre	Cash and Labor cost per acre			Total
		Labor	Fuel & Repairs	Materials Kind & Quantity Cost	
Cultural Costs					
Prune @\$1.75/hr.	16.0	28.00			28.00
Brush Disposal	0.7	1.40	0.74		2.14
Fertilize, Contract				40 Lbs. Applied 7.10	7.10
Disc & Spike Harrow	2.0	6.00	3.20		9.20
Mildew Control	0.3	0.60	0.30	1.05	1.95
Mite Control + Sulfur 2X	0.6	1.20	0.60	Miticides + Sulfur 6.00	7.80
Irrigate 3X	1.8	3.60	Power to boost 2.0Ac.Ft. @ \$5.47/Ac.Ft. \$10.94		14.54
Misc., Pest, etc.	2.0	4.00	1.50	Pickup	5.50
TOTAL CULTURAL COSTS		44.80	6.34	25.09	76.23

Harvest Costs					
Pick and Haul	Contract	\$20 Per Ton			120.00
TOTAL HARVEST COSTS					120.00

Cash Overhead					
Misc., Office, etc.	6 % of above costs				11.96
Taxes, land and Vines	\$1000 X 25% X .06 (rate)				15.00
Rent					
TOTAL CASH OVERHEAD					26.96

TOTAL CASH COST **223.19**

INVESTMENT	PER ACRE	ANNUAL COST 7 %	
		DEPRECIATION	INTEREST
Land	\$500.		\$35.00
Vines	700.	30 Yr. \$23.33	24.50
Irrigation System	150.	15 Yr. 10.00	5.25
Buildings	10.	20 Yr. 0.50	0.35
Equipment	102.	10 Yr. 10.20	3.56
Irrigation Supply Line	104.	30 Yr. 3.47	3.64
TOTAL	\$ 1566	47.50	72.30

119.80

TOTAL COST PER ACRE **342.99**

Cost Per Ton @ 6 Ton Yield 57.15

EQUIPMENT INVESTMENT FOR GRAPES
IN CALAVERAS COUNTY
MARCH 1970

Based on 80 Acres - 10 Yr. Life

Item	Cost	Cost Per Acre	Depre- ciation	7% Int.	Cash Costs Per Hour		
					Fuel	Repair	Total
40 H.P. - W.D. Tractor	\$ 5700	71.25	7.13	2.49	.32	.58	.90
Disk	1000	12.50	1.25	.44		.60	.60
Spike Harrow	300	3.75	.38	.13		.10	.10
Buckrake	600	7.50	.75	.26		.15	.15
Duster - 6 Row	300	3.75	.38	.13		.10	.10
Pickup Truck	2500	3.13	.31	.11			
TOTAL		\$ <u>101.88</u>	<u>10.20</u>	<u>3.56</u>			

Irrigation System

Booster Pump and Pipeline	12,000	150.00	10.00	5.25	15 Life Yrs.
Supply Line 2640' of 6"	8,316	104.00	3.47	3.64	30 Life Yrs.

COSTS AND EXPECTED RETURNS FROM GRAPES PRODUCTION IN CALAVERAS COUNTY
AT SELECTED YEARS

	Yields in Tons Per Acre				
	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
Cash Costs Per Acre	\$ 183.19	203.19	223.19	243.19	263.19
Overhead Costs Per Acre	119.80	119.80	119.80	119.80	119.80
Total Costs Per Acre	302.99	322.99	342.99	362.99	382.99
Costs Per Ton At Selected Yields	75.75	64.60	57.15	51.85	47.86
5 Yr. Average Local Price Per Ton	75.00	75.00	75.00	75.00	75.00
Net Farm Income Per Acre (Without Cost of Water)	-0.75	52.00	96.39	162.05	217.12