

SAMPLE COSTS TO ESTABLISH AND PRODUCE  
ZINFANDEL WINE GRAPES IN AMADOR COUNTY  
1983

Prepared by

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This publication shows sample costs to establish a Zinfandel vineyard of head-trained vines. The costs in the study are based on current dollars - no inflationary factors over a three year establishment period have been considered; nor have the three year costs been discounted to present value. The data was collected from growers of Zinfandel in Amador County.

*Acresage & Spacing.* Costs have been calculated based upon a 40 acre parcel with vines being planted on 25 acres at 9' x 9' spacing giving a net of 538 vines per acre after allowing for avenues and turning space.

*Labor Costs.* Labor costs have been calculated at \$5.00 for field crews and \$5.60 an hour for skilled labor including benefits.

*Capital Investment.* Investments are based on current replacement costs of new equipment. Some growers may reduce their costs by buying used equipment or by maintaining older equipment.

*Land Investment.* The land value of \$3,000.00 per acre are based upon what growers observe to be typical current market price for vineyard land in Amador County.

*Site Conversion.* Many of the parcels available for vineyard development require removal of rocks, brush and tree stumps and some should have tile drains installed. The costs can vary widely and are not included in this study.

*Yield.* Vineyard yields vary because of differences in soils and the care and management given by the grower. The average yield in Amador County for black grapes is approximately 3-3.5 tons per acre.

*Fencing.* Permanent deer fencing may be necessary where vineyards are planted next to deer habitat. Fencing costs are not included in this cost study.

*Rootstocks and Scion Wood.* Only certified rootings should be planted. Otherwise virus diseases can significantly reduce production. Own rooted vines can be used if the property does not have a history of phylloxera.

*Management.* The vineyard is assumed to be owner operated. The owner's salary is not charged as a cost in this study. The profit shown when vines reach production include both return to management and return on investment.

*Interest.* Interest on machinery, equipment and the irrigation equipment is figured at 14% while interest on land and buildings is based at 9.75% assuming a 40 year mortgage.

*Depreciation.* The straight-line depreciation method is used to depreciate investment. Equipment is depreciated over ten years to 20% of its original value. The buildings and overhead sprinkler system are completely depreciated over 20 years and vineyard investment over 30 years.

*Taxes.* Land and vineyard improvements are assumed to be taxed at 1% of value.

FUEL USE SUMMARY FOR BUDGET RECORD NUMBER 294  
 COSTS FOR PRODUCING ZINFANDEL GRAPES  
 ANADOR COUNTY 1983  
 BY DEL FARNHAM AND KAREN KLONSKY

FUEL USED IN GALLONS PER HOUR

TRACTOR 50 HP 2.400

FUEL ALLOCATED TO OPERATIONS IN GALLONS PER ACRE COVERED

MACHINE	GALLONS	POWER UNIT
OFFSET DISC 7'6"	1.760	TRACTOR 50 HP
SPRINGTOOTH 6'	1.862	TRACTOR 50 HP
DRY FERT APPLIC.	1.031	TRACTOR 50 HP
WEED SPRAYER	0.722	TRACTOR 50 HP
DUSTER	0.830	TRACTOR 50 HP

FUEL ALLOCATED TO OPERATIONS FOR THE BUDGET UNIT

	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL	FUEL TYPE
OFFSET DISC 7'6"	0.000	0.000	3.520	3.520	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.040	DIESEL
SPRINGTOOTH 6'	0.000	0.000	3.723	3.723	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.446	DIESEL
DRY FERT APPLIC.	0.000	1.031	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.031	DIESEL
WEED SPRAYER	0.000	0.000	0.000	0.000	0.000	0.722	0.722	0.000	0.000	0.000	0.000	0.000	1.445	DIESEL
DUSTER	0.000	0.000	0.000	0.000	0.830	0.830	0.830	0.000	0.000	0.000	0.000	0.000	2.489	DIESEL
TOTALS	0.000	1.031	7.243	7.243	0.830	1.552	1.552	0.000	0.000	0.000	0.000	0.000	19.451	

GALLONS FUEL BY TYPE

0.00 GAS  
 0.00 LP  
 19.45 DIESEL  
 0.00 N. GAS  
 0.00 KWRS

FUEL TYPES

1=GAS  
 2=L.P.  
 3=DIESEL  
 4=N. GAS  
 5=ELEC.

BORATE EVERY THIRD YEAR

25 ACRES OF 40 ACRE FARM

9X9 SPACING

DATE PRINTED: 04/01/83

CERTIFIED ZINFANDEL  
 530 VINES PER ACRE

UPDATED 04/01/83

MACHINERY OPERATIONS SUMMARY  
 COSTS FOR PRODUCING ZINFANDEL GRAPES  
 ANADOR COUNTY 1983  
 BY DEL FARNHAM AND KAREN KLONSKY

BUDGET RECORD NUMBER 294

OPERATION	ITEM NO.	DATE	TIMES OVER	LABOR HOUR S	MACHINE HOURS	FUEL, OIL, FIXED	
						LUB. PER ACRE	REP. COSTS PER ACRE
DRY FERT APPLIC.	4, 85	FEB	1.00	0.473	0.391	1.78	5.88
OFFSET DISC 7'6"	4, 76	MAR	2.00	1.613	1.333	8.24	21.59
SPRINGTOOTH 6'	4, 98	MAR	2.00	1.706	1.410	6.90	20.04
OFFSET DISC 7'6"	4, 76	APR	2.00	1.613	1.333	8.24	21.59
SPRINGTOOTH 6'	4, 98	APR	2.00	1.706	1.410	6.90	20.04
DUSTER	4, 87	MAY	1.00	0.380	0.314	1.36	4.75
WEED SPRAYER	4, 88	JUNE	1.00	0.331	0.274	1.16	4.45
DUSTER	4, 87	JUNE	1.00	0.380	0.314	1.36	4.75
WEED SPRAYER	4, 88	JULY	1.00	0.331	0.274	1.16	4.45
DUSTER	4, 87	JULY	1.00	0.380	0.314	1.36	4.75
TOTALS				8.915	7.368	38.46	112.26

BORATE EVERY THIRD YEAR

25 ACRES OF 40 ACRE FARM

9X9 SPACING

DATE PRINTED: 04/01/83

CERTIFIED ZINFANDEL  
 530 VINES PER ACRE

UPDATED 04/01/83

STORED DATA PAGE (NO CALCULATIONS) FOR GRAPES, WINE

BUDGET RECORD NUMBER 294

COSTS FOR PRODUCING ZINFANDEL GRAPES  
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COSTS AND RETURNS WILL BE  
DIVIDED BY 4.0 TON  
TO OBTAIN PER TON COSTS

LINE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	PRICE	SHARE	UNIT	ITEM	TYPE	XXXX		
PRODUCTION	NUMBER OF UNITS																			
1 GRAPES, WINE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00	0.00	0.00500.000	0.000	3.	47.	2.	0.		
OPERATING INPUTS	RATE/UNIT																			
6 FERTING	0.00	13.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.000	0.000	8.	340.	3.	0.		
7 NITROGEN	0.00	40.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.350	0.000	12.	211.	3.	0.		
8 BORAX	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.460	0.000	7.	226.	3.	0.		
10 FWDY MILDW CTL	0.00	0.00	0.00	0.00	15.00	15.00	15.00	0.00	0.00	0.00	0.00	0.00	0.120	0.000	12.	239.	3.	0.		
11 MITTICIDE	0.00	0.00	0.00	0.00	0.00	15.00	15.00	0.00	0.00	0.00	0.00	0.00	0.530	0.000	12.	247.	3.	0.		
12 SUPERVISION	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.000	0.000	7.	325.	3.	0.		
13 PICKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00	0.00	50.000	0.000	3.	328.	3.	9.		
15 HAULING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00	0.00	20.000	0.000	3.	319.	3.	9.		
16 FORKLIFT RENTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	20.000	0.000	7.	469.	3.	9.		
17 PICKUP USE	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	0.260	0.000	18.	152.	3.	0.		
18 TRACTOR RENTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00100.000	0.000	43.	296.	3.	9.		
MACHINERY REQUIREMENTS	IMPLEMENTS = TIMES OVER, TRUCKS = # MILES/ACRE, TRACTORS = HRS/ACRE																			
26 OFFSET DISC 7'6"	0.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	4.	76.	4.	0.		
27 SPRINGTOOTH 6'	0.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	4.	98.	4.	0.		
29 DRY FERT AFFLIC.	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	4.	85.	4.	0.		
30 WEED SPRAYER	0.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	4.	68.	4.	0.		
31 DUSTER	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	4.	87.	4.	0.		
EQUIPMENT REQUIREMENTS	NUMBER UNITS OF COST																			
51 STORAGE SHED													1.000	0.625	0.	8.	5.	0.		
52 2 FUEL TANKS													1.000	0.625	0.	18.	5.	0.		
53 MISCL ORCH EQUIP													1.000	0.625	0.	55.	5.	0.		
54 40 WOODEN BINS													1.000	0.625	0.	75.	5.	0.		
55 4 TRAILERS													1.000	0.625	0.	76.	5.	0.		
COLUMNS --->	2	3	4	5	6	7	8													
LAND REQUIREMENTS	CHARGE	NUMBER	VALUE	TAXES	PERENIAL															
	METHOD	OF ACRES	COST/ACRE	PER ACRE	YRS LIFE	COST/ACRE														
71	1.	25.00	3000.00	30.00	40.0	3961.90														
ENTERPRISE 2-47 REGION/COUNTY	3 UNASSIGNED	00000	MACH CORP	7 IRRIG SYST	4 UNASSIGNED	0 EQUIP SET	1 HARVEST	WORTH	8											
BORATE EVERY THIRD YEAR																				
25 ACRES OF 40 ACRE FARM	CERTIFIED ZINFANDEL												MACHINERY COMPLEMENT						7	
9X9 SPACING	530 VINES PER ACRE												UPDATED 04/01/83						EQUIPMENT COMPLEMENT	1
GENERAL NAME CHANGE-->226	BORAX	325	SUPERVISION	334	CHECKER	469	FORKLIFT RENTAL	328	PICKING											
	319	HAULING	152	PICKUP USE	296	TRACTOR RENTAL	43	DAYS												
MACHRY NAME CHANGE-->88	WEED SPRAYER	87	DUSTER	21	IRRIG PUMP-10HP	76	OFFSET DISC 7'6"	98	SPRINGTOOTH 6'											
	18	2 FUEL TANKS--																		
EQUIP NAME CHANGE-->75	40 WOODEN BINS	76	4 TRAILERS	18	2 FUEL TANKS															
MACH CORP CHGS-->89	3.	7000.000000	89.13.	7000.000000	76.13.	3700.000000	98.2.	6.000000	21.16.	10.000000	85.2.	8.000000								
	4.13.	16000.000000	4.	3.160000.000000	21.13.	2500.000000	21.	3.	2500.000000	56.	3.	22500.000000	56.13.	22500.000000						
	56.	9.	3000.000000	56.2.	1.000000	76.2.	7.500000	76.	3.	3700.000000	98.13.	1500.000000	98.3.	1500.000000						
	87.13.	700.000000	87.10.	10.000000	87.3.	700.000000	88.13.	1200.000000	88.10.	10.000000	88.3.	1200.000000								
	4.	9.	225.000000																	
EQUAT CORP CHGS-->55	5.	5000.000000	55.6.	5000.000000	8.2.	2000.000000	8.5.	20000.000000	8.6.	20000.000000	75.2.	1.000000								
	75.4.	2.000000	75.5.	7000.000000	75.6.	7000.000000	75.7.	10.000000	76.2.	1.000000	76.4.	2.000000								
	76.5.	2000.000000	76.6.	2000.000000	76.7.	15.000000	18.6.	1000.000000	18.5.	1000.000000	55.7.	4.000000								
	55.10.	0.000000																		
PARAMETER CHGS-->10.	7.600000	11.	5.000000	12.	5.000000	26.	0.097500													

COST & RETURNS SUMMARY FOR GRAPES, WINE

COSTS FOR PRODUCING ZINFANDEL GRAPES

ARADOR COUNTY 1983

BY DEL FARNHAM AND KAREN KLONSKY

	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST PER ACRE	YOUR COST
<b>1. GROSS RECEIPTS FROM PRODUCTION:</b>					
GRAPES, WINE	TON	500.000	4.000	2000.00	
TOTAL RECEIPTS:				2000.00	
<b>2. VARIABLE COSTS:</b>					
<b>PREHARVEST:</b>					
PRUNING	HOURL	5.000	13.000	65.00	
NITROGEN	LBS.	0.350	40.000	14.00	
BORAX	ACRE	15.460	0.330	5.10	
POWDRY MILDEW CTL	LBS.	0.128	45.000	5.76	
FITICIDE	LBS.	0.530	30.000	15.90	
SUPERVISION	ACRE	10.000	1.000	10.00	
PICKUP USE	MILE	0.260	480.000	124.80	
TRACTOR (FUEL-LUBE-REPAIRS)	ACRE			29.73	
EQUIPMENT (FUEL-LUBE-REPAIRS)	ACRE			8.73	
BUILDINGS (FUEL-LUBE-REPAIRS)	ACRE			0.38	
MACHINERY LABOR	HOURL	7.600	8.915	67.76	
INTEREST ON OPERATING CAP.	DOL.	0.14000	143.379	12.44	
TOTAL PREHARVEST COSTS:				368.60	
PREHARVEST COST PER TON				91.6501	
<b>HARVEST:</b>					
PICKING	TON	50.000	4.000	200.00	
HAULING	TON	20.000	4.000	80.00	
FORKLIFT RENTAL	ACRE	20.000	1.000	20.00	
TRACTOR RENTAL		100.000	0.200	20.00	
TOTAL HARVEST COSTS:				320.00	
HARVEST COST PER TON				80.0000	
TOTAL VARIABLE COSTS:				688.60	
VARIABLE COST PER TON				171.6501	
<b>3. INCOME ABOVE VARIABLE COSTS:</b>					
INCOME PER TON				1313.40	
				328.3497	
<b>4. OVERHEAD:</b>					
PERSONAL PROPERTY TAXES:				15.72	
REAL PROPERTY TAXES:				30.00	
TOTAL OVERHEAD:				45.72	
OVERHEAD COST PER TON				11.4297	
TOTAL CASH COSTS:				732.32	
TOTAL CASH COST PER TON				183.0798	
<b>5. INCOME ABOVE ALL CASH COSTS:</b>					
INCOME PER TON				1267.68	
				316.9202	
<b>6. OWNERSHIP COSTS:</b>					
<b>DEPRECIATION:</b>					
MACHINERY & EQUIPMENT	ACRE			38.86	
BUILDINGS	ACRE			62.15	
TREES, VINES OR STAND	ACRE			59.05	
TOTAL DEPRECIATION:				200.06	
<b>CAPITAL &amp; INTEREST:</b>					
MACHINERY & EQUIPMENT		0.14000	412.158	57.70	
BUILDINGS		0.09750	476.250	46.43	
TREES, VINES OR STAND		0.09750	3961.900	193.14	
LAND		0.09750	3000.000	292.50	
TOTAL INTEREST CHARGE:				589.78	
TOTAL FIXED COSTS:				789.84	
FIXED COST PER TON				197.4594	
<b>7. TOTAL OF ABOVE COSTS:</b>					
TOTAL COST PER TON				1522.16	
				380.5393	
<b>8. NET RETURNS:</b>					
NET RETURNS PER TON				477.84	
				119.4607	

80RATE EVERY THIRD YEAR

25 ACRES OF 40 ACRE FARM

9X9 SPACING

DATE PRINTED: 04/01/83

CERTIFIED ZINFANDEL

538 VINES PER ACRE

HARVEST MONTH: 8

UPDATED 04/01/83

BUDGET RECORD NUMBER 294

