

Sample Costs for Producing Emperor Table Grapes in the San Joaquin Valley - 1988



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Introduction

This publication is one of a series on sample costs of producing grapes in the San Joaquin Valley. The data is to be used only as a guide to help analyze costs and practices that might increase production efficiency. The data is based on what are considered good management practices and do not represent industry averages.

Establishment Costs

Refer to the publication "*Sample Costs for Establishing and Producing Cordon Trained, Spur Pruned Table Grape Varieties*" for information on establishment costs.

Yield

Yield is the most important factor affecting costs per ton and profit per acre. The yield per acre used in this sample is average over a period of years for a typical, well-managed vineyard. Although this figure is higher than industry average, some vineyards do better.

Irrigation

Sample costs for irrigation, labor and water costs are based on a pumping system with pipeline, and access to water from an irrigation district. These costs vary widely depending on pumping depth, efficiency, and irrigation district taxes. Labor cost per acre is affected by the number of irrigations, quantity applied, and size of head.

Pest Management and Growth Regulators

Pest management costs include materials and application for control of insect, mite, and disease pest problems, including powdery mildew. Pest management programs and costs vary widely depending on pest pressure, vineyard location, pesticides selected, and many other factors. Sample costs shown on this sheet are based on average conditions and a well-managed integrated pest management program. Some growth regulators are combined with pesticide applications.

EMPEROR TABLE GRAPES
Sample Costs for a Mature Vineyard - 1988

Based on a 120-acre unit, vines spaced at 8' x 12'. Wages include social security, worker's compensation, and insurance. Yield of 457, 23-pound lugs (87/ton), 5.25 tons shipped and 1.75 tons culls. Tractor and supervisory labor \$6.80/hour, field labor \$5.50/hour. Tractor costs \$6.60/hour.

OPERATION	LABOR HRS/AC	LABOR RATE	LABOR COST	FUEL & REPAIRS	MATERIALS TYPE AND QUANTITY PER ACRE	COST	TOTAL COST
Preharvest Cash Costs							
Pruning	20	\$5.50	\$110				\$110
Brush Disposal -- Contract					Alternate middles	\$6	\$6
Fertilizer					50 lbs N @ \$0.30/lb + \$5.00/Ac application	\$15 \$5	\$15 \$5
Growth Regulators, Disease & Pest Control						\$132	\$132
Application costs (growth regs & other)						\$49	\$49
Herbicides					Materials & application	\$37	\$37
Cultivation & Irrigation Preparation	4	\$6.80	\$27	\$26			\$53
Irrigation	5	\$5.50	\$28				\$28
Water Power and/or District tax @ \$32.70 1.5 ac ft (2 ac ft pumped)						\$47	\$47
Fruit Exposure	17	\$5.50	\$94				\$94
Misc. Repairs & fuel (not tractor)							\$20
Miscellaneous	8	\$5.50	\$44	\$13	Materials	\$32	\$89
Interest on Operating Capital @12.5%							\$85
Total Preharvest Costs							\$769
Cash Overhead							
Office & Business Costs							\$30
County Taxes							\$39
Total Cash Overhead Costs							\$69
TOTAL CASH COSTS							\$838
TOTAL CASH COST/LUG @ 457 LUGS/ACRE							\$1.83
ANNUAL COST							
INVESTMENT	Per Acre	DEPRECIATION		INTEREST @12.5%		TOTAL	
Equipment, buildings, irrigation	\$899	\$70		\$56		\$126	
Vines, stakes, trellis - 20 yr life	\$5,830	\$292		\$364		\$656	
Land	\$3,000			\$375		\$375	
Total Investment Costs	\$9,729	\$362		\$796		\$1,157	
TOTAL COSTS PER ACRE						\$1,995	
COSTS PER LUG @ 457 LUGS/ACRE						\$4.37	

Costs Per Lug of Packed Fruit

House Packed		Field Packed	
Preharvest Costs	\$4.37	Preharvest Costs	\$4.37
Harvest Costs		Harvest Costs	
Pick & Haul	\$0.85	pick, pack, supervise	
Packing House cost	\$2.50	boxes, spread, swamp	
Total Harvest Costs	\$3.35	storage & handling	\$3.30
Total House Packed Costs/Lug	\$7.72	Total Field Packed Costs/Lug	\$7.67

**TABLE VARIETY
EQUIPMENT AND BUILDING LIST**

ITEM	ORIGINAL COST	ANNUAL USE (ACRES)	COST/ACRE	LIFE (YEARS)	DEPRECIATION	INTEREST @ 12.5%	REPAIR COSTS/HR	FUEL COSTS/HR
TRACTORS								
30 hp Wheel Diesel	\$13,000	120	\$108	10	\$11	\$6.77	\$1.30	\$1.95
60 HP Wheel Diesel	\$31,000	120	\$258	10	\$26	\$16.15	\$2.58	\$3.90
Disk, tandem 8'	\$7,500	120	\$63	15	\$4	\$3.91	\$3.60	
Border disc	\$2,000	120	\$17	15	\$1	\$1.04	\$0.96	
Springtooth 8'	\$1,500	120	\$13	20	\$1	\$0.78	\$0.90	
Flat furrower	\$2,800	120	\$23	20	\$1	\$1.46		
Three-point hitch	\$1,100	120	\$9	10	\$1	\$0.57	\$0.92	
Power Sprayer (100 gals)								
Duster	\$2,650	120	\$22	10	\$2	\$1.38		
Mower	\$4,000	120	\$33	10	\$3	\$2.08		
ATV	\$2,200	120	\$18	5	\$4	\$1.15		
Pickup	\$12,000	120	\$100	5	\$20	\$6.25		
Misc tools	\$5,000	120	\$42	10	\$4	\$2.60		
Cane cutters	\$2,679	120	\$22	10	\$2	\$1.40		
2 Tool bars	\$800	120	\$7	10	\$1	\$0.42		
Air Compressor	\$600	120	\$5	20	\$0	\$0.31		
Irrigation System	\$81,600	120	\$680	20	\$34	\$42.50		
Buildings	\$12,000	120	\$100	30	\$3	\$6.25		
TOTAL COST	\$179,779		\$1,498		\$116	\$93.63	\$10.26	\$5.85
60% OF NEW COSTS	\$107,867		\$899		\$70	\$56.18	\$6.16	\$3.51

Sample Costs for Establishing and Producing Thompson Seedless Table Grapes - 1988



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Introduction

This publication is one of a series on sample costs of producing grapes in the San Joaquin Valley. The data is to be used only as a guide to help analyze costs and practices that might increase production efficiency. The data is based on what are considered good management practices and do not represent industry averages.

Yield

Yield is the most important factor affecting costs per ton and profit per acre. The yield per acre used in this sample is average over a period of years for a typical, well-managed vineyard. Although this figure is higher than industry average, some vineyards do better.

Irrigation

Sample costs for irrigation, labor and water costs are based on a pumping system with pipeline, and access to water from an irrigation district. These costs vary widely depending on pumping depth, efficiency, and irrigation district taxes. Labor cost per acre is affected by the number of irrigations, quantity applied, and size of head.

Pest Management and Growth Regulators

Pest management costs include materials and application for control of insect, mite, and disease pest problems, including powdery mildew. Pest management programs and costs vary widely depending on pest pressure, vineyard location, pesticides selected, and many other factors. Sample costs shown on this sheet are based on average conditions and a well-managed integrated pest management program. Some growth regulators are combined with pesticide applications.

THOMPSON SEEDLESS TABLE GRAPES
Sample Costs to Establish a Vineyard - 1988

Costs are based on a 120 acre unit, vines spaced at 8' x 12'. Wages and piece work include social security, worker's compensation and insurance. Yield of 6.0 tons (for wine) in third year. Tractor and supervisory labor \$6.80 per hour, field labor \$5.50 per hour. Tractor costs \$6.60 per hour. Sales tax is included in per item cost.

	Cost / Acre		
	1st Year	2nd Year	3rd Year
YIELD: Tons Fruit/Acre	---	---	6
Preharvest Cash Costs			
Fumigate	\$465		
Land preparation: contract			
4 hrs chisel and labor			
4 hrs disc, float, and labor	\$150		
Rootings: 454 @ \$0.37 (+20, 2nd year)	\$168	\$7	
Trim and store @ \$0.08 per rooting	\$36	\$2	
Machine planting: \$0.11/vine (+2 hrs labor 2nd year)	\$50	\$11	
Stakes (treated): 454 7-ft @ \$1.13 ea		\$513	
End posts (treated): 11 8-ft @ \$6.50		\$72	
Stake and set end posts: \$0.18 stakes + \$4.50 end posts		\$131	
Wire: #13 high tensile @ \$0.36 per lb, 350 lbs		\$126	
String five wires and staple		\$125	
Crossarms: 4ft @ \$0.41, braces \$0.04, staples, nails, tie wire \$0.04		\$222	
Attach crossarms and braces: 32 hrs labor		\$176	
Training and suckering: 22 hrs labor 2nd year		\$121	
10 hrs labor 3rd year			\$55
Prune and tie: 5 hrs labor 2nd yr + \$6.00 materials		\$34	
18 hrs 3rd yr + \$4.00 materials			\$103
Rabbit Control	\$15	\$15	
Irrigation: 5 hrs labor @ \$6.80 per hr	\$34	\$34	\$34
Water power: 60 ft pumping and/or district tax @ \$32.70 1, 2, 3.5 ac. ft. (.5, 1.0, 1.75 ac ft pumped)	\$37	\$41	\$44
Cultivation and irrigation preparation	\$67		
6 hrs labor + 4 hrs tractor 1st yr.		\$81	\$81
8 hrs labor + 4 hrs tractor 2nd yr and after			
Fertilizer: \$0.30/lb (20 lbs N 2nd yr 40 lbs 3rd yr + \$5/ac for application)		\$11	\$17
Pest management and disease control	\$18	\$30	\$109
Herbicides: materials and application	\$35	\$37	\$37
Misc repairs & fuel other than tractor	\$20	\$20	\$20
Misc (trellis repair, etc.) labor, materials, 1 hr tractor	\$35	\$35	\$35
Total Preharvest Cash Costs	\$1,130	\$1,843	\$535
Harvest Costs: Contract at \$45/ton-pick and haul			\$270
TOTAL CASH COSTS			\$805

THOMPSON SEEDLESS GRAPES FOR TABLE USE
Sample Costs for a Mature Vineyard - 1988

Based on 120-acre unit, vines spaced at 8' x 12'. Wages include social security, workman's compensation and insurance. Yield of 522, 23-pound lugs (87/ton), 6 tons packed and 2.5 culls. Tractor and supervisory labor \$6.80 per hour, field labor \$5.50 per hour. Tractor costs \$6.60 per hour. Sales tax is included in per item cost.

OPERATION	Labor Hrs/Ac	Labor Rate	Labor Cost	Fuel & Repairs	Materials and Quantity per Acre	COST	TOTAL COST
Preharvest Cash Costs							
Pruning	35	\$5.50	\$193				\$193
Brush Disposal -- Contract					Every middle		\$10
Tying Vines	7	\$5.50	\$39				\$39
Fertilizer					50 lbs N @ \$0.30/lb + \$5.00/Ac application	\$15 \$5	\$15 \$5
Growth Regulators and Disease & Pest Control						\$289	\$289
Application costs for Growth Regulator and Disease and Pest Control							\$86
Herbicides					Materials and application costs	\$37	\$37
Cultivation & Irrigation Preparation	4	\$6.80	\$27	\$26			\$54
Irrigation	6	\$5.50	\$33				\$33
Water Power and/or District tax @ \$32.70 4.0 ac ft (2 ft pumped)							\$48
Girdling	10	\$5.50	\$55				\$55
Thinning	41	\$5.50	\$226				\$226
Misc (trellis, repairs)	8	\$5.50	\$44	\$13	Materials	\$32	\$89
Misc. repairs & fuel						\$20	\$20
Interest on Operating Capital @11.5%							\$147
Total Preharvest Costs	69		\$385	\$39			\$1,345
Cash Overhead							
Office & Business Costs							\$30
County Taxes							\$39
Total Cash Overhead Costs							\$69
TOTAL CASH COSTS							\$1,413
TOTAL CASH COST/LUG @ 522 LUGS/ACRE							\$2.71

Annual Cost					
INVESTMENT	Per Acre	DEPRECIATION	INTEREST @12.5%		TOTAL
Equipment, buildings, irrigation	\$899	\$70	\$56		\$126
Vines, stakes, and trellis	\$5,830	\$292	\$364		\$656
Land	\$3,000		\$375		\$375
TOTAL INVESTMENT COSTS	\$9,729	\$362	\$795		\$1,157
TOTAL COSTS PER ACRE					\$2,570
COSTS PER LUG @ 522 LUGS/ACRE					\$4.92

Costs / Acre

	1st Year	2nd Year	3rd Year
Overhead Costs			
County taxes	\$39	\$39	\$39
Office and business costs	\$30	\$30	\$30
Total Overhead Costs	\$69	\$69	\$69
Total Cash Costs	\$1,199	\$1,912	\$874
Accumulated Cash Costs	\$1,199	\$3,111	\$3,985
Depreciation			
Building, equipment, and irrigation	\$70	\$70	\$70
INTEREST ON INVESTMENT @ 12.5%			
Building, equipment, and irrigation	\$56	\$56	\$56
Land \$3,000	\$375	\$375	\$375
Interest On accumulated cash cost	\$150	\$389	\$498
Total Interest on Investment	\$581	\$820	\$929
TOTAL COST FOR THE YEAR	\$1,849	\$2,802	\$1,873
CREDIT FOR PRODUCTION			
@ \$125/ton for juice			(\$750)
NET COST FOR THE YEAR	\$1,849	\$2,802	\$1,123
ACCUMULATED NET COST	\$1,849	\$4,651	\$5,775

HARVEST COSTS (PER LUG)

HOUSE PACKED

	Per Lug	Total
Preharvest Costs		\$4.92
Harvest Costs		\$3.45
Pick & Haul	\$0.95	
Packinghouse Costs including cold storage	\$2.50	
Total House Packed Costs		\$8.37

FIELD PACKED

	Per Lug	Total
Preharvest Costs		\$4.92
Harvest Costs		\$3.40
Pick, pack & supervision	\$1.50	
Boxes, etc.	\$1.55	
Spread boxes, swamp haul	\$0.35	
Total House Packed Costs		\$8.32

Selling commision, Table Grape Commission assessment, inspection and packing are not included. Does not include any credit for culls or strippings.

**TABLE VARIETY
EQUIPMENT AND BUILDING LIST**

ITEM	ORIGINAL COST	ANNUAL USE (ACRES)	COST/ACRE	LIFE (YEARS)	DEPRECIATION	INTEREST @ 12.5%	REPAIR COSTS/HR	FUEL COSTS/HR
TRACTORS								
30 hp Wheel Diesel	\$13,000	120	\$108	10	\$11	\$6.77	\$1.30	\$1.95
60 HP Wheel Diesel	\$31,000	120	\$258	10	\$26	\$16.15	\$2.58	\$3.90
Disk, tandem 8'	\$7,500	120	\$63	15	\$4	\$3.91	\$3.60	
Border disc	\$2,000	120	\$17	15	\$1	\$1.04	\$0.96	
Springtooth 8'	\$1,500	120	\$13	20	\$1	\$0.78	\$0.90	
Flat furrower	\$2,800	120	\$23	20	\$1	\$1.46		
Three-point hitch	\$1,100	120	\$9	10	\$1	\$0.57	\$0.92	
Power Sprayer (100 gals)								
Duster	\$2,650	120	\$22	10	\$2	\$1.38		
Mower	\$4,000	120	\$33	10	\$3	\$2.08		
ATV	\$2,200	120	\$18	5	\$4	\$1.15		
Pickup	\$12,000	120	\$100	5	\$20	\$6.25		
Misc tools	\$5,000	120	\$42	10	\$4	\$2.60		
Cane cutters	\$2,679	120	\$22	10	\$2	\$1.40		
2 Tool bars	\$800	120	\$7	10	\$1	\$0.42		
Air Compressor	\$600	120	\$5	20	\$0	\$0.31		
Irrigation System	\$81,600	120	\$680	20	\$34	\$42.50		
Buildings	\$12,000	120	\$100	30	\$3	\$6.25		
TOTAL COST	\$179,779		\$1,498		\$116	\$93.63	\$10.26	\$5.85
60% OF NEW COSTS	\$107,867		\$899		\$70	\$56.18	\$6.16	\$3.51

Sample Costs for Establishing and Producing Cordon Trained, Spur Pruned Table Grape Varieties - 1988



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Introduction

This publication is one of a series on sample costs of producing grapes in the San Joaquin Valley. The publication refers to cordon trained, spur pruned varieties such as: **Flame Seedless, Ruby Seedless, Ribier, Exotic, Emperor, and others.** The data is to be used only as a guide to help analyze costs and practices that might increase production efficiency. The data is based on what are considered good management practices and do not represent industry averages.

Yield

Yield is the most important factor affecting costs per ton and profit per acre. The yield per acre used in this sample is average over a period of years for a typical, well-managed vineyard. Although this figure is higher than industry average, some vineyards do better.

Irrigation

Sample costs for irrigation, labor and water costs are based on a pumping system with pipeline, and access to water from an irrigation district. These costs vary widely depending on pumping depth, efficiency, and irrigation district taxes. Labor cost per acre is affected by the number of irrigations, quantity applied, and size of head.

Pest Management and Growth Regulators

Pest management costs include materials and application for control of insect, mite, and disease pest problems, including powdery mildew. Pest management programs and costs vary widely depending on pest pressure, vineyard location, pesticides selected, and many other factors. Growth regulator rates also vary widely depending on variety and location. Sample costs shown on this sheet are based on average conditions and a well-managed integrated pest management program.

CORDON TRAINED, SPUR-PRUNED TABLE GRAPES
Flame Seedless, Emperor, Ruby Seedless, Ribier, Exotic
Sample Costs to Establish a Vineyard - 1988

Costs are based on a 120 acre unit, vines spaced at 8' x 12'. Wages and piecework include social security, worker's compensation and insurance. Yield of 5 tons (wine) in third year. Tractor and supervisory labor \$6.80 per hour, field labor \$5.50 per hour. Tractor costs \$6.60 per hour. Sales tax included in cost per item.

	Cost / Acre		
	1st Year	2nd Year	3rd Year
YIELD: Tons Fruit/Acre	---	---	5
Preharvest Cash Costs			
Fumigate	\$465		
Land preparation: contract			
4 hrs chisel and labor			
4 hrs disc, float, and labor	\$150		
Rootings: 454 @ \$0.37 (+20, 2nd year)	\$168	\$7	
Trim and store @ \$0.08 per rooting	\$36	\$2	
Machine planting: \$0.11/vine (+2 hrs labor 2nd year)	\$50	\$11	
Stakes (treated): 454 7-ft @ \$1.13 ea		\$513	
End posts (treated): 11 8-ft. @ \$6.50		\$72	
Stake and set end posts: \$0.18 stakes + \$4.50 end posts		\$131	
Wire: #13 high tensile @ \$0.36/lb, 82 lbs 2nd yr, 164 lbs 3rd yr		\$30	\$59
String wire and staple (Year 2-1 wire, Year 3-2 wires)		\$25	\$50
Crossarms: 3ft @ \$0.32, braces @ \$0.04, staples, nails, tie, wire @ \$0.04		\$182	
Attach crossarms and braces: 32 hours labor		\$176	
Training and suckering: 40 hrs labor 2nd yr		\$220	
10 hrs labor 3rd yr			\$55
Prune and tie: 5 hrs labor 2nd yr + \$6.00 materials		\$34	
12 hrs 3rd yr + \$6.00 materials			\$72
Rabbit Control	\$15	\$8	
Irrigation: 5 hrs labor @ \$6.80 per hr	\$34	\$34	\$34
Water power: 60 ft pumping and/or district tax: @ \$32.70			
1, 2, 3.5 ac ft (.5, 1.0, 1.75 ac ft pumped)	\$37	\$41	\$44
Cultivation and irrigation preparation			
6 hrs labor + 4 hrs tractor 1st yr	\$67		
8 hrs labor + 4 hrs tractor 2nd yr and after		\$81	\$81
Fertilizer: \$0.30/lb (20 lbs N 2nd yr		\$11	
50 lbs 3rd yr + \$5/ac. for application)			\$20
Pest management and disease control	\$18	\$30	\$132
Herbicides: materials and application	\$35	\$37	\$37
Misc. (trellis repair, suckering, etc.) labor, materials, 1hr tractor	\$35	\$35	\$37
Misc. fuel and repair other than tractor	\$20	\$20	\$20
Total Preharvest Cash Costs	\$1,130	\$1,698	\$641
Harvest Costs: Contract at \$45/ton			\$225
TOTAL CASH COSTS	\$1,130	\$1,698	\$866

	Costs/Acre		
	1st Year	2nd Year	3rd Year
Overhead Costs			
County taxes	\$39	\$39	\$39
Office and business costs	\$30	\$30	\$30
Total Overhead Costs	\$69	\$69	\$69
Total Cash Costs	\$1,199	\$1,767	\$710
Accumulated Cash Costs	\$1,199	\$2,965	\$3,676
Depreciation			
Building, equipment, and irrigation	\$70	\$70	\$70
Interest on Investment @ 12.5%			
Building, equipment, and irrigation	\$56	\$56	\$56
Land \$3,000	\$375	\$375	\$375
Interest in accumulated cash cost	\$150	\$371	\$459
Total Interest on Investment	\$581	\$802	\$890
Total Costs for the Year	\$1,849	\$2,638	\$1,671
Credit for Production*			
at \$125/ton for 5 tons			(\$625)
Net Cost for the Year	\$1,849	\$2,638	\$1,671
Accumulated Net Cost	\$1,849	\$4,488	\$6,158

*Fruit credit will vary widely by variety, year and use of crop.

CORDON TRAINED, SPUR PRUNED TABLE GRAPES

Flame Seedless

Sample Costs for a Mature Vineyard - 1988

Based on a 120-acre unit, vines spaced at 8' x 12'. Wages include social security, worker's compensation, and insurance. Tractor and supervisory labor \$6.80/hour, field labor \$5.50/hour. Tractor costs \$6.60/hour. Yield of 522 lugs (23 pounds) 6 tons shipped and 2 tons culls.

OPERATION	LABOR HRS/AC	LABOR RATE	LABOR COST	FUEL & REPAIRS	MATERIALS TYPE AND QUANTITY PER ACRE	COST	TOTAL COST
Preharvest Cash Costs							
Pruning	20	\$5.50	\$110				\$110
Brush Disposal -- Contract					Alternate middles		\$6
Fertilizer					50 lbs N @ \$0.30/lb	\$15	\$15
					+ \$5.00/Ac application	\$5	\$5
Zinc						\$4	\$4
Growth Regulators					Costs vary widely w/variety	\$160	\$160
Disease & Pest Control					Materials & costs vary widely	\$132	\$132
Application costs						\$49	\$49
Herbicides					Materials & application	\$37	\$37
Cultivation & Irrigation	4	\$6.80	\$27	\$26			\$53
Preparation							
Irrigation	5	\$5.50	\$28				\$28
Water Power and/or							
District tax @ \$32.70							\$47
4.5 ac ft (2 ac ft pumped)							
Fruit Exposure	17	\$5.50	\$94				\$94
Misc. (trellis repair etc.)	8	\$5.50	\$44	\$13	Materials	\$32	\$89
Misc repair & fuel other than tractor							\$20
Interest on Operating Capital @12.5%							\$106
Total Preharvest Costs							\$954
Cash Overhead							
Office & Business Costs							\$30
County Taxes							\$39
Total Cash Overhead Costs							\$69
TOTAL CASH COSTS							\$1,023
TOTAL CASH COST/LUG @ 522 LUGS/ACRE							\$1.96
ANNUAL COST							
INVESTMENT	Per Acre	DEPRECIATION		INTEREST @12.5%		TOTAL	
Equipment, buildings, irrigation	\$899	\$70		\$56		\$126	
Vines, stakes, trellis	\$5,860	\$293		\$366		\$659	
Land	\$3,000			\$375		\$375	
Total Investment Costs	\$9,759	\$363		\$797		\$1,160	
TOTAL COSTS PER ACRE						\$2,183	
COSTS PER LUG @ 522 LUGS/ACRE						\$4.18	

Costs Per Lug of Packed Fruit

House Packed		Field Packed	
Preharvest Costs	\$4.18	Preharvest Costs	\$4.18
Harvest Costs		Harvest Costs	
Pick & Haul	\$0.85	pick, pack, supervise	
Packing House cost	\$2.50	boxes, spread, swamp	
Total Harvest Costs	\$3.35	storage & handling	\$3.30
Total House Packed Costs/Lug	\$7.53	Total Field Packed Costs/Lug	\$7.48

**TABLE VARIETY
EQUIPMENT AND BUILDING LIST**

ITEM	ORIGINAL COST	ANNUAL USE (ACRES)	COST/ACRE	LIFE (YEARS)	DEPRECIATION	INTEREST @ 12.5%	REPAIR COSTS/HR	FUEL COSTS/HR
TRACTORS								
30 hp Wheel Diesel	\$13,000	120	\$108	10	\$11	\$6.77	\$1.30	\$1.95
60 HP Wheel Diesel	\$31,000	120	\$258	10	\$26	\$16.15	\$2.58	\$3.90
Disk, tandem 8'	\$7,500	120	\$63	15	\$4	\$3.91	\$3.60	
Border disc	\$2,000	120	\$17	15	\$1	\$1.04	\$0.96	
Springtooth 8'	\$1,500	120	\$13	20	\$1	\$0.78	\$0.90	
Flat furrower	\$2,800	120	\$23	20	\$1	\$1.46		
Three-point hitch	\$1,100	120	\$9	10	\$1	\$0.57	\$0.92	
Power Sprayer (100 gals)								
Mower	\$4,000	120	\$33	10	\$3	\$2.08		
ATV	\$2,200	120	\$18	5	\$4	\$1.15		
Pickup	\$12,000	120	\$100	5	\$20	\$6.25		
Sulfur Duster	\$2,650	120	\$22	10	\$2	\$1.38		
Misc tools	\$5,000	120	\$42	10	\$1	\$2.60		
Cane cutters	\$2,679	120	\$22	10	\$2	\$1.40		
2 Tool bars	\$800	120	\$7	10	\$1	\$0.42		
Air Compressor	\$600	120	\$5	20	\$0	\$0.31		
Irrigation System	\$81,600	120	\$680	20	\$34	\$42.50		
Buildings	\$12,000	120	\$100	30	\$3	\$6.25		
TOTAL COST	\$179,779	120	\$1,498		\$116	\$93.63	\$10.26	\$5.85
60% OF NEW COSTS	\$107,867		\$899		\$70	\$56.18	\$6.16	\$3.51

Revised October 1989

Sample Costs for Establishing and Producing Thompson Seedless Grapes for Raisins or Wine - 1988



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Introduction

This publication is one of a series on sample costs of producing grapes in the San Joaquin Valley. The data is to be used only as a guide to help analyze costs and practices that might increase production efficiency. The data is based on what are considered good management practices and do not represent industry averages.

Yield

Yield is the most important factor affecting costs per ton and profit per acre. The yield per acre used in this sample is average over a period of years for a typical, well-managed vineyard. Although this figure is higher than industry average, some vineyards do better.

Irrigation

Sample costs for irrigation, labor and water costs are based on a pumping system with pipeline, and access to water from an irrigation district. These costs vary widely depending on pumping depth, efficiency, and irrigation district taxes. Labor cost per acre is affected by the number of irrigations, quantity applied, and size of head.

Pest Management and Growth Regulators

Pest management costs include materials and application for control of insect, mite, and disease pest problems, including powdery mildew. Pest management programs and costs vary widely depending on pest pressure, vineyard location, pesticides selected, and many other factors. Sample costs shown on this sheet are based on average conditions and a well-managed integrated pest management program. Some growth regulators are combined with pesticide applications.

THOMPSON SEEDLESS GRAPES FOR RAISINS OR WINE
Sample Costs to Establish a Vineyard - 1988

Costs are based on a 120 acre unit, vines spaced at 7' x 12'. Wages and piecework include social security, worker's compensation and insurance. Yield of 4.5 tons for winery or 1.5 ton for raisins. Tractor and supervisory labor \$6.80 per hour, field labor \$5.50 per hour. Tractor costs \$6.60 per hour. Sales tax is included in per item cost.

	Cost / Acre		
	1st Year	2nd Year	3rd Year
YIELD: Tons Fruit/Acre	---	---	1.5
Preharvest Cash Costs			
Fumigate	\$465		
Land preparation: contract			
4 hrs chisel and labor			
4 hrs disc, float, and labor	\$150		
Rootings: 519 @ \$0.37 (+25, 2nd year)	\$192	\$9	
Trim and store @ \$0.08 per rooting	\$42	\$2	
Machine planting: \$0.11/vine (+2 hrs labor 2nd year)	\$57	\$11	
Stakes (treated): 519 6-ft @ \$1.00 ea		\$519	
End posts (treated): 11 8-ft @ \$6.50		\$72	
Wire: #13 high tensile @ \$0.36 per lb, 180 lbs		\$65	
Crossarms: 2 ft wood 519 @ \$.25, braces, staples, nails @ \$.08		\$171	
Stake and set end posts: \$0.18 stakes + \$4.50 end posts		\$143	
Install crossarms: \$.28 per stake		\$145	
String two wires and staple		\$50	
Training and suckering: 22 hrs labor 2nd year		\$121	
6 hrs labor 3rd year			\$33
Prune and tie: 5 hrs labor 2nd yr + \$6.00 materials		\$34	
18 hrs 3rd yr + \$4.00 materials			\$103
Rabbit Control	\$15	\$8	
Irrigation: 5 hrs labor @ \$6.80 per hr	\$34	\$34	\$34
Water power: 55 ft pumping and/or district tax: \$15.00 1, 2, 3.5 ac. ft. (.5, 1, 1.75 ac ft pumped)	\$19	\$22	\$26
Cultivation and irrigation preparation			
6 hrs labor + 4 hrs tractor 1st yr.	\$67		
8 hrs labor + 4 hrs tractor 2nd yr and after		\$81	\$81
Fertilizer: \$0.30/lb (20 lbs N 2nd yr 40 lbs 3rd yr + \$5/ac for application)		\$11	\$17
Pest management and disease control	\$18	\$30	\$109
Herbicides: materials and application	\$30	\$30	\$37
Misc. Repairs and Fuel other than tractor	\$20	\$20	\$20
Misc (trellis repair, etc.) labor, materials, 1hr tractor	\$35	\$35	\$35
Total Preharvest Cash Costs	\$1,143	\$1,613	\$495
Total Harvest Costs - Refer to Raisin production costs			\$241

COSTS / TON		
HARVESTING COSTS	RAISINS	WINERY
	SAMPLE COSTS	SAMPLE COSTS
Pick and haul for winery - contract		\$40.00
Terracing & pulling back .75 hr labor .75 hr tractor	\$10	
Pick for raisins - 450 trays/ton @ \$0.20/tray	\$90	
Turn and roll - contract \$60/1,000 trays	\$27	
Box and shake - 4.75 hrs labor + .5 hrs tractor	\$29	
Haul to processor (includes picking up bins)	\$12	
Paper trays - 460 trays @ \$40/1,000	\$18	
Forklift cost (rent)	\$10	
Raisin rain insurance \$455/ton coverage	\$27	
Bin rental (2 bins per ton)	\$15	
Misc- Toilets, water	\$2	
Total Harvest Cost/Ton	\$241	\$40
Total Harvest Cost/Acre (2 tons raisins or 9 tons wine)	\$482	\$360
Total Cost/Ton @ 2 Tons Raisins or 9 Tons Winery	\$1,081	\$227
Total Cost/Acre @ 2 Tons Raisins or 9 Tons Winery	\$2,162	\$2,040

EQUIPMENT AND BUILDING LIST

ITEM	ORIGINAL COST	ANNUAL USE (ACRES)	COST/ACRE	LIFE (YEARS)	DEPRECIATION	INTEREST @ 12.5%	REPAIR COSTS/HR	FUEL COSTS/HR
TRACTORS								
30 hp Wheel Diesel	\$13,000	120	\$108	10	\$11	\$6.77	\$1.30	\$1.95
60 HP Wheel Diesel	\$31,000	120	\$258	10	\$26	\$16.15	\$2.70	\$3.90
Disk, tandem 8'	\$7,500	120	\$63	15	\$4	\$3.91	\$3.60	
Border disc	\$2,000	120	\$17	15	\$1	\$1.04	\$0.96	
Springtooth 8'	\$1,500	120	\$13	20	\$1	\$0.78	\$0.90	
Flat furrower	\$2,800	120	\$23	20	\$1	\$1.46		
Three-point hitch	\$1,100	120	\$9	10	\$1	\$0.57	\$0.92	
Power Sprayer (100 gals)								
ATV	\$2,200	120	\$18	5	\$4	\$1.15		
Pickup	\$12,000	120	\$100	5	\$20	\$6.25		
Sulfur Duster	\$2,650	120	\$22	10	\$2			
Misc tools	\$5,000	120	\$42	10	\$4	\$2.60		
Raisin dumper & shake	\$7,600	120	\$63	10	\$6	\$3.96		
2 bin trailers (4 bins ea)	\$1,640	120	\$14	10	\$1	\$0.85		
Terracer	\$953	120	\$8	10	\$1	\$0.50		
Cane cutters	\$2,679	120	\$22	10	\$2	\$1.40		
2 Tool bars	\$800	120	\$7	10	\$1	\$0.42		
Air Compressor	\$600	120	\$5	20	\$0	\$0.31		
Irrigation System	\$81,600	120	\$680	20	\$34	\$42.50		
Buildings	\$12,000	120	\$100	30	\$3	\$6.25		
Total Cost	\$185,972		\$1,550		\$121	\$96.86	\$10.38	\$5.85
60% Of New Costs	\$111,583		\$930		\$73	\$58.12	\$6.23	\$3.51

THOMPSON SEEDLESS GRAPES FOR RAISINS OR WINE
Sample Costs for a Mature Vineyard - 1988

Based on 120-acre unit, vines spaced at 7 x 12'. Wages and piecework rates include social security, worker's compensation and insurance. Yield of 2 tons raisins or 9 tons for winery. Tractor and supervisory labor \$6.80/hour, field labor \$5.50/hour. Tractor costs \$6.60/hour. Sales tax is included in per item cost.

OPERATION	Labor Hrs/A	Labor Rate	Labor Cost	Fuel and Repairs	Material and Quantity Per Acre	COST	TOTAL COST
Preharvest Cash Costs							
Pruning -- Contract					\$0.22/vine, 519 vine/acre	\$114	\$114
Brush Disposal -- Contract					Alternate middles	\$6	\$6
Tying Vines -- Contract					\$0.05/vine	\$26	\$26
Fertilizer					50 lbs N @ \$0.30/lb + \$5.00/Ac application	\$15 \$5	\$15 \$5
Growth Regulator, Pest and Disease Control (including powdery mildew)					Gibberellin and all other materials	\$71	\$71
Application Costs for Growth Regulator & Pest Control						\$38	\$38
Herbicides					Materials & application	\$37	\$37
Cultivation & Irrigation Preparation	4	\$6.80	\$27	\$26			\$54
Irrigation	5	\$5.50	\$28				\$28
Water Power and/or District tax @ \$15.00							\$26
3.5 ac ft (1.75 acre ft pumped)							\$26
Misc. (Trellis, pipeline repair, and suckering) 1 hr tractor	4	\$5.50	\$22	\$7	Materials (trellis)	\$30	\$59
Misc. repairs & fuel other than tractor						\$20	\$20
Interest on Operating Capital @11.5%							\$36
Total Preharvest Costs							\$533

Cash Overhead	
Office & Business Costs	\$30
County Taxes	\$39
Total Cash Overhead Costs	\$69
Total Cash Costs	\$602
Total Cash Costs/Ton @ 2 Tons Raisins	\$301
Total Cash Costs/Ton @ 9 Tons Winery	\$67

Investment	Per Acre	Depreciation	Interest @12.5%	TOTAL
Equipment, buildings, irrigation	\$930	\$73	58	\$131
Vines, stakes and trellis	\$5,100	\$253	319	\$572
Land	\$3,000		375	\$375
Total Investment Costs	\$9,030	\$326		\$1,078
Total Costs Per Acre				\$1,680
Total Cash Costs/Ton @ 2 Tons Raisins				\$840
Total Cash Costs/Ton @ 9 Tons Winery				\$187

	Costs/Acre		
	1st Year	2nd Year	3rd Year
Overhead Costs			
County taxes	\$39	\$39	\$39
Office and business costs	\$30	\$30	\$30
Total Overhead Costs	\$69	\$69	\$69
Total Cash Costs	\$1,212	\$1,682	\$805
Accumulated Cash Costs	\$1,212	\$2,894	\$3,698
DEPRECIATION			
Building, equipment and irrigation	\$73	\$73	\$73
INTEREST ON INVESTMENT @ 12.5%			
Building, equipment, and irrigation	\$58	\$58	\$58
Land \$3,000	\$375	\$375	\$375
Interest on accumulated cash cost	\$152	\$362	\$462
Total Interest On Investment	\$585	\$795	\$895
TOTAL COST FOR THE YEAR	\$1,870	\$2,549	\$1,773
CREDIT FOR PRODUCTION			
@ \$800/ton for RAISINS			(\$1,200)
NET COST FOR THE YEAR	\$1,870	\$2,549	\$573
ACCUMULATED NET COST	\$1,870	\$4,419	\$4,992