OLALLIE BERRY PRODUCTION COSTS

FOR

SANTA CRUZ COUNTY

AGRICULTURAL EXTENSION SERVICE
UNIVERSITY OF CALIFORNIA

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July 1967

INTRODUCTION

Olallie berries are produced in the Pajaro Valley under irrigated conditions. Individual growers may use these costs as a basis for analysis of their own operations.

Acreage data in Table I shows that bearing bushberry acreage in Santa Cruz remains relatively unchanged from five or ten years ago. The 1966 Agricultural Commissioner's Crop Report indicates that of the 640 acres of bearing berry crops in Santa Cruz County, Olallie berries represented 475 acres with Boysenberries second at 70 acres. Loganberries, raspberries and blueberries made up the balance.

TABLE I

SANTA CRUZ COUNTY
BEARING BUSHBERRY ACREAGE

1951	1956	1961	1966
915	765	690	640

These data sheets were developed for Olallie berries so minor changes must be made if they are to apply to Boysenberries where a 2-wire trellis system is used.

Bushberries require one year for development before any cash returns to the grower. The first year's costs of approximately $1115 per acre are depreciated over the next five fruiting years, which are considered to be the normal life span of the planting. Production beyond this 5-year period would not have any development costs charged to the operation.

Equipment and other overhead costs were charged to 30 acres as most bushberry farms are a part of a larger economic unit and a 20-acre unit was used to represent a typical bushberry operation in this area.

TYPES OF COSTS

Three input categories are included in this study: (1) Cash Costs, (2) Depreciation Costs, and (3) Interest on Investment Cost. Each must be a part of the total picture as they are a true part of the costs per hundredweight of berries.

Cash Costs are those annual expenditures sometimes called out-of-pocket costs -- monies paid for the fertilizer, pruning, spraying, etc., where a flow of capital is obvious.

Depreciation Costs - Vines get old and must be replaced, irrigation equipment, tractors, trucks and other equipment wear out and must be replaced. These costs (which do not include regular maintenance such as gas, oil, repairs, etc.) too, are a real expense and must be accounted for annually. The depreciation costs in this study were based on the purchase of all new equipment and other capital outlay items.

Interest on Investment is, all too often, ignored as a cost except when interest is actually paid on borrowed capital. However, all capital, whether invested in bonds or stocks, in berry growing or any other business commands a return which is an important part of total production costs. For purposes of this study, a fair rate of interest is considered to be 6%. This is figured on one-half the original cost of depreciable items and full value of land. Those using the cost table can substitute any interest rate which they think would be more appropriate for their purpose.

SAMPLE FIRST-YEAR COSTS FOR OLALLIE BERRIES - SANTA CRUZ COUNTY - 1967

	Man labor	Small tractor	Truck	Total Cost per acre
	Hours per acre			
Land preparation, operations as needed				
40 hp. tractor work hired @ $8 an hour				48.00
Planting, by hand, as usual in small acreages	24.0	1.0	1.0	45.66
Cultivate and furrow about 4 times	4.0	4.0		11.92
Irrigate, furrows - 3 times	16.0			28.00
Spray once, including $1.00/hour for sprayer	1.5	1.5		5.97
Hoeing	10.0			17.50
Building trellis set stakes, put up 3 wires	60.0		3.0	106.29
Train and wrap canes on trellis	60.0			105.00
Miscellaneous other work	10.0	1.0	1.0	21.16
Total labor and field power	176.5	7.5	5.0	389.50
Pre-fertilization - 10 tons manure @ $10 applied				100.00
Plants - 1200 @ $150 per thousand				180.00
Stakes - 2" x 2" - 7 ft. redwood, treated, 350 @ 33¢				115.50
Wire - 16,000 ft. no. 14 galvinized, for 3 wires plus staples				58.00
Commercial fertilizer for one side dressing				20.00
Spray materials for 1 application				4.00
Irrigation water, power to pump 1 acre foot - 150 ft. head				6.00
Total material cost				483.50
Total labor, material and field power costs				873.00
General expense - office, car and misc. - est. at 5% of above				43.65
County taxes, land and equipment				32.00
Repairs to equipment not covered in rates above				4.00
Miscellaneous				5.00
Total cash overhead costs				84.65
Total cash costs				957.65

Equipment overhead costs based on 20 acres of berries in 30-acre farming unit	Original cost	Acres served	Aver. value	6% int.	Depreci-ation	
			Dollars per acre			
Irrigation system and pipe	7800	30	130.00	7.80	15.60	
Small tractor and truck	6000	30	100.00	6.00	13.30	
Tillage equip. and brush chopper	1800	30	30.00	1.80	4.50	
Special berry sprayer	2400	20	60.00	3.60	12.00	
Miscellaneous small tools & equip.	600	30	10.00	.60	2.00	
Land, agricultural value	---	--	1500.00	90.00	--	
Total investment and depreciation			1830.00		47.40	47.40
Total cash costs and depreciation						1005.05
Interest on investment				109.80		109.80
Total all costs for first year cost of establishing vines						1114.85

Labor costs above were figured at $2.18 an hour for jobs usually done by the operator and $1.75 for hired-hand labor. The small wheel tractor was figured at 80 cents an hour and the truck at $2.00. These rates are cash costs only for fuel, repairs and also license and insurance in case of the truck. Overhead costs of depreciation and interest on investment at 6% are included as shown in the lower part of the table. Average value is figured at half the original cost for depreciable items to arrive at average value over the useful life of each item.

SAMPLE COSTS TO PRODUCE OLALLIE BERRIES IN SANTA CRUZ COUNTY - 1967

Based on 20 acres of berries on a 30-acre farm with an average yield of 12,000 pounds per acre for five years. Labor costs including social security and compensation insurance at $1.75 and $2.18 per hour. Cash cost per hour for small tractor at 80¢ and for truck at $2.00.

	Sample Costs		Your Costs	
	Per Acre	Per Cwt.	Per Acre	Per Cwt.
PRE-HARVEST CASH COSTS:				
Prune: remove old canes - 40 man hrs.	$ 70.00			
Put up & wrap new canes: 60 man hrs.	105.00			
Chop prunings: 1½ hrs. man & tractor	4.47			
Rewrap & train: 60 man hrs.	105.00			
Pin back canes: 15 man hrs.	26.25			
Fertilize 2 times: 2 man, 1.6 tract. & .2 trk. hrs.	6.04			
Fertilizer materials	30.00			
Spray 3 times: 4½ hrs. man & tract.-sprayer @ $1.00/hr.	17.91			
Spray materials	33.00			
Dust by plane including materials	12.00			
Cultivate 5 times: 7½ hrs. man & tractor	22.35			
Hoe: 3 man hrs.	5.25			
Irrigate 8 to 10 times: 32 man hrs.	56.00			
Water: power to pump 2-acre ft.	11.60			
Misc. labor: 10 man, 1 tract. & 1 truck hr.	21.16			
Misc. materials	6.00			
County taxes	40.00			
Office, car, int. on oper. capital, etc.	61.00			
Repairs except tractor & truck	6.00			
TOTAL PRE-HARVEST CASH AND LABOR COSTS	$ 639.03	$ 5.32		
HARVESTING COSTS:				
Picking: 800 - 15 lb. crates @ 65¢	520.00	4.33		
Checking & supervising: 30 man hrs.	65.40	.55		
Load, haul & other harvest: 13 man & 9 truck hrs.	46.34	.39		
Sanitary facilities	16.80	.14		
TOTAL HARVESTING COSTS	$ 648.54	$ 5.41		
TOTAL CASH AND LABOR COSTS	$1,287.57	$10.73		
DEPRECIATION (per acre):				
Vines: 1st yr. costs - $1,115, 5 yrs. crops	223.00			
Irrigation system: $260 original cost	15.60			
Tractor & truck: $200 original cost	13.30			
Berry sprayer: $120 original cost	12.00			
Tillage, chopper & misc. eqt.: $80 cost	6.50			
TOTAL DEPRECIATION COSTS	$ 270.40	$ 2.25		
TOTAL CASH AND DEPRECIATION COSTS	$1,557.97	$12.98		
INTEREST ON INVESTMENT @ 6% (per acre):				
Vines: on ½ cost ($557.50)	33.45			
Irrigation system: on ½ cost ($130)	7.80			
Tractor & truck: on ½ cost ($100)	6.00			
Berry sprayer: on ½ cost ($60)	3.60			
Tillage, chopper & misc.: on ½ cost ($40)	2.40			
Land at $1500	90.00			
TOTAL INTEREST ON INVESTMENT	$ 143.25	$ 1.19		
TOTAL COST OF PRODUCTION 1/	$1,701.22	$14.17		

1/ Does not include any cost for management. This is sometimes calculated at 5% of the gross income.

YIELD AFFECTS COSTS

Larger operations with higher yields per acre will generally lower the costs shown in this study.

The table below shows the effect of yield on cost of production per hundredweight if all inputs and costs per acre are constant, except harvesting, which is figured at $5.41 per hundredweight.

COSTS PER HUNDREDWEIGHT AT DIFFERENT YIELDS

	Yield, Pounds Per Acre				
	4,000	8,000	12,000	16,000	20,000
Total Cash & Labor Cost	$21.39	$13.40	$10.73	$ 9.40	$ 8.60
Depreciation Cost	6.76	3.38	2.25	1.69	1.35
Interest Cost	3.58	1.79	1.19	.90	.72
Total Cost of Production	31.73	18.57	14.17	11.99	10.67

PRACTICES CAN AFFECT COSTS

Opportunity for mechanization should increase. Chemical weed control is already reducing hand hoeing costs and the increased use of concentrate and semi-concentrate sprayers should help reduce spraying costs.