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APPLE

PRODUCTION COSTS

FOR

SANTA CRUZ COUNTY

AGRICULTURAL EXTENSION SERVICE
UNIVERSITY OF CALIFORNIA

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UC Cooperative Extension

INTRODUCTION

This cost study applies to irrigated apple production in the Pajaro Valley. These costs are for the use of individual growers to serve as a basis for analyzing their own operations and to help others not familiar with such costs. They do not represent average costs for producing apples in the county.

The thinning costs apply primarily to the Yellow Newtown pippin where spray thinning is commonly used. Some allowance for higher costs with other varieties should be considered.

The data was developed as typical by a group of growers in cooperation with the Agricultural Extension Service. Participating growers had acreages varying from about 30 to 150 acres with varying yields and costs. These were weighed and adjusted to an economic unit of approximately 50 acres with a yield of 18 tons per acre. Growers must keep these figures in mind when making a comparison with their own operation.

Larger operations or higher yields per acre will generally lower the costs shown in this study (see page 5).

Growers today are making attempts to reduce labor and other costs by changes in cultural practices.

There is a trend from standard sized trees to semi-dwarf rootstock. Reduction of tree size and hedgerow planting should result in lower costs of pruning, spraying and harvesting. More trees per acre will tend to maintain yield.

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

YIELD AFFECTS COSTS

The table below shows the effect of yield on cost of production if all the inputs and per-acre costs are held constant except the harvesting cost which would have to vary with amount of fruit picked.

COSTS PER TON AT DIFFERENT YIELDS

	Yield, Tons Per Acre				
	15	18	20	25	30
Total Cash & Labor Cost	53.35	47.21	44.13	38.60	34.92
Depreciation Cost	8.98	7.48	6.74	5.39	4.49
Interest Cost	11.62	9.68	8.71	6.97	5.81
Total Cost of Production	73.95	64.37	59.58	50.96	45.22

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 cost of a ton of apples.

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 - Trees 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 fruit 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 on land. Those using the cost table can substitute any interest rate which they think would be more appropriate for their purpose.

SAMPLE COSTS TO PRODUCE APPLES IN SANTA CRUZ COUNTY--1967

Based on a 50-acre orchard with a yield of 18 tons per acre. Man labor at \$1.60 plus Soc. Sec. & Comp. Ins., .15=\$1.75 per hr. and \$2.00 plus Soc. Sec. & Comp. Ins., .18=\$2.18 per hr. Cash costs per hr: 30-40 HP tractor-crawler @ \$1.75 & wheel tractor with or w/out fork lift @ \$1.30; truck @ \$2.00 and sprayer @ \$4.00.

	Sample Costs		Your Cost	
	Per Acre	Per Ton	Per Acre	Per Ton
PRE-HARVEST CASH COSTS:				
Pruning: 76 hrs. @ \$1.75 + 8 hrs. @ \$2.18	\$150.44			
Brush disposal: 3 man & 1 truck hours	7.68			
Fertilize: 0.3 hr. man & tractor	1.04			
Fertilizer:	15.00			
Spray: 7 times-3½ hrs. man, sprayer (1 time crawler 6 times wheel tractor)	26.41			
Spray material:	80.00			
Irrigate: (sprinkler) 4 man & 0.2 truck hrs.	7.40			
Water: pumping power	12.00			
Cultivate: 3 man, 7 crawler & 1 wheel tractor hrs.	11.34			
Thin: 60 man hrs. after spray thinning	105.00			
Prop: 6 man & 3 tractor hrs.	15.69			
Misc. labor: 5 man, 2 tractor & 2 truck hrs.	17.52			
Misc. material incl. gopher control	8.00			
County taxes	48.00			
Office, car, int. on oper. capital, etc.	41.55			
Repairs, except tractors, truck & sprayer	6.00			
TOTAL PRE-HARVEST CASH & LABOR COSTS	\$553.77	\$30.73		
HARVESTING COSTS:				
Picking: 18 T. @ \$11.00 per ton	\$198.00	\$11.00		
Supervision: 7 man hours @ \$2.18	15.26	.85		
Move & load bins: 5 hrs. man & fork lift tractor	17.00	.97		
Haul: 5 hrs. man & truck	20.90	1.16		
Bin rental @ \$2.50 per ton	45.00	2.50		
TOTAL HARVESTING COSTS	\$296.56	\$16.48		
TOTAL CASH & LABOR COSTS	\$849.63	\$47.21		
DEPRECIATION COSTS: (per acre on 50 acres)				
Trees: cost \$1500 - 40 yrs. bearing life	\$37.50			
Bldgs. for equip: \$80-25 yrs.; housing \$180-30 yrs.	9.20			
Irrig. system (sprinkler): cost \$240 - Av. 16 yrs.	15.00			
Tractors, fork lift, truck & pickup \$400-12½ yrs.	32.00			
Sprayer: cost \$120-10 yrs. life	12.00			
Props. Ladders & pick bags: cost \$230-10 yrs.	23.00			
Tillage & other equip: cost \$60-10 yrs.	6.00			
TOTAL DEPRECIATION COSTS	\$134.70	\$ 7.48		
TOTAL CASH & DEPRECIATION COSTS	\$984.33	\$54.69		
INTEREST ON INVESTMENT @ 6%: (per acre on 50 acres)				
Trees: on ½ cost (\$750)	\$ 45.00			
Bldgs. for equip. & housing: on ½ cost (\$130)	7.80			
Irrig. system (sprinkler): on ½ cost (\$120)	7.20			
Tractors, fork lift, truck & pickup: on ½ cost (\$200)	12.00			
Sprayer: on ½ cost (\$60)	3.60			
Props, ladders & pick bags: on ½ cost (\$115)	6.90			
Tillage & other equip: on ½ cost (\$30)	1.80			
Land at \$1500	90.00			
TOTAL INTEREST ON INVESTMENT	\$174.30	\$ 9.68		
TOTAL COST OF PRODUCTION*	\$1158.63	\$64.37		

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