

ST-CC-71

A SAMPLE OF
STRAWBERRY PRODUCTION COSTS
FOR
MONTEREY AND SANTA CRUZ COUNTIES

AGRICULTURAL EXTENSION SERVICE
UNIVERSITY OF CALIFORNIA

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by

Arthur S. Greathead, Farm Advisor

UC Cooperative Extension

DISCUSSION

These data sheets apply to summer planted strawberry varieties in Monterey and Santa Cruz counties.

Equipment and overhead costs were charged to a 20-acre unit with ten acres being established. Establishment costs are depreciated in two years with 60 percent charged to the first year's production. Depreciation includes a solid set sprinkler system for the ten acres being established.

TYPES OF COSTS

Three input categories are included in this study: (1) Cash Costs; (2) Depreciation Costs; and (3) Interest on Investment Cost. Together they make up the total cost of each crate of strawberries.

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

Depreciation Costs - Plants and equipment get old and must be replaced. These costs (which do not include regular maintenance) 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 often ignored as a cost except when interest is paid on borrowed capital. All capital, whether invested in bonds, business or in berry growing, commands a return which is an important part of the total production costs. In this study, a fair rate of interest is considered to be 7%. This is figured on one-half the original cost of depreciable items.

SAMPLE INPUTS AND COSTS TO ESTABLISH STRAWBERRIES - RENTED LAND
MONTEREY AND SANTA CRUZ COUNTIES - 1971

	Hours per Acre			Cost per Acre
	Man. ex. Contract	20 H.P. Tractor	1 Ton Truck	
Plow, disk 2 x, subsoil and float: contract - 8 hrs. with 40 h.p. crawler @ \$10.00				\$ 80.00
Survey for leveling: 3 men, 1½ hrs.	4.5			9.90
Leveling and grading - contract - 6 hrs. @ \$10.00				60.00
Chisel 2 x - contract - 3 hrs. @ \$10.00				30.00
Fumigate - contract				415.00
List beds - contract - 1 hr. @ \$10.00				10.00
Preplant sprinkle irrig. - 2 x (5" water)	3.7			8.14
Shape beds & open plant furrows	2.0	2.0		7.84
Planting	44.0		5.0	114.80
Plants: 23,000 @ \$18.50/1,000				425.50
Close furrows	1.0	1.0		3.92
Total Preparation and Planting				\$1,165.10
Irrigate: sprinkler 15 x	10.7			23.54
Power - \$8.00; booster pump fuel and repairs - \$9.00; includes preplant (16" water)				17.00
Furrow leveling	7.0	7.0		27.44
Cut runners and weed - 3 x	114.0			250.80
Fertilizer: 30 lbs. 16-20 - applied				15.00
Dust: 3 x - contract - applied				42.00
Total Labor, Materials and Field Power				\$1,540.88
General expense: office, car, operating capital, etc.				123.27
County taxes on tenant's equipment				5.50
Repairs to equipment other than tractor & truck				6.40
Rent on land				175.00
Total Cash Overhead Costs				\$ 310.17
Total Cash Costs				\$1,851.05

	Orig. Costs	Acres Served	Orig. Cost	Per Acre	
				7% on ½ Cost	Depre- ciation
Investment overhead - tenant's					
Irrigation system -					
Reservoir	\$1,000	20	\$ 50	\$ 1.75	\$ 6.25
Solid set sprinkler	6,300	10	630	22.05	63.00
Booster pump & motor	3,600	10	360	12.60	24.00
Total Irrigation			\$1,040	\$36.40	\$ 93.25
Tractor and Truck	\$6,600	20	330	11.55	27.50
Other equipment	5,000	20	250	8.75	25.00
Total Investment & Depreciation			\$1,620		\$145.75
Total Cash Costs & Depreciation					\$1,996.80
Interest on Investment				\$56.70	\$ 56.70
TOTAL COST TO ESTABLISH STAND					\$2,053.50

Based on a 20-acre unit with 10 acres being established. A solid set sprinkler system used in establishing stand.

Labor rates per hour including compensation insurance and Social Security as follows:
\$3.02 and \$2.20.

Tractor cash cost per hour @ 90¢ and truck @ \$2.00.

SAMPLE INPUTS AND COSTS FOR STRAWBERRIES - RENTED LAND
FIRST PRODUCTION YEAR--JANUARY - DECEMBER
MONTEREY AND SANTA CRUZ COUNTIES - 1971

Based on a yield of 3,350 - 12 lb. crates (40,200 lbs.) for fresh market

	Hours per Acre			Cost per Acre
	Man	20 H.P. Tractor	1 Ton Truck	
Prune	50.0			\$ 110.00
Plastic mulching	30.0	4.0		60.00
Plastic material - 205 lbs. @ 34¢				70.00
Pull plants thru plastic 2nd time & weed	20.0			44.00
Fertilize - 400 lbs. 16-20 @ 5¢ applied				20.00
140 lbs. N in irrig. water @ 11½¢				16.10
Irrigate: 40 x	35.0			77.00
Water: power to pump 80" @ \$6.00/Ac. ft.				40.00
Weeding - 3 x	70.0			154.00
Pest control: ^{1/}				
Ground applic. 4 x - \$24.00; materials \$52.00				76.00
Air applic. 5 x - \$20.00; materials \$53.00				73.00
Hand bait 4 x; materials \$29.00	1.0			30.80
Miscellaneous work includ. materials \$5.00	10.0	1.0	1.0	29.90
Total Cultural Labor, Mat. & Field Power				\$ 800.80
General expense: office, car, operating capital, etc.				58.13
County taxes on tenant's equipment				5.50
Repairs to equipment, except tractor & truck				8.00
Rent on land				175.00
Total Cultural Cash Overhead				\$ 246.63
Total Cultural Cash Costs				\$1,047.43
Investment overhead -	Per Acre			
tenant's - based on	Orig.	Av.	7% on	Depre-
20-acre unit	Cost	Value	Av. Val.	ciation
Establishment of stand ^{2/}	\$2,054	\$1,746	\$122.22	\$1,232.40
Irrigation - reservoir	50	25	1.75	6.25
Irrigation - gated pipe	300	150	10.50	15.00
Tractor and truck	330	165	11.55	27.50
Other equipment	250	125	8.75	25.00
Total Invest. & Deprec.	\$2,984	\$2,211		\$1,306.15
Total Cultural Cash & Depreciation Cost				\$2,353.58
Total Interest on Investment			\$154.77	154.77
Total Cultural Costs				\$2,508.35
Picking: hourly plus so much per crate = 90¢/crate x 3,350/Ac.				\$3,015.00
Checker: 54 hrs. @ \$2.20; 20 hrs. man & truck				219.20
Crates, baskets and wires @ 34¢				1,139.00
Harvesting cash overhead				200.00
Total Harvesting & Crate Costs				\$4,573.20
Total All Costs				\$7,081.55

^{1/} For Shastas', two additional dusts @ \$16.00 each = \$32.00

^{2/} Establishment costs depreciated in two years with 60% charged to first year's prod

Based on 20-acre unit with only portion in first production year. Labor rates per h including compensation insurance and Social Security as follows: \$3.02 and \$2.20. cash cost per hour @ 90¢; truck @ \$2.00.

YIELD AFFECTS COSTS

A yield of 3,350 crates per acre was chosen for this study. Higher or lower yields per acre will affect the costs shown in this study. The table below shows the effect of yield on costs of production per crate of strawberries if all inputs and costs remain constant.

Costs Per Crate at Varying Yields

Yield, Crates per Acre	2,500	3,350	4,000
Costs per Crate	2.56	2.11	1.98

Most growers harvest a certain portion of their crop for sale to processors. Since the proportion of the crop sold for this purpose varies widely among growers, it is difficult to establish an average level. Therefore, the following costs per pound have been worked out on the assumption that 100% of the crop is being harvested for use by the processor.

Production/Ac.	30,000 lbs.	40,200 lbs.	48,000 lbs.
Price/lb.	17.6¢	13.9¢	12.8¢

PRACTICES CAN AFFECT COSTS

Growers must review production systems and develop ways to reduce labor and other costs. High yielding varieties with short harvest seasons can more effectively compete for scarce labor supplies.