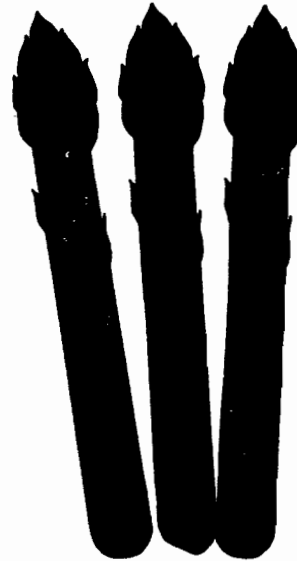


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**ASPARAGUS PRODUCTION COSTS IN
SAN JOAQUIN COUNTY**

**SEDIMENTARY SOIL
6-FOOT BEDS**

**UNIVERSITY OF CALIFORNIA
AGRICULTURAL EXTENSION SERVICE
SAN JOAQUIN COUNTY**

December 1969
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Asparagus

GENERAL REMARKS

This estimate of production costs of asparagus was prepared from information supplied by a group of representative asparagus growers in San Joaquin County. These growers felt the need of preparing a cost estimate as a guide for growers in making management decisions in relation to their asparagus operations.

In the preparation of these figures, equipment was figured on a new-cost basis. Harvest equipment was depreciated over the harvest life of the bed. Some growers who purchase used equipment, or who are able to use harvest equipment on successive plantings, will have a lower cost on these items. Also, farm operators usually perform some of the labor items which are charged in these data.

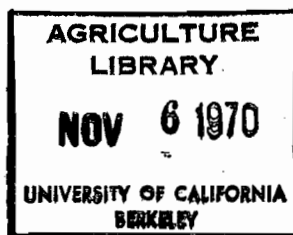
Operations vary widely among asparagus growers. In this study, we attempted to include operations that most growers practice. Individual growers should examine these figures and make changes where their individual cost situations differ to make a more accurate estimate of their own operation.

The length of life of an asparagus bed is quite important in a cost analysis such as this and has considerable influence on the total cost of production. In this study of a 6 ft. bed on sediment soil, a 10-year length of life was used. A tabulation made on the average age of beds (5-to 8-foot rows) at time of plowing out from the 1958 and 1959 Asparagus Surveys showed an average of 12 years in peat soil and 15 years in sedimentary soil. A second tabulation made from the 1962 and 1963 Asparagus Surveys showed an average life of 10 years for peat soil and 12 years for sediment soil. A third tabulation made from the 1967 and 1968 Asparagus Surveys showed an average life of 8 years for beds removed in peat soil during 1967 and 1968 and 11 years on sedimentary soil. Production of asparagus beds falls off rapidly with increased age.

In the face of the present labor situation, the economical life of an asparagus bed may be quite different than it has been in the past. Figures in this study should be adjusted to fit the changing situation.

The authors would like to acknowledge the assistance of the California Asparagus Growers Association in the preparation of this report.

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COSTS OF ESTABLISHING ASPARAGUS ON SEDIMENTARY SOIL - FIRST YEAR

6-FT. BEDS, 7-INCH ROOT SPACING - SAN JOAQUIN COUNTY

Based on a 200-acre operation on a 600-acre farm,
a 12-year life of bed with 10 years of cutting

Operation	Hours per Acre	CASH AND LABOR COSTS PER ACRE (1)			Total
		Labor	Fuel and Repairs	Material	
Subsoil		\$	\$	Contract \$ 10.00	\$ 10.00
Disc	.33	.66	1.37		2.03
Make and remove levee				Contract 3.00	3.00
Make drain ditches				Contract 1.50	1.50
Flood	1.00	1.75		Water 1.25	3.00
Disc & knock down levees	.33	.66	1.37		2.03
Plow	.70	1.40	3.78		5.18
Disc	.33	.66	1.37		2.03
Land plane 2 x	1.00	2.00	2.40	Rent of plane 1.00	5.40
Mark furrow and fertilize				Contract--Materials and application 35.00	35.00
Plant				Contract (2) 155.00	155.00
Cover plants	.33	.66	.56		1.22
Pack row	.15	.30	.18		.48
Irrigate 3 x	5.00	8.75		Water & drainage 6.00	14.75
Weed control				Contract (3) 12.00	12.00
Cultivate and cover weeds 4 x	1.20	2.40	2.04		4.44
Spray irrigation ditches	.50	1.00	.80	Chemicals .79	2.59
Hoe 3 x				Contract 35.00	35.00
Furrow out centers 2 x	.66	1.32	1.12		2.44
Cultivate 4 x	1.33	2.66	2.26		4.92
Chop fern	.40	.80	.60		1.40
Disc	.33	.66	1.04		1.70
Additional labor costs(5)		2.57			2.57
Miscellaneous (6)				18.46	18.46
TOTAL CASH AND LABOR COST		28.25	18.89	279.00	326.14
<u>Annual Cost</u>					
<u>Investment (9)</u>	<u>Per Acre</u>	<u>Depreciation</u>	<u>Interest--(7%)</u>		
Cultural Equipment	\$139.00	\$13.91	\$4.87		18.78
TOTAL COST PER ACRE					344.92

COSTS OF ESTABLISHING ASPARAGUS ON SEDIMENTARY SOIL - SECOND YEAR

6-FT. BEDS, 7-INCH ROOT SPACING - SAN JOAQUIN COUNTY

Based on a 200-acre operation on a 600-acre farm,
a 12-year life of bed with 10 years of cutting

Operation	Hours per Acre	CASH AND LABOR COSTS PER ACRE (1)			Total
		Labor	Fuel and Repairs	Materials	
Winter discing 2 x	.66	\$ 1.32	\$ 2.74	\$	\$ 4.06
Summer discing 4 x	1.00	2.00	4.15		6.15
Hoe 2 x				Contract 20.00	20.00
Mow ditches	.20	.40	.36		.76
Spray irrigation ditches	.50	1.00	.80	Chemicals .79	2.59
Furrow out 2 x	.66	1.32	2.36		3.68
Irrigate 3 x	5.00	8.75		Water and drainage 6.00	14.75
Cultivate 4 x	1.33	2.66	2.26		4.92
Chop fern	.40	.80	.60		1.40
Disc 2 x	.50	1.00	1.58		2.58
Chisel	.33	.66	.96		1.62
Additional labor costs (5)		2.00			2.00
Miscellaneous (6)				3.87	3.87
TOTAL CASH AND LABOR COST		21.91	15.81	30.66	68.38

Investment (9)	Per Acre	Annual Cost		
		Depreciation	Interest--(7%)	
Cultural Equipment	\$139.00	\$13.91	\$4.87	18.78

TOTAL COST PER ACRE 87.16

Some growers harvest for a short time during second year. Normally, income from this asparagus is only sufficient to cover costs of harvesting.

FIRST YEAR COST 344.92
Interest on first year cost $\$344.92 \times 7\%$ 24.14

TOTAL COST FIRST 2 YEARS 456.22

ANNUAL COSTS OF A PRODUCING ASPARAGUS BED

6-FT. BEDS, SEDIMENTARY SOIL, 7-INCH ROOT SPACING, 3RD TO 12TH YEAR

Based on a 200-acre operation on a 600-acre farm,
a 12-year life of bed with 10 years of cutting

Operation	Hours per Acre	CASH AND LABOR COSTS PER ACRE (1)			Total
		Labor	Fuel and Repairs	Materials	
CULTURAL					
Disc	2 x	.66	\$ 1.32	\$ 2.08	\$ 3.40
Ridge & roll		.25	.50	.55	1.05
Reridge		.33	.66	.56	1.22
Work centers		.20	.40	.34	.74
Fertilize				Contract--Materials and application 15.00	15.00
Weed control				Contract 10.00	10.00
Furrow out	2 x	1.33	2.66	2.26	4.92
Irrigate	2 x	3.00	5.25	Water and drainage 4.00	9.25
Cultivate	2 x	.66	1.32	1.12	2.44
Chop fern		.40	.80	.60	1.40
Additional labor costs (5)			1.30		1.30
TOTAL CULTURAL COSTS			14.21	7.51	29.00
HARVEST (90 days, 45-man crew)					
<u>Market (1,000 lbs.)</u>					
Cut, sled, pack, etc.			57.75	(33 crates @ 1.75)	57.75
Crates				33 crates @ .75 24.75	24.75
<u>Cannery Green (2,000 lbs.)</u>					
Cut and sled			140.00	(2,000 lbs. @ 7.00 per 100#)	140.00
Rack, wash and box			14.00	(2,000 lbs. @ .70 per 100#)	14.00
Field hauling		3.00	6.00	6.75	12.75
Sled operation (3 sleds)		9.00		7.65	7.65
Housing, supervision, transportation, etc. of labor (8)				48.04	48.04
TOTAL HARVEST COSTS			217.75	14.40	72.79
TOTAL CULTURAL AND HARVEST COSTS			231.96	21.91	101.79
Cash overhead					
Misc., office, ins., etc. (4 & 6) - 6% of total cultural & harvest costs					21.34
Share rent (7)					102.00
TOTAL CASH OVERHEAD					123.34
TOTAL CASH COST					479.00
Investment					
				Annual Cost	
				Depreciation	Interest--(7%)
(9) Cultural equipment	139.00			\$13.91	\$ 4.87
(10) Harvest equipment	117.00			11.70	4.10
(10) Labor camp	175.00			8.75	6.13
(10) Packing shed	100.00			5.00	3.50
Cost first 2 years	456.22			45.62	15.97
Total	987.22			84.98	34.57
TOTAL COST PER ACRE					119.55
Cost per lb. @ 3,000 lb. yield					19.95¢
Cost per lb. @ 2,000 lb. yield - 24.09¢					
Cost per lb. @ 4,000 lb. yield - 16.58¢					

NOTES

- (1) All tractor labor \$2.00 per hour; other hourly labor \$1.75 per hour. Fuel, repair and other cash costs per hour taken from standard tables are: 60 HP tracklayer diesel tractor @ \$2.40 per hour, 55 HP diesel wheel tractor at \$1.20 per hour.
- (2) Planting \$35.00 per acre 12,000 roots, 7-inch spacing in row \$10.00 per thousand which includes cost of delivery and treatment with fungicide.
- (3) Material 3 lbs. per acre (\$9.00), application \$3.00 per acre.
- (4) Insurance cost on \$45,000 buildings, \$70,000 equipment (all risk & liability) \$1,200.00. Included under cash overhead, misc. costs.
- (5) Additional labor costs include compensation insurance @ 2.29%, Social Security @ 4.8%, other miscellaneous costs including bonuses, transportation, etc. 2.91%. These percentages are used to figure out the additional labor costs in each section.
- (6) Miscellaneous costs are computed at 6% of the total cash and labor costs not including rent. This includes office, fire and liability insurance, interest on operating capital, etc.
- (7) Share rent figured at 20 percent of a 3,000-pound yield at 17¢ per lb. No rent charged during first 2 years of establishment.
- (8) Housing, supervision, transportation, etc. of labor - (45-man crew)

Camp supervisor \$30.00 per day (90 days)-----	\$2,700.00
Transportation to field (2 buses at \$35.00 per day)---	6,300.00
Blankets and mattresses (\$7.50 per man per year)-----	337.50
Camp lights and fuel (\$2.00 per month per man)-----	270.00
	\$9,607.50

Per Acre Charge 48.04

EQUIPMENT LIST (9)

Items	Original Cost		Years Life	Annual Use (Acres)	Non-cash Overhead	
	Total	Per Acre Annual Use			Depre- ciation	Interest at 7%
<u>CULTURAL EQUIPMENT</u>						
D4 crawler tractor 60-80 HP	\$24,000	\$ 40.00	10	600	\$ 4.00	\$ 1.40
W.D. tractor 55 HP (2)	18,000	30.00	10	600	3.00	1.05
Smizer roller (3 section)	2,400	4.00	10	600	.40	.14
Rotary hoes (3)	1,200	6.00	10	200	.60	.21
Cultipacker	750	1.25	10	600	.13	.04
Roto chopper	1,000	5.00	10	200	.50	.18
Disk (3-5 ft. sections)	2,400	12.00	10	200	1.20	.42
Truck 1½ ton	5,500	13.75	10	400	1.38	.48
Mower	600	1.50	10	400	.15	.05
Sprayer 200 gal.	1,200	2.00	10	600	.20	.07
Pickup truck	3,600	6.00	10	600	.60	.21
Plow 3 bottom 16" two-way	4,500	7.50	10	600	.75	.26
Disk, 18' offset	3,000	5.00	10	600	.50	.18
Disk, 6' single border	400	2.00	10	200	.20	.07
Tool bar	1,800	3.00	10	600	.30	.11
TOTALS	70,350	139.00			13.91	4.87

EQUIPMENT LIST (10)

Items	Original Cost		Years Life	Annual Use (Acres)	Non-cash Overhead	
	Total	Per Acre Annual Use			Depre- ciation	Interest at 7%
<u>HARVEST FACILITIES</u>						
Labor camp and furnishings 45 men	\$35,000	\$175.00	20	200	\$ 8.75	\$ 6.13
Packing shed	20,000	100.00	20	200	5.00	3.50
<u>HARVEST EQUIPMENT</u>						
Washer, butt saw, press	7,500	37.50	10	200	3.75	1.31
Pump 5 HP & well 100'	3,000	15.00	10	200	1.50	.53
Auger & elevator	1,500	7.50	10	200	.75	.26
Sleds (40)	2,400	12.00	10	200	1.20	.42
Sled tractors 25 HP W. (3)	9,000	45.00	10	200	4.50	1.58
TOTAL	23,400	117.00			11.70	4.10