

COSTS OF ESTABLISHING AND PRODUCING KIWIFRUIT

SACRAMENTO VALLEY - 1987

BY

Janine Hasey, Farm Advisor, Sutter-Yuba County
Bill Olson, Farm Advisor, Butte County
James Beutel, Extension Pomologist, UCD

AND

Karen Klonsky, Farm Management Specialist, UCD

This study is based on a 20 acre kiwifruit vineyard, 15'x18' (161 vines per acre, 143 female and 18 male). The 20 acres of kiwifruit are assumed to be 933'x933' square with a total of 3,243 plants, 63 rows with 51 vines per row. The vineyard is assumed to be owner operated and to consist of 22 total acres allowing for 20 acres of actual plants with the remainder used for roads, farm shop etc. The following assumptions will help to explain the study:

1. All labor costs \$5.50/hour, which includes fringe benefits.
2. The Pergola trellis system is used. The cost for the trellis is detailed on a separate page.
3. Hired management may be required for absentee owners and large vineyards. For a 20-acre vineyard it is assumed that the owner is the manager and supplies part of the labor. Costs are shown as if all labor were hired.
4. Windbreaks are assumed to be used in some vineyards. If they are desired, they may consist of poplar trees planted 3 feet apart as an outside row on the windward side or sides of the vineyard. A windbreak may be needed in the center if the wind is severe or from more than one side. Each 933 feet of windbreak would cost about \$141. The cost is about \$141 for planting a single row of poplar cuttings one side of a 20-acre vineyard. Using bare root container grown trees from a nursery could cost from \$550 to \$850 per row.
5. Although cash receipts are displayed and used for calculations in the same year as the crop is harvested, it should be noted that payment is usually not received until the following year.

6. The irrigations system is a dual system using 1) solid set sprinklers for frost control and supplemental irrigation and 2) drip/micro sprinklers for irrigating vines. Cost details are on a separate page. The cost of pumping water is \$35/acre foot. Water is applied as follows:
- 2 ac. ft. in year 1
 - 3 ac. ft. in year 2
 - 4 ac. ft. in year 3 and following years

A dual system using two drip/micro sprinkler applications and one solid set sprinkler application is applied each week approximately from April to October. There are two hours labor/irrigation/20 ac. Frost control will range from 1 to 6 applications per season (Spring and Fall).

7. Pruning and training is performed as follows: dormant pruning in December and January, dormant tying in February, and summer pruning, training, and tying canes during June-September. Fruit thinning is performed in June and July to remove offgrade fruit from the packing process.

COST PER VINE

	Dormant Prune	Dormant Tie	Summer Prune Train & Tie	Materials	Fruit Thinning
Year 1	5 minutes	5 minutes	15 minutes	\$0.10	-
Year 2	10 minutes	5 minutes	15 minutes	\$0.10	-
Year 3	15 minutes	10 minutes	20 minutes	\$0.15	-
Year 4	25 minutes	12 minutes	25 minutes*	\$0.20	-
Full Bearing	40 minutes	15 minutes	30 minutes*	\$0.23	7 minutes*

* Female vines only

8. Mowing for weed control is performed as follows:
 Years 1, 2, 3, 4: 8 times - Each time takes 10 hrs./20 acres.
 Full production: 6 times - Each time takes 10 hrs./20 acres.
9. Weed control - Pre-emergent and post-emergent strip spray applied in fall after harvest.
 2 spot treatments of post-emergent herbicide during the season.
 Each spray takes approximately 1/2 hour per acre. Strips are 5 feet wide.
10. Pest control for mature vines includes
 1 dormant spray for scale and at least
 2 summer sprays for leafroller.

Custom spray application for mature vineyards is at a cost of \$20/acre each time.

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11. Fertilizer - Cost of \$0.58/lb for nitrogen.

Year 1 - None

Year 2 - 1/4 lb. nitrogen/vine

Year 3 - 1/2 lb. nitrogen/vine

Year 4 - 3/4 lb. nitrogen/vine

Mature - 1 lb. nitrogen/vine

Fertilizer is generally applied five times; February, April, May, June and July. Additional nutrients are often applied through the irrigation system. Costs will vary according to materials used and application methods.

12. Equipment Costs: In allocating the equipment costs per acre, the following calculations were made: (a) "Original Cost" of equipment is the new cost including sales tax. (b) "Depreciation" is the new cost per acre divided by the years of life. The new cost per acre is figured as the new cost divided by the number of acres the equipment will be used on. (c) "Interest" on the investment is figured as one-half of the new cost per acre multiplied by the interest rate. One-half of the new cost is the average value of the equipment during its useful life. (d) The investment per acre used in the cost study is calculated at 60% of the depreciation and interest costs for all new equipment to reflect a mix of the new and used equipment.

13. Land Value: \$4000/acre

14. County tax: 1% of land + equipment costs

This study represents an example of costs and operations for the Sacramento Valley area. Industry averages have not been used. In particular, trellis, irrigation systems, and fertilizer practices vary widely.