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UNIVERSITY OF CALIFORNIA AGRICULTURE AND NATURAL RESOURCES POLICY INSTITUTE

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CILANTRO PRODUCTION COSTS AND PROFITABILITY ANALYSIS, VENTURA COUNTY

Cilantro Field, Ventura County, 2024,
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ABSTRACT

We developed this study for existing and prospective growers, and allied industries to provide information on the financial requirements for producing cilantro in Ventura County and analyzing enterprise profitability. The primary data source for the study is a panel of growers and allied industries that we interviewed in the Spring of 2024 with follow-up reviews and revisions in 2025. We also used references from the Ventura County Agricultural Report 2020-2023 for yield and price averages. The total cost to produce cilantro in 2025 using a yield of 1,200 cartons per acre approximates $7,316 per acre. Using a price received of $9.00 per carton, profit before paying management, is estimated at $3,480 per acre. We also provided a range analysis to show profitability at variable yield and price options to account for possible yield differences and prices received by farms within the region.

INTRODUCTION

Ventura County produces a diversity of vegetables and herb crops. Lately, the acreage in cilantro production has been increasing (Figure 1). Between 2002 and 2022, the cilantro acreage almost quadrupled from 1,257 acres to 4,065, reflecting increases in demand for this crop.

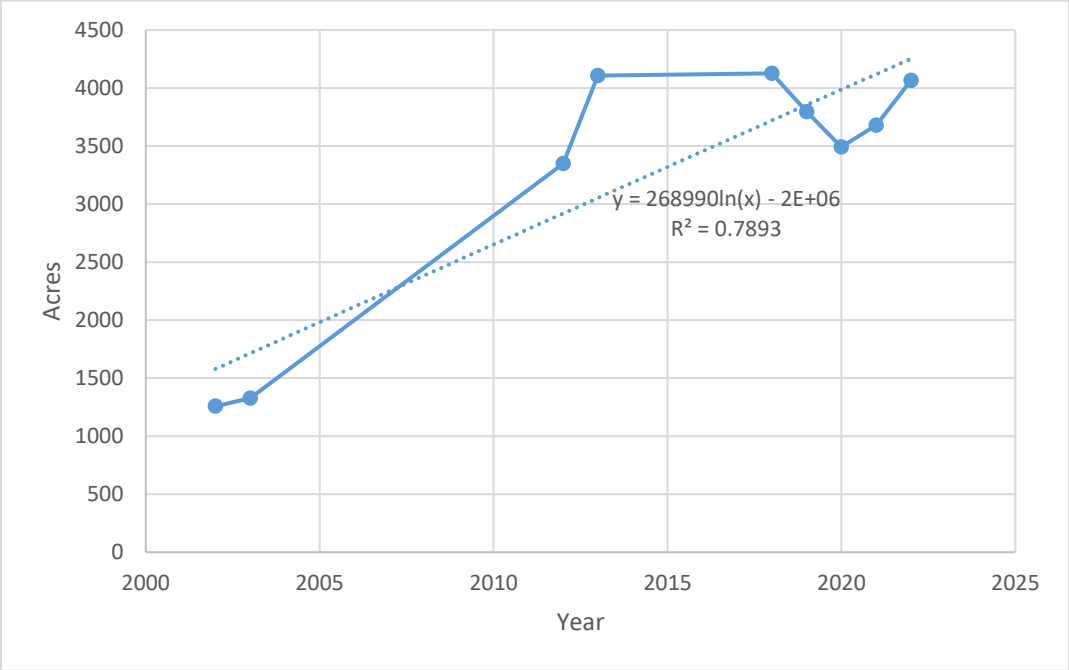


Figure 1. Cilantro Acreage Trend in Ventura County, California

Crop Reports – Agriculture / Weights & Measures, *2000-2023*

It has been over 20 years since the last cost of production study was completed for cilantro. Since 1999 the costs of production have increased, methods have changed, and new regulations have influenced choices faced by producers. This study provides a sample costs and profitability estimation of cilantro production in Ventura County in 2025. The objective is to provide growers and investors with financial tools to analyze the profit of cilantro production as an enterprise; to use it as a financial transaction tool such as for loan requests by growers and loan analyses by lenders; and for evaluation of insurance claims and asset appraisals by allied industries. Government agencies such as the California Department of Agriculture (CDFA) and the United States Department of Agriculture (USDA) also use the information when developing and implementing agricultural policies and programs.

ASSUMPTIONS

We based our study on production practices collected from a growers' panel, pest control advisors and the University of California Cooperative Extension (UCCE) Farm Advisor for Ventura County in March of 2024 with follow-up reviews and revisions in 2025. Typical production practices from the growers' interview and the enterprise budget development methods are provided below. Materials, equipment, contract services, labor wages and production revenues (unless otherwise specified) are determined in 2024-2025 prices.

Farm Size: We based our study on an 800 acre farm, the average farm size of the growers in our interview panel. Double cropping is common in Ventura County; therefore, the total land farmed for this sample approximates 1,600 acres per year. Growers produce multiple crops each year. Hence, planting and harvesting vegetable crops are year-round activities. In our growers interview the most common crop mix in a farm included bell pepper, celery, spinach, radish, cabbage, parsley and cilantro. Cilantro production is considered 20% -30% of the actual 1600 acres farmed and is produced only once a year on the same field. In this study, cilantro production is on 280 acres.

PRODUCTION PRACTICES

Land preparation: Growers in our interview pool stated several operations for land preparation including multiple discing (three times in this study), ripping the soil (twice) to break up any underlying compacted soil, plowing (once), land plane (three times) leveling using a triplane (once), chiseling (twice), and furrowing (once). Preplant fertilizer (about 300-350lbs./acre of 15-15-15 is applied together with the listing operation before the ground is shaped and rolled into beds. After the ground is shaped and rolled into beds, the ground is preplant-irrigated with about 2-acre inches per acre.

Planting and Growing Period: Cilantro can be planted in Ventura County in the fall, winter or spring. The length of the cilantro growing period can range from 40-80 days. This study assumes approximately 80 days growing period (mid-February to mid-May) including harvesting.

Stand establishment: Seeding rate is approximately 60 pounds per acre. Cilantro varieties grown in California include Santos, Long Standing, Slo Bolt, and Leisure, and all have similar production, harvesting and marketing practices.

Irrigation. Sprinkler irrigation is commonly used prior to planting and during germination. Growers can purchase or rent sprinkler irrigation systems. Growers can irrigate a field, a portion at a time, moving pumps, pipes, and fittings manually from field to field. For this study, we assume that a grower has sufficient pumps, pipes, and fittings available to irrigate 400 acres at a time. Pipes are transported using a trailer and a tractor. Spreading the sprinkler pipes takes 30 minutes of manual labor per acre and removing takes about the same. After the seedlings emerged, growers indicated switching to drip irrigation system.

Irrigation labor for inspection and maintenance of the system is estimated at about 30 minutes per acre per irrigation for sprinklers and about 20 minutes per acre per irrigation for drip irrigation. The cost of water to irrigate crops may vary depending on whether district or well water is used. In this study, production is in the Oxnard plains where growers use both well and district water. We assume that one-third of the water is from the district at $1,066 per acre foot ($88.83 per acre inch) and two-thirds of the water pumped from wells.

Energy use for pumping includes both diesel fuel and electric power. The amount of diesel and electricity consumption for pumping depends on pump horsepower (hp). For this study, 100 hp diesel pumps and 70 hp electric pumps were used. We estimated that 24 gallons per acre of diesel and about 269 kilowatts (kW) of electricity per acre would be needed during the production period for cilantro. Irrigation of a cilantro crop uses a

total of about 6 acre-inches of water per acre (2 acre inches in preplant and 4 acre inches in growing). In growing irrigation applied 4 times at 10 days interval.

Fertilization. In this study, 15-15-15 is applied pre plant at 325 lbs. per acre through the irrigation system and CAN17 is applied in the growing period at 12 gallons per acre via the drip system.

Pest and disease management. Growers commonly hire pest control advisors (PCA), licensed by the State of California, to manage pest treatments. Growers can also be licensed to perform pesticide treatments. Pesticide use permits are obtained from the Agricultural Commissioner's office. More pest management information is available on the UC Statewide Integrated Pest Management Project website, https://ipm.ucanr.edu/agriculture/. PCA fees for application are estimated to cost $50.00 per acre per treatment.

Insects that can affect cilantro production during the growth period can be treated at the larval stage. Soilborne pests such as root knot nematodes (Melodidogyne spp.) are an isolated problem, therefore no treatment is included in this study. Growers' management strategies include planning ahead and selecting planting period and fields to avoid the problem.

Diseases such as bacterial leaf spot (*Pseudomonas syringae* pv. *coriandricola*), in the fall and spring Alternaria leaf spot (*Alternaria poonensis*) can affect crop foliage and make cilantro unmarketable. Quadris Flowable Fungicide applied once can minimize Alternaria leaf spot or bacteria leaf spot development.

Weed management. Weed management used in this study includes chemical control such as with Lorox plus mechanical cultivation (once) and hand hoeing of about 10 hours per acre. Alternatively, growers may use Linuron and Prometryn as postemergence herbicides.

Harvest and Sell: The cilantro crop is hand harvested, and field packed in cartons. Each carton typically contains about 30 bunches and weighs ~20 pounds. After the cilantro is packed, it is quickly transported to a storage facility where it is cooled and palletized at a scientifically recommended temperature.

Harvesting costs in this study include cartons, picking and packing, and loading and hauling to the nearest cooling facility. We estimated a cost of $0.43 for the carton (box), $1.18 per carton for picking and packing, $0.65 per carton for loading and hauling and $0.50 per carton for cooling and selling.

Disposing of Crop Residue: After harvest, the field is disced twice to incorporate all crop residues into the soil.

CASH OVERHEAD COSTS

Food Safety Program. We did not include food safety costs in this study because of a lack of sufficient information. Growers can access Good Agriculture Practice (GAP) guidelines developed by the United States Department of Agriculture to reduce food safety hazards on farm operations and for minimizing microbial contamination during the growing and harvesting seasons. Annual GAP audit and certification available. Each farm operation will be different; therefore, growers should decide on the GAP certification program that best fits their needs. The cost of most third-party GAP audit and certification programs is not public information. However, the United Fresh Produce Association pre-farm-gate matrix can provide average fees for GAP certification.

Regarding waste discharge control of water, the Los Angeles regional board, which overseas Ventura County, regulates discharges from irrigated farmlands. Information regarding waiver programs, reporting requirements and fees can be obtained from the Los Angeles regional board. Overall, the costs of food safety from previous studies showed only a very small portion of the total cost of production.

Interest on Operating Capital: Interest is charged on borrowed money or is an opportunity cost for using in-house funds for operating inputs. It is charged until income is received from the crop at harvest. We calculated interest on operating capital at a nominal rate of 5.87 percent per year. A nominal interest rate is the current market cost of borrowed funds for short-term loans.

Land rent. Land rental contracts and charges for agricultural production can vary widely by region and depend on the availability of well water on the property. In Ventura County, if there is a well on the property, the landlord often pays for the pump, the permanent parts of the irrigation facilities, and the costs of maintaining the well. The grower is generally responsible for the costs of energy needed to pump water.

This study assumes an average cash rent of $2,500 per acre per year ($208 per acre per month). Using an approximate 2.5 -months average growth period (mid-February to mid-May) from land preparation to harvest, the cilantro enterprise is charged a rent of $520 per acre.

Property taxes. We calculated property taxes at the County's base rate of 1 percent on the value of all farm property, including equipment, buildings, and improvements. No additional special assessment districts charges on property taxes are included.

Insurance. Insurance for property protection is calculated at $0.71 per $1,000 of the average value of property/assets. In addition, liability insurance for 800 acres farm size would be $1,461 per year. Liability insurance covers accidents on the entire farm.

Supervisors, foremen, and management. Interview information indicated that the size of farm we used in this study would require an average of about two employees working as supervisors and/or foremen. Wages including benefits are estimated at $240 per acre per year. For 2.5 months growing period, the cilantro enterprise is charged $50 per acre for supervisors and foremen.

Most growers in the survey did not provide management costs, and because of the wide variations in wages and salaries for professional managers, this study does not include management fees. We suggest that, after all production costs have been subtracted from the gross income of the crop, the residual may be allocated to profit or management income.

Office expenses. Expenses in this category include office supplies such as printers, computers, telephones, and paper and service fees for bookkeeping, accounting, legal fees, and so on. Our interview average for office expenses is about $400 per acre per year. For the 2.5 months of cilantro crop production, office expenses are around $83 per acre per crop.

Labor: Labor includes both owner and hired labor with the same wage rate. Information on farm labor wages in Oxnard 2024 is obtained; https://www.ziprecruiter.com/Salaries/Farm-Worker-Salary-in-Oxnard,CA. Hourly labor wages plus 46% benefits (Workers Compensation, Social Security, Medicare insurance, and other possible benefits) are $32.56 per hour for machine operators and $25.16 per hour for non-skilled/ other workers.

Machinery labor hours are calculated at 20 percent more than actual hours of labor to account for equipment setup, moving, maintenance, and repair.

Equipment operating cash costs: Equipment operating cash costs for fuel, lubrication, and repairs are calculated using formulas and coefficients developed by the American Society of Agricultural Engineers (ASAE). More information is available in Michael D. Boehlje, et.al,1984 and other farm management books and literature.

State prices for gas and diesel in 2024. include 4.78 for gas and 4.92 for diesel https://gasprices.aaa.com/state-gas-price-averages/ and the cost of energy for electric irrigation pumps is $0.30 per kW.

NONCASH OVERHEAD COSTS

We calculated the non-cash overhead or ownership costs of assets (including farm equipment and other investments like irrigation system, buildings, fuel tank, and pumps) using the capital recovery method. This method helps growers calculate an annual amount of money to charge the enterprise so that the value of assets is recovered within a specified period at the investment interest rate. The formula for calculating capital recovery is as follows:

Capital Recovery Per Year = [(Purchase Price – Salvage Value) x Capital Recovery Factor] + (Salvage Value x Interest Rate)

Where:

Purchase Price: All assets are in 2024-2025 prices. Farms use a mix of old and new investments; therefore, the overall value of the assets are estimated at 60% of the new prices for 2024-2025.

Salvage Value is an estimate of the remaining value of an investment at the end of its useful life. In this study, the remaining values for farm machinery are calculated at approximately 10% of the purchase prices. Other investments such as drip irrigation systems are assumed to depreciate fully with no remaining values. Land is always calculated at its current value.

Capital Recovery Factor is the amortization or the repayment factor for capital investments. It is used to determine equal annual payments needed to recover an investment at a specified interest rate over the life of the capital.

The interest rate in this study is 5.75%, the approximate long-run rate of return of agricultural assets to current income in California.

Capital recovery factors can be found in farm management books (Boelje, Michael D., et. al 1984). Simply locate the interest rate and number of useful years of the investment/asset to determine the capital recovery factor. Annual capital recovery costs for assets used in this study are provided in Table 6.

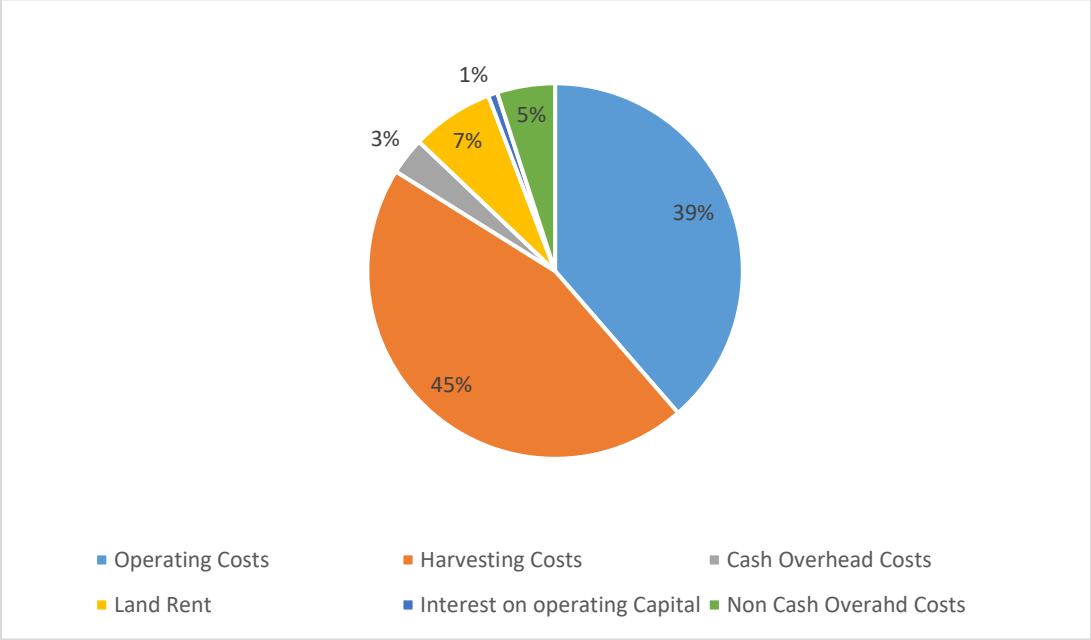
CROP RETURNS

Crop returns are calculated as yield per acre times price per carton. Cilantro yield may vary from farm to farm. In our sample study, we used 1,200 cartons per acre. Each carton is approximately 20 lbs. Average cilantro prices for the county are provided in the Ventura County Agricultural Crop Reports. We used a price of $9.00 per carton.

SUMMARY

Our estimate of the total cost of cilantro production in the Oxnard Valley of the Ventura County in 2025 is $7,320 per acre (tables 1 and 2). Table 1 presents costs by type of operation, and table 2 by type of input. The pie graph below shows the breakdown of costs.

Figure 2. Proportion of Production Costs for Cilantro, Ventura County, 2025



Where:

Operating Costs are the material and the machinery operating costs for planting, weed, disease and pest control, fertilization, and irrigation. Machinery operating costs are fuel, repairs, maintenance and labor.

Harvesting costs include material, labor and machinery operating costs for picking, packing and hauling.

Cash overhead costs include liability and property insurances, sanitation fees, office expenses, property taxes, and investment repairs.

Land rent is the leasing cost per acre for cilantro production.

Interest on operating capital is the short-term interest on operating expenses.

Noncash overhead costs include capital recovery of the value of assets used in production of cilantro.

PROFITABILITY ANALYSIS

We analyzed profitability using (i) break-even costs (ii) gross margin: and (iii) economic margin.

Break-even costs/prices: Allow growers to compare the expected market price with the unit cost of production. The break-even price using the 1,200 cartons per acre yield assumption in this study equals $5.79 per carton for cash costs and $6.00 per carton for total costs (not including management). Break-even levels are calculated as the cost of production per acre divided by yield per acre.

Gross margin, the income above cash costs is what growers often refer to as profit if there is no debt on the farming operation. If you deduct depreciation, it also approximates taxable income. Gross margin is calculated as gross returns (price times yield) minus operating costs. In this study, the gross margin is $3,850 per acre.

Economic profit the income above total costs.is gross returns (price times yield) minus total costs. In this study, management charges are not included. Therefore, the profit $3,484 per acre can be defined as returns to management and business profit.

Yield and prices of farmers may vary from the assumption we used in this study. Therefore, we provided breakeven costs, gross margin and economic profit using various combinations of prices and yield to show profitability for yield and prices that are lower and higher than that used in the sample study (Table 4).

References

American Society of Agricultural Engineers. 1992. American Society of Agricultural Engineers Standards Yearbook. St. Joseph, MI: ASAE.

Boelje, M. D., and V. R. Eidman. 1984. Farm management. New York: John Wiley and Sons.

Richard Smith, Jian Bi, Michael Cahn, Marita Cantwell, Oleg Daugovish, Steven Koike, Eric Natwick, and Etaferahu Takele, 2011. Cilantro Production in California, UC Vegetable Research & Information Center, Vegetable Production Series, University of California Agriculture and Natural Resources, http://anrcatalog.ucdavis.edu/. Publication 7236, May.

Richard Smith and Oleg Daugovish, 2015. **UC IPM Pest Management Guidelines: Cilantro and Parsley UC ANR Publication 3476,** https://ipm.ucanr.edu/agriculture/cilantro-and-parsley/integrated-weed-management/#gsc.tab=0, December.

Cilantro & Parsley 2015. Integrated Weed Management UCIPM, Pest Management Guidelines for Agriculture, December https://ipm.ucanr.edu/legacy_assets/pdf/pmg/pmgcilantroparsley.pdf

Ventura County Agricultural Commissioner. 2020-2022. Ventura County Annual Crop Report. Santa Paula, CA: County Agricultural Commissioner.https://www.ventura.org/agricultural-commissioner/reports/.

Farm Worker Salary In Oxnard, CA, ZipRecruiter, 2024. Https://Www.Ziprecruiter.Com/Salaries/Farm-Worker-Salary-In-Oxnard,CA, May.

California Ag. Network, December USDA lending Rates for Ag. Producers, 2024. https://californiaagnet.com/2023/12/04/december-usda-lending-rates-for-ag-producers/.

California Agricultural Water Prices by Water District, 202. https://aquaoso.com/water-trends/california-agricultural-water-prices/

What is the average cost of electricity per month in California in 2024 https://www.google.com/search?client=firefox-b-1-d&q=electricity+cost+per+KW&dlnr=1&sei=KEgLZsy0C_7CkPIPqbSE-Ac

The Food Safety Certification For Specialty Crops Program | Farmers.Gov , U. S. DEPARTMENT OF AGRICULTURE

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TABLE 1. COSTS PER ACRE TO PRODUCE CILANTRO

Operation	Operation Time (Hrs/A)	Cash and Labor Costs per Acre: Labor Cost	Fuel	Lube &Repairs	Material Cost	Custom/ Rent	Total Cost	Your Cost
Pre-Plant:								
Discing (3x)	0.33	13	21	16	0	0	49	
Ripping (2x) (36")	0.60	23	38	13	0	0	74	
Plowing	0.22	8	14	5	0	0	27	
Landplane (3x)	0.52	20	33	13	0	0	66	
Levelling	0.17	7	11	4	0	0	22	
Chiseling (2x)	0.31	12	19	6	0	0	38	
Furrowing	0.10	4	4	1	0	0	9	
Listing (contracted)	0.00	0	0	0	0	125	125	
Fertilizer (pre-plant) 15-15-15	0.00	0	0	0	166	0	166	
Shape beds (40")	0.14	5	5	1	0	0	12	
Sprinkler setup: machine & labor	0.00	29	0	0	0	0	29	
Pre-plant irrigation (sprinklers	0.00	13	0	0	125	0	137	
Sprinkler removal:	0.00	29	0	0	0	0	29	
Weed Control (pre-emergent)	0.07	3	3	1	80	0	87	
TOTAL PRE-PLANT COSTS	2.45	167	147	62	370	125	871	
Planting :								
Planting (cilantro seed)	0.12	5	4	1	1,200	0	1,210	
TOTAL PLANTING COSTS	0.12	5	4	1	1,200	0	1,210	
Cultural:								
Irrigation (drip)	0.00	50	0	0	315	0	366	
Fertilizer CAN - 17	0.00	0	0	0	33	0	33	
Weed Control (mechanical)	0.10	4	4	1	0	0	9	
Weed Control (hand hoeing)	0.00	252	0	0	0	0	252	
Disease Control (Alternaria)	0.00	0	0	0	17	50	67	
TOTAL CULTURAL COSTS	0.10	306	4	1	365	50	726	
Harvest :								
Harvesting Field	0.00	0	0	0	3,312	0	3,312	
TOTAL HARVEST COSTS	0.00	0	0	0	3,312	0	3,312	
Post-Harvest:								
Discing crop residue (2x)	0.16	6	6	6	0	0	19	
TOTAL POST-HARVEST COSTS	0.16	6	6	6	0	0	19	
Interest on Operating Capital at 5.87%							59	
TOTAL OPERATING COSTS/ACRE	3	483	161	71	5,248	175	6,197	

TABLE 1. CONTINUED

Operation	Operation Time (Hrs/A)	Cash and Labor Costs per Acre: Labor Cost	Fuel	Lube &Repairs	Material Cost	Custom/ Rent	Total Cost	Your Cost
CASH OVERHEAD:								
Office Expense							83	
Sanitation Fees							40	
Land Lease($2,500/A/Yr)							520	
Supervisor							50	
Liability Insurance							1	
Property Taxes							15	
Property Insurance							1	
Investment Repairs							44	
TOTAL CASH OVERHEAD COSTS/ACRE							754	
TOTAL CASH COSTS/ACRE							6,950	
NON-CASH OVERHEAD:		Per Producing Acre		Annual Cost Capital Recovery				
Irrigation System- Pump and Pipe		1,784		134			134	
Fuel Tanks and Pumps		48		4			4	
Shop/Field Tools		38		3			3	
Drip Tape		350		83			83	
Equipment		1,321		142			142	
TOTAL NON-CASH OVERHEAD COSTS		3,541		365			365	
TOTAL COSTS/ACRE							7,316	

TABLE 2. COSTS AND RETURNS PER ACRE TO PRODUCE CILANTRO

	Quantity/ Acre	Unit	Price or Cost/Unit	Value or Cost/Acre	Your Cost
GROSS RETURNS					
Cilantro	1,200	Ctn	9.00	10,800	
TOTAL GROSS RETURNS	1,200	Ctn		10,800	
OPERATING COSTS					
Herbicide:				**80**	
Lorox	32.00	Oz	2.50	80	
Fungicide:				**17**	
Quadris Flowable Fungicide	15.00	FlOz	1.13	17	
Custom:				**175**	
Listing-Custom	1.00	Acre	125.00	125	
PCA/CCA Fee	1.00	Acre	50.00	50	
Harvest:				**3,312**	
Carton	1200.00	Ctn	0.43	516	
Picking and Packing	1200.00	Ctn	1.18	1,416	
Load and Haul	1200.00	Ctn	0.65	780	
Sell and Cool	1200.00	Ctn	0.50	600	
Irrigation:				**440**	
Water-Ventura	6.00	AcIn	29.15	175	
Irrigation booster pump fuel	32.00	Gal	4.92	157	
Irrigiation pump (electricity)	358.67	KWh	0.30	108	
Fertilizer:				**199**	
15-15-15	325.00	Lb	0.51	166	
CAN 17	12.00	Gal	2.74	33	
Seed:				**1,200**	
Seed (cilantro)	60.00	Lb	20.00	1,200	
Labor				**483**	
Equipment Operator Labor	4.42	hrs	32.56	144	
Labor tractor load and unloading	1.00	hrs	25.16	25	
Labor (sprinkler monitoring)	0.50	hrs	25.16	13	
Irrigation Labor	2.00	hrs	25.16	50	
Non-Machine Labor	10.00	hrs	25.16	252	
Machinery				**236**	
Fuel-Gas	0.00	gal	4.78	0	
Fuel-Diesel	32.73	gal	4.92	161	
Lube				24	
Machinery Repair				51	
Interest on Operating Capital @ 5.87%				59	
TOTAL OPERATING COSTS/ACRE				6,201	
TOTAL OPERATING COSTS/CTN				5	
NET RETURNS ABOVE OPERATING COSTS				4,599	

TABLE 2. CONTINUED

	Quantity/ Acre	Unit	Price or Cost/Unit	Value or Cost/Acre	Your Cost
CASH OVERHEAD COSTS					
Office Expense				83	
Sanitation Fees				40	
Land Lease($2,500/A/Yr)				520	
Supervisor				50	
Liability Insurance				1	
Property Taxes				15	
Property Insurance				1	
Investment Repairs				44	
TOTAL CASH OVERHEAD COSTS/ACRE				754	
TOTAL CASH OVERHEAD COSTS/CTN				1	
TOTAL CASH COSTS/ACRE				6,955	
TOTAL CASH COSTS/CTN				6	
NET RETURNS ABOVE CASH COSTS				3,845	
NON-CASH OVERHEAD COSTS (Capital Recovery)					
Irrigation System- Pump and Pipe				134	
Fuel Tanks and Pumps				4	
Shop/Field Tools				3	
Drip Tape				83	
Equipment				142	
TOTAL NON-CASH OVERHEAD COSTS/ACRE				365	
TOTAL NON-CASH OVERHEAD COSTS/CTN				0	
TOTAL COST/ACRE				7,320	
TOTAL COST/CTN				6	
NET RETURNS ABOVE TOTAL COST				3,480	

TABLE 3. MONTHLY COSTS PER ACRE TO PRODUCE CILANTRO

	FEB 25	MAR 25	APR 25	MAY 25	Total
Pre-Plant:					
Discing (3x)	49				49
Ripping (2x) (36")	74				74
Plowing	27				27
Landplane (3x)	66				66
Levelling	22				22
Chiseling (2x)	38				38
Furrowing	9				9
Listing (contracted)	125				125
Fertilizer (pre-plant) 15-15-15	166				166
Shape beds (40")	12				12
Sprinkler setup: machine & labor	29				29
Pre-plant irrigation (sprinklers	137				137
Sprinkler removal:	29				29
Weed Control (pre-emergent)		87			87
TOTAL PRE-PLANT COSTS	783	87			871
Planting :					
Planting (cilantro seed)		1,210			1,210
TOTAL PLANTING COSTS	0	1,210			1,210
Cultural:					
Irrigation (drip)	91	91	91	91	366
Fertilizer CAN - 17		33			33
Weed Control (mechanical)			9		9
Weed Control (hand hoeing)			252		252
Disease Control (Alternaria)			67		67
TOTAL CULTURAL COSTS	91	124	419	91	726
Harvest :					
Harvesting Field				3,312	3,312
TOTAL HARVEST COSTS	0	0	0	3,312	3,312
Post-Harvest:					
Discing crop residue (2x)				19	19
TOTAL POST-HARVEST COSTS	0	0	0	19	19
Interest on Operating Capital @5.87%	4	11	13	30	59
TOTAL OPERATING COSTS/ACRE	879	1,433	432	3,452	6,197
CASH OVERHEAD					
Office Expense			83		83
Sanitation Fees			40		40
Land Lease($2,500/A/Yr)			520		520
Supervisor	13	13	13	13	50
Liability Insurance			1		1
Property Taxes	7		7		15

TABLE 3. CONTINUED

	FEB 25	MAR 25	APR 25	MAY 25	Total
Property Insurance	1		1		1
Investment Repairs	11	11	11	11	44
TOTAL CASH OVERHEAD COSTS	31	24	675	24	754
TOTAL CASH COSTS/ACRE	910	1,457	1,107	3,476	6,950

UC COOPERATIVE EXTENSION

TABLE 4. RANGING ANALYSIS - CILANTRO

COSTS PER ACRE AND PER CTN AT VARYING YIELDS TO PRODUCE CILANTRO

	YIELD(CTN)						
	600.00	800.00	1,000.00	1,200.00	1,400.00	1,600.00	1,800.00
OPERATING COSTS/ACRE:							
Pre-Plant	871	871	871	871	871	871	871
Planting	1,210	1,210	1,210	1,210	1,210	1,210	1,210
Cultural	726	726	726	726	726	726	726
Harvest	1,656	2,208	2,760	3,312	3,864	4,416	4,968
Post-Harvest	19	19	19	19	19	19	19
Interest on Operating Capital @ 5.87%	59	59	59	59	59	59	59
TOTAL OPERATING COSTS/ACRE	4,541	5,093	5,645	6,197	6,749	7,301	7,853
TOTAL OPERATING COSTS/CTN	7.6	6.4	5.6	5.2	4.8	4.6	4.4
CASH OVERHEAD COSTS/ACRE	754	754	754	754	754	754	754
TOTAL CASH COSTS/ACRE	5,295	5,847	6,399	6,951	7,503	8,055	8,607
TOTAL CASH COSTS/CTN	8.8	7.3	6.4	5.8	5.4	5.0	4.8
NON-CASH OVERHEAD COSTS/ACRE	365	365	365	365	365	365	365
TOTAL COSTS/ACRE	5,660	6,212	6,764	7,316	7,868	8,420	8,972
TOTAL COSTS/CTN	9.4	7.8	6.8	6.1	5.6	5.3	5.0

Net Return Per Acre Above Operating Costs For Cilantro

PRICE ($/ctn)	YIELD (ctn/acre)						
Cilantro	600.00	800.00	1000.00	1200.00	1400.00	1600.00	1800.00
6.00	-941	-293	355	1,003	1,651	2,299	2,947
7.00	-341	507	1,355	2,203	3,051	3,899	4,747
8.00	259	1,307	2,355	3,403	4,451	5,499	6,547
9.00	859	2,107	3,355	4,603	5,851	7,099	8,347
10.00	1,459	2,907	4,355	5,803	7,251	8,699	10,147
11.00	2,059	3,707	5,355	7,003	8,651	10,299	11,947
12.00	2,659	4,507	6,355	8,203	10,051	11,899	13,747

Net Return Per Acre Above Cash Costs For Cilantro

PRICE ($/ctn)	YIELD (ctn/acre)						
Cilantro	600.00	800.00	1000.00	1200.00	1400.00	1600.00	1800.00
6.00	-1,695	-1,047	-399	249	897	1,545	2,193
7.00	-1,095	-247	601	1,449	2,297	3,145	3,993
8.00	-495	553	1,601	2,649	3,697	4,745	5,793
9.00	105	1,353	2,601	3,849	5,097	6,345	7,593
10.00	705	2,153	3,601	5,049	6,497	7,945	9,393
11.00	1,305	2,953	4,601	6,249	7,897	9,545	11,193
12.00	1,905	3,753	5,601	7,449	9,297	11,145	12,993

TABLE 4. RANGING ANALYSIS CONTINUED

Net Return Per Acre Above Total Costs For Cilantro

PRICE ($/ctn)	YIELD (ctn/acre)						
Cilantro	600.00	800.00	1000.00	1200.00	1400.00	1600.00	1800.00
6.00	-2,060	-1,412	-764	-116	532	1,180	1,828
7.00	-1,460	-612	236	1,084	1,932	2,780	3,628
8.00	-860	188	1,236	2,284	3,332	4,380	5,428
9.00	-260	988	2,236	3,484	4,732	5,980	7,228
10.00	340	1,788	3,236	4,684	6,132	7,580	9,028
11.00	940	2,588	4,236	5,884	7,532	9,180	10,828
12.00	1,540	3,388	5,236	7,084	8,932	10,780	12,628

TABLE 5. WHOLE FARM ANNUAL EQUIPMENT, INVESTMENT, AND BUSINESS OVERHEAD COSTS

ANNUAL EQUIPMENT COSTS

						Cash Overhead		
Yr	Description	Price	Yrs Life	Salvage Value	Capital Recovery	Insur-ance	Taxes	Total
25	Disc 21' #1	109,000	10	19,276	13,155	46	641	13,842
25	200HP4WD Tractor	230,000	15	44,777	21,335	98	1,374	22,807
25	Subsoiler 12'	6,490	8	1,465	885	3	40	928
25	Plow-6 bottom	12,000	10	2,122	1,448	5	71	1,524
25	Triplane 14' #1	21,876	10	3,869	2,640	9	129	2,778
25	120HP4WD Tractor #1	93,000	12	23,251	9,543	41	581	10,165
25	Cultivator 4 Row 40" #1	8,550	10	1,512	1,032	4	50	1,086
25	Triplane 14' #2	21,876	10	3,869	2,640	9	129	2,778
25	200HP4WD Tractor #2	230,000	15	44,777	21,335	98	1,374	22,807
25	Chisel 14' #2	2,270	10	401	274	1	13	288
25	Chisel 14'	2,270	10	401	274	1	13	288
25	Subsoiler 12' #2	6,490	8	1,465	885	3	40	928
25	Bed shaper 3-row	8,900	10	1,574	1,074	4	52	1,130
25	Planter 6 Row	8,900	10	1,574	1,074	4	52	1,130
25	Sprayer 600 gal #1	350,000	10	61,894	42,241	146	2,059	44,447
25	Pipe Trailer	7,299	6	2,244	1,149	3	48	1,200
25	Pickup Truck 1/2 ton #1	45,000	10	13,292	5,021	21	291	5,334
25	Pickup Truck 1/2 ton #2	45,000	10	13,292	5,021	21	291	5,334
	TOTAL	1,208,921	-	241,057	131,029	515	7,250	138,794
	100% of New Cost*	1,208,921	-	241,057	131,029	515	7,250	138,794

*Used to reflect a mix of new and used equipment

ANNUAL INVESTMENT COSTS

					Cash Overhead			
Description	Price	Yrs Life	Salvage Value	Capital Recovery	Insur-ance	Taxes	Repairs	Total
INVESTMENT								
Irrigation System- Pump and Pipe	1,427,530	25	99,927	107,146	542	7,637	28,551	143,876
Fuel Tanks and Pumps	38,100	20	2,667	3,180	14	204	762	4,160
Shop/Field Tools	30,000	25	2,100	2,252	11	161	600	3,024
Drip Tape	280,000	5	0	66,020	99	1,400	5,600	73,119
TOTAL INVESTMENT	1,775,630	-	104,694	178,597	668	9,402	35,513	224,179

ANNUAL BUSINESS OVERHEAD COSTS

Description	Units/ Farm	Unit	Price/ Unit	Total Cost
Office Expense	800	Acre	83	66,400
Sanitation Fees	800	Acre	40	32,000
Land Lease($2,500/A/Yr)	800	Acre	520	416,000
Supervisor	800	Acre	50	40,000
Liability Insurance	800	Acre	0.9105	728

TABLE 6. HOURLY EQUIPMENT COSTS

Yr	Description	Cilantro Hours Used	Total Hours Used	Capital Recovery	Cash Overhead Insur-ance	Taxes	Operating Lube& Repairs	Fuel	Total Oper.	Total Costs/Hr.
25	Disc 21' #1	138	200	65.78	0.23	3.21	29.58	0.00	29.58	98.79
25	200HP4WD Tractor	409	1000	21.34	0.10	1.37	17.49	57.11	74.60	97.41
25	Subsoiler 12'	84	250	3.54	0.01	0.16	2.47	0.00	2.47	6.19
25	Plow-6 bottom	60	200	7.24	0.03	0.35	5.58	0.00	5.58	13.20
25	Triplane 14' #1	97	300	8.80	0.03	0.43	5.57	0.00	5.57	14.83
25	120HP4WD Tractor #1	189	1000	9.54	0.04	0.58	8.12	34.26	42.38	52.55
25	Cultivator 4 Row 40" #1	55	200	5.16	0.02	0.25	2.90	0.00	2.90	8.33
25	Triplane 14' #2	97	300	8.80	0.03	0.43	5.57	0.00	5.57	14.83
25	200HP4WD Tractor #2	251	1000	21.34	0.10	1.37	17.49	57.11	74.60	97.41
25	Chisel 14' #2	43	200	1.37	0.00	0.07	0.80	0.00	0.80	2.24
25	Chisel 14'	43	200	1.37	0.00	0.07	0.80	0.00	0.80	2.24
25	Subsoiler 12' #2	84	250	3.54	0.01	0.16	2.47	0.00	2.47	6.19
25	Bed shaper 3-row	39	200	5.37	0.02	0.26	1.69	0.00	1.69	7.34
25	Planter 6 Row	32	150	7.16	0.02	0.35	4.02	0.00	4.02	11.55
25	Sprayer 600 gal #1	23	200	211.20	0.73	10.30	14.71	39.36	54.07	276.30
25	Pipe Trailer	237	500	2.30	0.01	0.10	0.22	0.00	0.22	2.62
25	Pickup Truck 1/2 ton #1	119	200	25.11	0.10	1.46	5.44	0.00	5.44	32.10
25	Pickup Truck 1/2 ton #2	119	200	25.11	0.10	1.46	5.44	0.00	5.44	32.10

Operation	Operation Month	Tractor	Implement	Labor Type/ Material	Rate/ acre	Unit
Discing (3x)	Feb	200HP4WD Tractor	Disc 21' #1	Equipment Operator Labor	0.39	hour
Ripping (2x) (36")	Feb	200HP4WD Tractor #2	Subsoiler 12' #2	Equipment Operator Labor	0.36	hour
	Feb	200HP4WD Tractor #2	Subsoiler 12'	Equipment Operator Labor	0.36	hour
Plowing	Feb	200HP4WD Tractor #2	Plow-6 bottom	Equipment Operator Labor	0.26	hour
Landplane (3x)	Feb	200HP4WD Tractor	Triplane 14' #2	Equipment Operator Labor	0.21	hour
	Feb	200HP4WD Tractor	Triplane 14' #1	Equipment Operator Labor	0.42	hour
Levelling	Feb	200HP4WD Tractor	Triplane 14' #2	Equipment Operator Labor	0.21	hour
Chiseling (2x)	Feb	200HP4WD Tractor	Chisel 14' #2	Equipment Operator Labor	0.18	hour
	Feb	200HP4WD Tractor	Chisel 14'	Equipment Operator Labor	0.18	hour
Furrowing	Feb	120HP4WD Tractor #1	Cultivator 4 Row 40" #1	Equipment Operator Labor	0.12	hour
Listing (contracted)	Feb			Listing-Custom	1.00	Acre
Fertilizer (pre-plan	Feb			15-15-15	325.00	Lb
Shape beds (40")	Feb	120HP4WD Tractor #1	Bed shaper 3-row	Equipment Operator Labor	0.17	hour
Sprinkler setup: mac	Feb		Pickup Truck 1/2 ton #1 Pipe Trailer	Labor tractor load and unloading	0.50	hour
Pre-plant irrigation	Feb			Labor (sprinkler monitoring)	0.50	hour
				Water-Ventura	2.00	AcIn
				Irrigation booster pump fuel	8.00	Gal
				Irrigiation pump (electricity)	89.67	KWh
Sprinkler removal:	Feb		Pickup Truck 1/2 ton #2 Pipe Trailer	Labor tractor load and unloading	0.50	hour
Weed Control (pre-em	Mar		Sprayer 600 gal #1	Equipment Operator Labor	0.09	hour
				Lorox	32.00	Oz
Planting (cilantro s	Mar	120HP4WD Tractor #1	Planter 6 Row	Equipment Operator Labor	0.14	hour
				Seed (cilantro)	60.00	Lb
Irrigation (drip)	Feb			Irrigation Labor	0.50	hour
				Water-Ventura	1.00	AcIn
				Irrigation booster pump fuel	6.00	Gal
				Irrigiation pump (electricity)	67.25	KWh
	Mar			Irrigation Labor	0.50	hour
				Water-Ventura	1.00	AcIn
				Irrigation booster pump fuel	6.00	Gal
				Irrigiation pump (electricity)	67.25	KWh
	Apr			Irrigation Labor	0.50	hour
				Water-Ventura	1.00	AcIn
				Irrigation booster pump fuel	6.00	Gal
				Irrigiation pump (electricity)	67.25	KWh
	May			Irrigation Labor	0.50	hour
				Water-Ventura	1.00	AcIn
				Irrigation booster pump fuel	6.00	Gal
				Irrigiation pump (electricity)	67.25	KWh
Fertilizer CAN - 17	Mar			CAN 17	12.00	Gal
Weed Control (mechan	Apr	120HP4WD Tractor #1	Cultivator 4 Row 40" #1	Equipment Operator Labor	0.12	hour
Weed Control (hand h	Apr			Non-Machine Labor	10.00	hours
Disease Control (Alt	Apr			Quadris Flowable Fungicide	15.00	FlOz
				PCA/CCA Fee	1.00	Acre
Harvesting Field	May			Carton	1,200.00	Ctn
				Picking and Packing	1,200.00	Ctn
				Load and Haul	1,200.00	Ctn
				Sell and Cool	1,200.00	Ctn
Discing crop residue	May	120HP4WD Tractor #1	Disc 21' #1	Equipment Operator Labor	0.20	hour