UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION

2006

SAMPLE COSTS TO PRODUCE ORGANIC STRAWBERRIES

FRESH MARKET

CENTRAL COAST

Santa Cruz and Monterey Counties

Mark P. Bolda	Farm Advisor, UC Cooperative Extension, Santa Cruz County
Laura Tourte	Farm Advisor, UC Cooperative Extension, Santa Cruz County
Karen M. Klonsky	Cooperative Extension Specialist, Department of Agricultural and Resource Economics, University of California Davis
Richard L. De Moura	Research Associate, Department of Agricultural and Resource Economics, University of California

UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION

SAMPLE COSTS TO PRODUCE FRESH MARKET ORGANIC STRAWBERRIES

CENTRAL COAST - Santa Cruz & Monterey Counties 2006

CONTENTS

Acknowledgements. Thank you to the participating growers, industry representatives, and businesses associated with the strawberry industry for their cooperation and contributions to this study.

INTRODUCTION

Organic production, as defined by the USDAs Organic Food Production Act of 1990 as amended (U.S.C. 6501 et seq,) is a 'production system that is managed in accordance with the Act and associated regulations to respond to site-specific conditions by integrating cultural, biological, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity'.

Sample costs to produce organic strawberries in the Central Coast Region - Santa Cruz and Monterey Counties - are presented in this study. The study is intended as a guide only, and can be used to make production decisions, determine potential returns, prepare budgets and evaluate production loans. The practices described are based on production procedures considered typical for this crop and area, and will not apply to every farm. Sample costs for labor, materials, equipment and custom services are based on current figures. A blank column, "Your Cost", is provided to enter your actual costs on Tables 1 and 2.

The hypothetical farm operation, production practices, overhead, and calculations are described under assumptions. For additional information or explanation of calculations used in the study call the Department of Agricultural and Resource Economics, University of California, Davis, (530) 752-3589 or the UC Cooperative Extension office in your county.

Sample Cost of Production Studies for many commodities can be downloaded at http://coststudies.ucdavis.edu, requested through the Department of Agricultural and Resource Economics, UC Davis, (530) 752-4424 or obtained from the local county UC Cooperative Extension office. Some archived studies are also available on the website.

ASSUMPTIONS

The following assumptions refer to Tables 1 to 7 and pertain to sample costs to produce organic strawberries in the Central Coast Region - Santa Cruz and Monterey Counties. The cultural practices described and materials used are considered typical for organic strawberry production in the region. The costs, practices, and materials will not be applicable to all situations every production year. Cultural practices, materials, and organic strawberry production costs vary by grower and region, and differences can be significant. The practices and inputs used in the cost study serve as a guide only. *The use of trade names and cultural practices in this report does not constitute an endorsement or recommendation by the University of California nor is any criticism implied by omission of other similar products or cultural practices.*

Farm. This study assumes a farm operation size of 100 contiguous acres of rented land. Organic strawberries are planted on 25 acres, conventionally grown strawberries on 70 acres and roads or open space on the remaining 5 acres. The farmer owns the machinery and equipment used.

Production Operating Inputs

To gain certified organic status, growers must farm on land to which no synthetically formulated fertilizers and/or pesticides have been applied for a minimum of three years. Organic farmers generally use a 'systems management' approach to farming by including a suite of production practices such as crop rotation, diversification, cover crops and organic matter additions to help build soil fertility and manage pests. Organic strawberries are rotated with other crops to assist with disease and weed control and for long-term improvements to soil fertility.

Land Preparation. This study assumes that in September a previously planted cover or cash crop is disked twice to incorporate plant residue. The field is then subsoiled twice, leveled, disked three times, and rototilled twice. In middle to late October, beds are listed and shaped, drip tape at two lines per bed are installed, and the beds are covered with black plastic mulch using a mulch laying machine.

Plant Establishment. At the end of October, strawberry plants are transplanted into 48-inch beds using two rows per bed at 12-inch in-row spacing for a total plant density of 21,000 plants per acre. Five percent of the transplants are replanted and included in the planting costs. A mechanical slotting implement is used to open plastic mulch at appropriate intervals for transplanting strawberries. Plants are delivered to the edge of the field block where planting labor (a ratio of one person laying out the plants and two persons planting) gathers the plants in a basket and then places the plants in the punched holes. Planting takes approximately 100 man-hours per acre. Several strawberry varieties such as Seascape, Aromas, and Camarosa are suitable for organic production in the region, but no specific variety is assumed in this study.

Fertilization. Compost at five tons per acre is purchased and spread by a custom operator immediately after incorporating the cover crop (September), but before subsoiling, leveling, and disking. In October, bloodmeal is spread by a custom operator and incorporated into the soil at the rate of 500 pounds per acre. From February to September, the grower applies a series of soil applied liquid fertilizers and foliar fertilizers. Agrolizer (4-2-2), a fish emulsion, and soy-based Phytamin 801 (6-1-1) are soil-applied through the drip irrigation system at the rate of five gallons each per acre per application. These two products are applied every other week from March to September on an alternating basis for a total of seven applications each. Foliar sprays are applied from February to September, and include Biomin Ca (2-0-0-7, a calcium supplement) and Maxi Crop Seaweed Extract, applied once per month at a rate of one gallon per acre and 2.5 pounds per acre per application, respectively. These materials are used to ensure that a balance of N, P, K and micronutrients are supplied to plants.

Irrigation. Fields are sprinkler irrigated once during the land preparation process and again after transplanting the strawberries. Approximately, one acre-inch is applied during each irrigation. Six men, including the tractor driver, lay out, move, and pick up the pipe. For the drip irrigation system, two lines of tape per bed are installed during bed formation. Small ditches are made on the field edge with a tractor and blade to lay and bury lateral lines. The drip tape is connected to the lateral lines and the lines are tested for leaks. From March through September, strawberries are irrigated two to three times per week using a total of 30 acre-inches of water for the entire season. Including the two acre inches applied by sprinkler irrigation, a total of 32 acre inches is applied to the field. Water costs include pumping charges of $8.33 per acre inch plus an additional Pajaro Valley Water Management Agency (PVWMA) augmentation fee of $13.33 per acre-inch. Effective rainfall is not taken into account.

Pest Management. Pesticides and rates are listed in the *UC IPM Pest Management Guidelines, Strawberries*. For more information on other pesticides available, pest identification, monitoring, and management visit the UC IPM website at http://ipm.ucdavis.edu. Pesticide applications, timing, and materials vary according to pest pressure. The pesticide program in this report is considered typical, but organic practices vary considerably within the region. Inputs cited in this report may be effective but their effectiveness depends upon agronomic and environmental conditions. For information on current regulations and pesticide use permits, contact the local county Agricultural Commissioner's office.

Scouting Service/PCA. Pest Control Advisers (PCAs) write pesticide recommendations and monitor the fields for agronomic, nutrition, and pest problems. To assist with pest management decisions in this study, the grower contracts with a scouting service at an estimated cost of $150 per acre per year.

Diseases. Powdery mildew (*Sphaerotheca macularis f.sp. fragariae*) and Botrytis fruit rot (*Botrytis cinerea*) are the two diseases most common to strawberries in this area. Micronized sulfur (Thiolux) is applied at the rate of five pounds per acre per application for powdery mildew control every 12 to 16 days during April and May, and then every 20 to 25 days ending in early September, for a total of nine applications per year. Because no organically acceptable fungicide has proven consistently effective for Botrytis control, this fruit rot is managed by culling diseased fruit to keep the strawberry crop free of diseased materials. The infected fruit is culled by hand during harvest and is assumed to be part of the picking costs.

Insects and mites. Pests common to strawberries in this area include twospotted spider mite (*Tetranychus urticae*), greenhouse whitefly (*Trialeurodes vaporariorum*), lygus bug (*Lygus hesperus*), Western flower thrips (*Frankliniella occidentalis*) and certain species of aphids and Lepidoptera (worms). To assist with the control of twospotted spider mite, the predatory mite *Phytoseiulis persimilis*, is released four times, twice in April and twice in May, for a total application rate of 40,000 mites per acre per year. Application time is estimated at one hour per acre per release. Lepidoptera pests (worms) are managed using four applications of Dipel (*Bacillus thuringiensis* [Bt]), applied at a rate of one pound per acre per application in May and June.

Vertebrates. Rodents, such as pocket gophers, *Thomomys spp*., cause damage in strawberry fields by feeding on the plant roots, digging tunnels into the beds and also gnawing holes in the drip irrigation tape. They may be controlled in organic strawberry fields by trapping and other means throughout the growing season. Labor cost is estimated at two hours per acre for the season.

Weeds. Weed management is especially challenging for organic strawberry production because soil fumigation and synthetic herbicides are not allowed under organic regulations. For 10 months beginning in December and ending in September, weeds in and around plants are managed by hand weeding. Although weeding times vary by grower and month, the study assumes an average of 20 hours per acre per month. Weeds in furrows between beds are controlled using mechanical cultivations.

Harvest. The crop is harvested twice per week from April through early October with peak harvest in June and July. The percent of the total crop harvested each month is shown in Table A. Crew size will vary according to the amount of fruit available for harvest. In this study, it is assumed that the grower will be using the crews on the entire 95 acres - 25 acres of organic and 70 acres of conventional strawberries. The grower hires a foreman to supervise a 30 person crew early and late in the season and two 30-person crews during the peak season. The strawberry picker pushes a picking cart that holds a tray with eight one-pound clamshell containers down the furrow. The ripe strawberries are picked by hand and placed in the containers/tray, while Botrytis infected fruit are picked and culled (discarded) in the field. Other container types and sizes are used, but are not included in this study. Picking rates per picker ranges from 3 trays per hour early and late in the season and 5 to 8 trays per hour during the peak harvest. Additional field labor includes one field checker to check for proper picking, one picking card puncher per crew to count the trays picked by each picker. To load and haul the fruit, one truck loader stacks the trays on the truck and the truck driver delivers the strawberries to the cooler. The grower uses a one-ton flatbed truck that holds two pallets at 120 trays per pallet for delivery to the cooler. Trays per pallet will vary by container types. The truck driver takes about an hour per load to deliver the filled trays. The grower will have at least one tractor, one trailer, and one toilet in the field. Picker labor costs vary by grower and with crop yield. In this study, the picker is paid an hourly wage early and late in the season. During the peak harvest, the picker is paid a piecework hourly wage plus an amount per tray (see Labor section).

Table A. Percent Crop Harvested by Month

	April	May	June	July	Aug	Sept	Oct
Harvest %	5	12	25	25	18	12	2

Yields. Yields for organic strawberries vary depending on season and growing conditions. Yields usually range from 2,500 to 4,000 eight-pound trays per acre. Costs per acre presented on Tables 1 and 2 are for an expected yield of 3,750 trays per acre.

Returns. For this study growers' average seasonal returns are estimated at $8.00 per 8-pound tray for conventional fruit. Conventional fruit prices can vary from a low of $5.00 to a high of $10.00 per tray depending on market conditions. Price premiums are paid for organic fruit and range from $2.00 to $4.00 per tray. For this study, a premium of $3.00 is assumed; therefore a total return of $11.00 per tray is used in this study. The return does not include a deduction for cooling costs. Fresh market fruit harvested early in the season is generally sold at prices higher than fruit harvested mid to late season. Estimated returns for a range of prices and yields are shown on Table 4.

Assessment Fees. Organic strawberry certification and registration fees analyzed here are estimated at $150 per acre. This includes fees associated with certification and inspection by a USDA accredited certification agent and also registration fees associated with the California Department of Food and Agriculture's Organic Program. The Strawberry Commission assesses the grower a fee of $0.04 per tray to support the commission's goals: production and nutrition research, trade relations, public relations, and public policy.

Cooling Costs. Cooling costs vary by cooler and grower volume. Growers are responsible for these costs, which can be negotiated with a cooler. The estimated cost used in this study is $0.50 per tray.

Postharvest Operations. After all harvest operations have been completed, the field is mowed; the plastic mulch and drip tape are removed from the field and disposed of at a refuse disposal site.

Labor, Equipment and Interest

Labor. Labor rates of $15.46 per hour for machine operators and $10.35 for general labor includes payroll overhead of 38%. The basic hourly wages are $11.20 for machine operators and $7.50 for general labor. In this study, the pickers are paid the hourly general labor rate early and late in the season. During the peak harvest period, pickers are usually paid an hourly base pay plus piecework. Piece rate during the peak season (June, July) is calculated at $5.00 per hour plus $0.80 per tray. Adding 38% for overhead, the piece rate is $6.90 per hour and $1.10 per tray. The overhead includes the employers' share of federal and California state payroll taxes, workers' compensation insurance for strawberry crops (code 0079), and a percentage for other possible benefits. Workers' compensation costs will vary among growers, but for this study the cost is based upon the average industry final rate as of January 5, 2005 (California Department of Insurance). Labor for operations involving machinery are 20% higher than the operation time given in Table 1 to account for the extra labor involved in equipment set up, moving, maintenance, work breaks, and field repair.

Equipment Operating Costs. Repair costs are based on purchase price, annual hours of use, total hours of life, and repair coefficients formulated by American Society of Agricultural Engineers (ASAE). Fuel and lubrication costs are also determined by ASAE equations based on maximum power takeoff (PTO) horsepower, and fuel type. Prices for on-farm delivery of diesel and gasoline are $2.00 and $2.55 per gallon, respectively. The cost includes a 2% local sales tax on diesel fuel and 8% sales tax on gasoline. Gasoline also includes federal and state excise tax, which are refundable for on-farm use when filing your income tax. The fuel, lube, and repair cost per acre for each operation in Table 1 is determined by multiplying the total hourly operating cost in Table 6 for each piece of equipment used for the selected operation by the hours per acre. Tractor time is 10% higher than implement time for a given operation to account for setup, travel and down time.

Interest on Operating Capital. Interest on operating capital is based on cash operating costs and is calculated monthly until harvest at a nominal rate of 9.25% per year. A nominal interest rate is the typical market cost of borrowed funds. The interest cost of post harvest operations is discounted back to the last harvest month using a negative interest charge. The rate will vary depending upon various factors, but the rate in this study is considered a typical lending rate by a farm lending agency as of January 2006.

Risk. While this study makes every effort to model a production system based on typical, real world practices, it cannot fully represent financial, agronomic and market risks that affect the profitability and economic viability of organic strawberry production. The risks associated with producing and marketing organic strawberries should not be minimized.

Cash Overhead

Cash overhead consists of various cash expenses paid out during the year that are assigned to the whole farm and not to a particular operation. These costs include property taxes, interest on investments, office expense, liability and property insurance, sanitation services, and equipment repairs. Employee benefits, insurance, and payroll taxes are included in labor costs and not in overhead (see Labor).

Property Taxes. Counties charge a base property tax rate of 1% on the assessed value of the property. In some counties special assessment districts exist and charge additional taxes on property including equipment, buildings, and improvements. For this study, county taxes are calculated as 1% of the average value of the property. Average value equals new cost plus salvage value divided by two on a per acre basis.

Insurance. Insurance for farm investments varies depending on the assets included and the amount of coverage. Property insurance provides coverage for property loss and is charged at 0.70% of the average value of the assets over their useful life. Liability insurance covers accidents on the farm and costs $529 for the entire farm.

Office Expense. Office and business expenses are estimated at $250 per acre. These expenses include office supplies, telephones, bookkeeping, accounting, legal fees, road maintenance, utilities, and miscellaneous expenses.

Sanitation Services. Sanitation services provide two double portable toilets and single toilet with washing equipment and cost the farm $4,079 annually for all strawberry acreage. The cost includes delivery and 12 months of weekly service for the single toilet and 6 months of weekly service for the doubles. Sanitation facilities required will vary by state regulations and crew size. Cal/OSHA Safety Order 3457 requires employers to provide one hand-washing facility for each 20 employees or fraction thereof and if more than five laborers are employed separate toilets for each sex are required. The employer must also keep records of toilet servicing for two years.

Food Safety Program. Most growers of fresh market commodities such as strawberries, participate in food safety programs for their operations. The program incorporates the basic principals of good agricultural practices (GAP) in each step of the growing cycle. It includes documentation related to soil and water testing, field sanitation, pesticide use, worker health and hygiene. The program is usually requested by the fresh marketer or processor. Part of a food safety program is participation in third party (independent) audits that are done to accommodate buyer requests and to enhance marketability of the crop. Costs will vary depending upon farm or inspection circumstances. The cost for a basic farm audit is generally per farm regardless of size. Additional audit costs may occur for harvest crew audits. For strawberries, these may be done as often as monthly. Other costs the grower may incur are lab fees for items such as soil and water testing and general record keeping. Growers associated with cooperatives may have a different cost structure. For this study, costs for the farm are estimated at $750 per year.

Land Rent. The grower pays $2,000 per acre per year for the 100-acres or $2,105 per producing acre (95 acres). Roads account for the remaining five acres.

Supervisor/Management Salaries. Wages for management are not included as a cash cost. Returns above total costs are considered a return to management and risk.

Non-Cash Overhead

Non-cash overhead is calculated as the capital recovery cost for equipment and other farm investments.

Capital Recovery Costs. Capital recovery cost is the annual depreciation and interest costs for a capital investment. It is the amount of money required each year to recover the difference between the purchase price and salvage value (unrecovered capital). It is equivalent to the annual payment on a loan for the investment with the down payment equal to the discounted salvage value. This is a more complex method of calculating ownership costs than straight-line depreciation and opportunity costs, but more accurately represents the annual costs of ownership because it takes the time value of money into account (Boehlje and Eidman). The formula for the calculation of the annual capital recovery costs is ((Purchase Price – Salvage Value) x (Capital Recovery Factor)) + (Salvage Value x Interest Rate).

Salvage Value. Salvage value is an estimate of the remaining value of an investment at the end of its useful life. For farm machinery (tractors and implements) the remaining value is a percentage of the new cost

of the investment (Boehlje and Eidman). The percent remaining value is calculated from equations developed by the American Society of Agricultural Engineers (ASAE) based on equipment type and years of life. The life in years is estimated by dividing the wear out life, as given by ASAE by the annual hours of use in this operation. For other investments including irrigation systems, buildings, and miscellaneous equipment, the value at the end of its useful life is zero. The salvage value for land is the purchase price because land does not depreciate. The purchase price and salvage value for equipment and investments are shown in Table 7.

Capital Recovery Factor. Capital recovery factor is the amortization factor or annual payment whose present value at compound interest is 1. The amortization factor is a table value that corresponds to the interest rate used and the life of the machine.

Interest Rate. The interest rate of 6.25% is used to calculate capital recovery. The rate will vary depending upon size of loan and other lending agency conditions, but is a suggested rate by a farm lending agency in January 2006.

Irrigation System. The cost is based on one 75 horsepower electric pump lifting from a water level depth of 120 feet. The pump and 300-foot deep well already existed on the site and the renter is responsible for above ground maintenance (pump and filters) and the owner for below ground (well). Reusable telescoping lateral lines that are owned by the grower are buried each year at the edge of the strawberry field and are connected to the main and drip lines. Two drip lines are buried in each bed prior to planting. The life of the irrigation system is estimated to be 20 years for the pump and filtration system. The grower owns enough sprinkler pipe to cover 50 acres per setting.

Equipment. Farm equipment is purchased new or used, but the study shows the current purchase price for new equipment. The new purchase price is adjusted to 50% to indicate a mix of new and used equipment. Annual ownership costs for equipment and other investments are shown in Table 5. Equipment costs are composed of three parts: non-cash overhead, cash overhead, and operating costs. Both of the overhead factors have been discussed in previous sections. The operating costs consist of repairs, fuel, and lubrication and are discussed under operating costs.

Table Values. Due to rounding, the totals may be slightly different from the sum of the components.

REFERENCES

American Society of Agricultural Engineers. 1994. American Society of Agricultural Engineers Standards Yearbook. Russell H. Hahn and Evelyn E. Rosentreter (Eds.). St. Joseph, MO, 41". edition.

Boehlje, Michael D. and Vernon R. Eidman. 1984. Farm management. John Wiley & Sons, New York, NY.

Bolda, Mark, Laura Tourte, Karen Klonsky, Jose E. Bervejillo. 2003. *Sample Costs To Produce Organic Strawberries.* Central Coast. University of California Cooperative Extension, Davis, CA.

Bolda, Mark P., Laura J. Tourte, Karen M. Klonsky, Richard L. De Moura. 2004. *Sample Costs To Produce Strawberries*. Central Coast. University of California Cooperative Extension. Davis, CA.

California Department of Insurance. 2005. *California Workers' Compensation Rating Data for Selected Agricultural Classifications as of January 1, 2005.* California Department of Insurance, Rate Regulation Branch.

California State Automobile Association. 2006. *Gas Price Survey 2005.* AAA Public Affairs, San Francisco,

California State Board of equalization. *Fuel Tax Division Tax Rates.* Internet accessed January 2006. http://www.boe.ca.gov/sptaxprog/spftdrates.htm

Doanes Editors. *Facts and Figures for Farmers.* 1977. Doane Publishing, St. Louis, MO. P 292.

Energy Information Administration. 2005. *Weekly Retail on Highway Diesel Prices.* Internet accessed January 2006. http://tonto.eix.doe.gov/oog/info/wohdp

University of California Statewide IPM Project. 2003. *UC Pest Management Guidelines, Strawberries*. University of California, Davis, CA. http://www.ipm.ucdavis.edu

For information concerning the above mentioned University of California publications contact UC DANR Communications Services (1-800-994-8849) or your local county Cooperative Extension office.

UC COOPERATIVE EXTENSION

Table 1. COSTS PER ACRE TO PRODUCE ORGANIC STRAWBERRIES

CENTRAL COAST - Santa Cruz and Monterey Counties 2006

	Operation	Cash and Labor Costs per Acre					
Operation	Time Hrs/Acre	Labor Cost	Fuel, Lube & Repairs	Material Cost	Custom/ Rent	Total Costs	Your Costs
Land Prep: Disk 2X (Cover Crop)	0.25	5	3	0	0	8	
Fertilize: Compost Bloodmeal	0.00	0	0	360	24	384	
Irrigate: Sprinklers Setup/Remove	3.00	87	24	0	0	111	
Irrigate: Sprinkle 2X	0.60	6	0	43	0	50	
Land Prep: Subsoil 2X	0.72	13	11	0	0	24	
Land Prep: Level (Triplane)	0.16	3	2	0	0	5	
Land Prep: Disk 3X	0.37	7	5	0	0	12	
Land Prep: Rototill 2x	0.54	10	7	0	0	17	
Land Prep: Beds List/Shape	0.23	4	3	0	0	7	
Irrigate: Install Drip Tape	1.06	30	9	240	0	279	
Irrigate: Ditch for Laterals	0.10	3	1	0	0	4	
Plant: Lay Mulch	0.52	10	4	363	0	377	
Plant: Punch Planting Holes	0.52	10	4	0	0	14	
Plant: Transplants	100.00	1,035	0	1,654	0	2,689	
Weed: Hand Weed	200.00	2,070	0	0	0	2,070	
Vertebrate: Trapping	2.00	21	0	0	0	21	
Weed: Cultivate	0.49	9	6	0	0	15	
Fertilize; Foliar (Biomin)	0.78	15	9	112	0	136	
Fertilize: Foliar (Maxi)	0.78	15	9	115	0	139	
Irrigate: Drip	12.00	124	0	650	0	774	
Fertilize: Drip (Agrolizer)	1.47	15	0	89	0	104	
Fertilize: Drip (Phytamin)	1.47	15	0	226	0	242	
Insect: Mites (Spread Predatory Mites)	4.00	41	0	210	0	251	
Insect: Worms (Dipel)	0.39	7	5	57	0	69	
Disease: Powdery Mildew (Thiolux)	0.89	16	10	41	0	68	
Pickup	3.00	56	27	0	0	83	
ATV	1.02	19	2	0	0	21	
Scouting Services	0.00	0	0	0	150	150	
Post Harvest Cleanup	2.00	136	29	0	18	184	
TOTAL CULTURAL COSTS	338.36	3,781	173	4,161	192	8,307	
Harvest: Regular	444.41	4,600	0	6,075	0	10,675	
Harvest: Haul to Cooler	11.01	318	60	0	0	378	
Harvest: Piece Work	0.00	0	0	0	3,677	3,677	
Harvest: Cooling	0.00	0	0	0	1,874	1,874	
Assessments	0.00	0	0	300	0	300	
TOTAL HARVEST COSTS	455.42	4,918	60	6,375	5,551	16,904	
Interest on Operating Capital						1,131	
TOTAL OPERATING COSTS/ACRE						26,342	

UC COOPERATIVE EXTENSION

Table 1 Continued

CENTRAL COAST - Santa Cruz and Monterey Counties 2006

Operation	Operation Time Hrs/Acre	Cash and Labor Costs per Acre: Labor Cost	Fuel, Lube & Repairs	Material Cost	Custom/ Rent	Total Costs	Your Costs
Cash Overhead:							
Liability Insurance						6	
Office Expense						250	
Sanitation Expense						43	
Land Rent						2,105	
Food Safety						8	
Property Taxes						17	
Property Insurance						12	
Investment Repairs						29	
TOTAL CASH OVERHEAD						2,469	
TOTAL CASH COSTS/ACRE						28,811	
Non-Cash Overhead:		Per producing Acre		Annual Cost Capital Recovery			
Buildings 1200 sq ft		442		33		33	
Fuel Tanks 2-300 gal		37		3		3	
Miscellaneous Tools		158		16		16	
Harvest Carts (70)		12		3		3	
Irrigation: Pump, Filters		158		14		14	
Irrigation: Sprinkler Pipe		632		66		66	
Lateral Lines		116		28		28	
Equipment		1,469		156		156	
TOTAL NON-CASH OVERHEAD		3,023		319		319	
TOTAL COSTS/ACRE						29,129	

UC COOPERATIVE EXTENSION

Table 2. COSTS AND RETURNS PER ACRE TO PRODUCE ORGANIC STRAWBERRIES

CENTRAL COAST - Santa Cruz and Monterey Counties 2006

	Quantity/ Acre	Unit	Price or Cost/Unit	Value or Cost/Acre	Your Cost
Gross Returns:					
Organic Strawberries (price includes premium)	3,750.00	trays	11.00	41,250	
Fertilizer:					
Compost	5.00	ton	27.00	135	
Bloodmeal	500.00	lb	0.45	225	
Biomin Ca 2-0-0-7	8.00	gal	14.00	112	
Maxi Crop	20.00	lb	5.75	115	
Agrolizer 4-2-2	35.00	gal	2.55	89	
Phytamin 801 (6-1-1)	35.00	gal	6.47	226	
Water:					
Pumped	32.00	acin	8.33	267	
PVWMA	32.00	acin	13.33	427	
Materials:					
T-Tape (2 lines/bed)	21,780.00	feet	0.01	240	
Mulch (4,000 ft x 5 ft/roll)	2.75	rolls	132.00	363	
Plants:					
Strawberry Transplants (includes 5% replant)*	22,050.00	each	0.08	1,654	
Insecticide:					
Persimilis Mites (Predatory)	40.00	thou	5.25	210	
Dipel DF	4.00	lb	14.36	57	
Fungicide:					
Thiolux Jet (micronized sulfur)	45.00	lb	0.91	41	
Harvest:					
Tray + 8 Clamshells (1 lb)	3,750.00	each	1.62	6,075	
Piece Rate per Tray ($0.80 + overhead))	1,875.00	tray	1.10	2,063	
Piece Rate Hourly ($5.00 + overhead))	234.00	hour	6.90	1,615	
Cooling Costs	3,750.00	tray	0.50	1,875	
Assessments:					
Strawberry Commission	3,750.00	tray	0.04	150	
Organic Certification	1.00	acre	150.00	150	
Other:					
Spread Fertilizer (Compost & Bloodmeal)	2.00	acre	12.00	24	
Scouting Fees	1.00	acre	150.00	150	
Refuse Disposal Fee	600.00	lb	0.03	18	
Labor Machine	35.77	hr	15.46	553	
Labor Non-Machine	787.06	hr	10.35	8,146	
Gas	19.05	gal	2.55	49	
Diesel	45.43	gal	2.00	91	
Lube				21	
Machinery Repair				72	
Interest				1,131	
TOTAL OPERATING COSTS				26,342	
NET RETURNS ABOVE OPERATING COSTS				14,908	

UC COOPERATIVE EXTENSION

Table 2. Continued

CENTRAL COAST - Santa Cruz and Monterey Counties 2006

	Quantity/ Acre	Unit	Price or Cost/Unit	Value or Cost/Acre	Your Cost
Cash Overhead:				6	
Liability Insurance				250	
Office Expense				43	
Sanitation Expense				2,105	
Land Rent				8	
Property Taxes				17	
Property Insurance				12	
Investment Repairs				29	
TOTAL CASH OVERHEAD				2,469	
TOTAL CASH COSTS/ACRE				28,811	
Non-Cash Overhead:					
Buildings 1200 sq ft				33	
Fuel Tanks 2-300 gal				3	
Miscellaneous Tools				16	
Harvest Carts (70)				3	
Irrigation: Pump, Filters				14	
Irrigation: Sprinkler Pipe				66	
Irrigation: Lateral Lines				28	
Equipment				156	
TOTAL NON-CASH OVERHEAD				319	
TOTAL COSTS/ACRE				29,129	
NET RETURNS ABOVE TOTAL COSTS				12,120	

*Plants = $0.075 each

UC COOPERATIVE EXTENSION

Table 3. MONTHLY CASH COSTS PER ACRE TO PRODUCE ORGANIC STRAWBERRIES

CENTRAL COAST - Santa Cruz and Monterey Counties 2006

Beginning Sept 05 Ending Oct 06	Sept 05	Oct 05	Nov 05	Dec 05	Jan 06	Feb 06	Mar 06	Apr 06	May 06	Jun 06	Jul 06	Aug 06	Sept 06	Oct 06	TOTAL
Land Prep: Disk 2X (Cover Crop)	8														8
Fertilize: Compost & Bloodmeal (separate applications)	147	237													384
Irrigate: Sprinklers Setup/Remove	55		55												111
Irrigate: Sprinkle 2X	25		25												50
Land Prep: Subsoil 2X	24														24
Land Prep: Level (Triplane)	5														5
Land Prep: Disk 3X	12														12
Land Prep: Rototill 2X	17														17
Land Prep: Beds List/Shape		7													7
Irrigate: Install Drip Tape		279													279
Irrigate: Ditch for Laterals		4													4
Plant: Lay Mulch		377													377
Plant: Punch Planting Holes		14													14
Plant: Transplants		2,689													2,689
Weed: Hand Weed				207	207	207	207	207	207	207	207	207	207		2,070
Vertebrate: Trapping						4	4	4	4	4					21
Weed: Cultivate						5	5	5							15
Fertilize; Foliar (Biomin)						17	17	17	17	17	17	17	17		136
Fertilize: Foliar (Maxi)						17	17	17	17	17	17	17	17		139
Irrigate: Drip							110	110	111	111	111	110	110		774
Fertilize: Drip (Agrolizer)							15	15	15	15	15	15	15		104
Fertilize: Drip (Phytamin)							35	35	35	35	35	35	35		242
Insect: Mites (Spread Predatory Mites)								126	126						251
Insect: Worms (Dipel)									35	35					69
Disease: Powdery Mildew (Thiolux)								12	15	15	11	8	8		68
Pickup	6	6	6	6	6	6	6	6	6	6	6	6	6	6	83
ATV	2	2	2	2	2	2	2	2	2	2	2	2	1	1	21
Scouting Services							150								150
Post Harvest Cleanup														184	184
TOTAL CULTURAL COSTS	301	3,614	88	214	214	258	568	555	588	463	420	416	416	191	8,307
Harvest: Regular								1,005	1,738	1,633	1,635	2,355	1,738	570	10,675
Harvest: Haul to Cooler								36	51	76	76	64	51	21	378
Harvest: Piece Work										1,838	1,839				3,677
Harvest: Cooler								94	225	469	469	338	225	56	1,875
Assessments														300	300
TOTAL HARVEST COSTS	0	0	0	0	0	0	0	1,136	2,015	4,016	4,020	2,757	2,015	947	16,904

UC COOPERATIVE EXTENSION

Table 3. Continued

CENTRAL COAST - Santa Cruz and Monterey Counties 2006

Beginning Sept 05	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	
Ending Oct 06	05	05	05	05	06	06	06	06	06	06	06	06	06	06	TOTAL
Interest on Operating Capital @ 9.25%*	2	30	31	33	34	36	41	54	74	108	142	167	186	194	1,131
TOTAL OPERATING COSTS/ACRE	303	3,644	119	247	249	294	608	1,745	2,676	4,588	4,582	3,340	2,616	1,332	26,342
Cash Overhead:															
Liability Insurance					6										6
Office Expense	21	21	21	21	21	21	21	21	21	21	21	21			250
Sanitation Expense			1	1	1	1	1	6	6	6	6	6	6	1	43
Land Rent					2,105										2,105
Food Safety												8			8
Property Taxes					8							8			17
Property Insurance					6							6			12
Investment Repairs	2	2	2	2	2	2	2	2	2	2	2	2			29
TOTAL CASH OVERHEAD	23	23	25	25	2,150	25	25	29	29	29	29	51	6	1	2,469
TOTAL CASH COSTS/ACRE	327	3,667	143	272	2,399	319	633	1,774	2,705	4,616	4,610	3,391	2,622	1,334	28,811

*Interest based on Total Cultural + Total Harvest Costs

UC COOPERATIVE EXTENSION

Table 4. Ranging Analysis

CENTRAL COAST - Santa Cruz and Monterey Counties 2006

COSTS PER ACRE AT VARYING YIELD TO PRODUCE ORGANIC STRAWBERRIES

	YIELD (trays/acre)						
	2,500	2,750	3,000	3,250	3,500	3,750	4,000
OPERATING COSTS/ACRE:							
Cultural Cost	8,307	8,307	8,307	8,307	8,307	8,307	8,307
Harvest Cost	9,823	10,806	11,788	12,771	13,753	14,735	15,718
Cooling Cost	1,250	1,375	1,500	1,625	1,750	1,875	2,000
Assessment	250	260	270	280	290	300	310
Interest on operating capital (cultural + harvest)	881	931	981	1,031	1,081	1,131	1,182
TOTAL OPERATING COSTS/ACRE	20,511	21,679	22,846	24,014	25,181	26,348	27,516
TOTAL OPERATING COSTS/Tray	8.20	7.88	7.62	7.39	7.19	7.03	6.88
CASH OVERHEAD COSTS/ACRE	2,469	2,469	2,469	2,469	2,469	2,469	2,469
TOTAL CASH COSTS/ACRE	22,979	24,148	25,315	26,483	27,650	28,817	29,985
TOTAL CASH COSTS/Tray	9.19	8.78	8.44	8.15	7.90	7.68	7.50
NON-CASH OVERHEAD COSTS/ACRE	319	319	319	319	319	319	319
TOTAL COSTS/ACRE	23,298	24,466	25,633	26,801	27,969	29,136	30,304
TOTAL COSTS/Tray	9.32	8.90	8.54	8.25	7.99	7.77	7.58

NET RETURNS PER ACRE ABOVE OPERATING COSTS

PRICE	YIELD (trays/acre)						
$/TRAY	2,500	2,750	3,000	3,250	3,500	3,750	4,000
7.00	-3,011	-2,429	-1,846	-1,264	-681	-98	484
8.00	-511	321	1,154	1,986	2,819	3,652	4,484
9.00	1,989	3,071	4,154	5,236	6,319	7,402	8,484
10.00	4,489	5,821	7,154	8,486	9,819	11,152	12,484
11.00	6,989	8,571	10,154	11,736	13,319	14,902	16,484
12.00	9,489	11,321	13,154	14,986	16,819	18,652	20,484
13.00	11,989	14,071	16,154	18,236	20,319	22,402	24,484

NET RETURNS PER ACRE ABOVE CASH COSTS

PRICE	YIELD (trays/acre)						
$/TRAY	2,500	2,750	3,000	3,250	3,500	3,750	4,000
7.00	-5,479	-4,898	-4,315	-3,733	-3,150	-2,567	-1,985
8.00	-2,979	-2,148	-1,315	-483	350	1,183	2,015
9.00	-479	602	1,685	2,767	3,850	4,933	6,015
10.00	2,021	3,352	4,685	6,017	7,350	8,683	10,015
11.00	4,521	6,102	7,685	9,267	10,850	12,433	14,015
12.00	7,021	8,852	10,685	12,517	14,350	16,183	18,015
13.00	9,521	11,602	13,685	15,767	17,850	19,933	22,015

NET RETURNS PER ACRE ABOVE TOTAL COSTS

PRICE	YIELD (trays/acre)						
$/TRAY	2,500	2,750	3,000	3,250	3,500	3,750	4,000
7.00	-5,798	-5,216	-4,633	-4,051	-3,469	-2,886	-2,304
8.00	-3,298	-2,466	-1,633	-801	31	864	1,696
9.00	-798	284	1,367	2,449	3,531	4,614	5,696
10.00	1,702	3,034	4,367	5,699	7,031	8,364	9,696
11.00	4,202	5,784	7,367	8,949	10,531	12,114	13,696
12.00	6,702	8,534	10,367	12,199	14,031	15,864	17,696
13.00	9,202	11,284	13,367	15,449	17,531	19,614	21,696

UC COOPERATIVE EXTENSION

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

CENTRAL COAST - Santa Cruz and Monterey Counties 2006

					Cash Overhead		
Description	Price	Yrs Life	Salvage Value	Capital Recovery	Insur-ance	Taxes	Total
55HP 2WD Tractor	32,269	20	4,140	2,761	127	182	3,071
75HP 4WD Tractor	45,000	20	5,774	3,851	178	254	4,282
90HP 4WD Tractor	47,000	20	6,031	4,022	186	265	4,472
ATV 4WD	7,430	7	2,818	1,010	36	51	1,097
Blade-Rear 3 point 8 ft	1,560	20	81	137	6	8	151
Cultivator 3 Row 12 ft	5,000	20	261	438	18	26	483
Disc-Offset 14 ft	16,000	20	834	1,401	59	84	1,544
Drip Machine 1-48 inch Row	3,500	15	336	352	13	19	385
Lister/Shaper 3-48 inch Row	5,000	15	480	503	19	27	550
Mower 4 ft	3,500	20	182	307	13	18	338
Mulch Machine 1-48 inch Row	3,000	20	156	263	11	16	290
Pickup 1/2 ton	28,000	5	12,549	4,477	142	203	4,822
Punch Machine 1-48 inch Row	5,000	20	261	438	18	26	483
Ripper-5 Shank 18 ft	10,800	20	563	946	40	57	1,042
Rototiller 12 ft	8,500	20	443	744	31	45	820
Sprayer w/20 ft Boom	3,700	5	1,205	672	17	25	713
Trailer-Pipe	1,950	20	102	171	7	10	188
Triplane 15 ft	22,200	20	1,157	1,944	82	117	2,143
Truck 1 ton #1	36,000	5	16,134	5,757	182	261	6,200
TOTAL	285,409		53,507	30,192	1,186	1,695	33,073
50% of New Cost*	142,705		26,754	15,096	593	847	16,537

*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
Buildings 1200 sqft	42,000	30		3,133	147	210	840	4,330
Fuel Tanks 2-300 gal	3,500	20	650	294	15	21	70	399
Harvest Carts (70)	1,100	5		263	4	6	22	294
Irrigation 75HP Pump, Filters	15,000	20		1,334	53	75	100	1,562
Irrigation Sprinkler Pipe	60,000	15		6,279	210	300	1,200	7,989
Lateral Lines	11,000	5		2,629	39	55	220	2,943
Miscellaneous Field/Shop Tools	15,000	15	1,500	1,507	58	83	300	1,947
TOTAL INVESTMENT	147,600		2,150	15,440	524	749	2,752	19,464

ANNUAL BUSINESS OVERHEAD COSTS

Description	Units/ Farm	Unit	Price/ Unit	Total Cost
Food Safety	95	acre	7.89	750
Land Rent	95	acre	2,105.26	200,000
Liability Insurance	95	acre	5.57	529
Office Expense	95	acre	250.00	23,750
Sanitation Fee	95	acre	42.94	4,079

UC COOPERATIVE EXTENSION

Table 6. HOURLY EQUIPMENT COSTS

CENTRAL COAST - Santa Cruz and Monterey Counties 2006

		COSTS PER HOUR						
			Cash Overhead		Operating			
Description	Actual Hours Used	Capital Recovery	Insur-ance	Taxes	Repairs	Fuel & Lube	Total Oper.	Total Costs/Hr.
55HP 2WD Tractor	626.70	2.20	0.10	0.15	1.09	6.21	7.30	9.75
75HP 4WD Tractor	481.40	4.00	0.18	0.26	1.52	8.47	9.99	14.43
90HP 4WD Tractor	197.50	10.18	0.47	0.67	0.91	10.17	11.08	22.40
ATV 4WD	102.50	4.93	0.17	0.25	0.46	1.95	2.41	7.76
Blade-Rear 3 point 8 ft	9.50	7.19	0.30	0.43	0.00	0.00	0.00	7.92
Cultivator 3 Row 12 ft	48.20	4.55	0.19	0.27	0.8	0.00	0.80	5.81
Disc-Offset 14 ft	60.40	11.60	0.49	0.70	1.98	0.00	1.98	14.77
Drip Machine 1-48 inch Row	106.50	1.65	0.06	0.09	0.73	0.00	0.73	2.53
Lister/Shaper 3-48 inch Row	23.80	10.58	0.40	0.58	0.82	0.00	0.82	12.38
Mower 4 ft	50.00	3.07	0.13	0.18	1.24	0.00	1.24	4.62
Mulch Machine 1-48 inch Row	51.90	2.53	0.11	0.15	0.27	0.00	0.27	3.06
Pickup 1/2 ton	300.00	7.46	0.24	0.34	1.73	7.33	9.06	17.10
Punch Machine 1-48 inch Row	51.90	4.22	0.18	0.25	0.46	0.00	0.46	5.11
Ripper-5 Shank 18 ft	72.00	6.57	0.28	0.39	2.71	0.00	2.71	9.95
Rototiller 12 ft	55.50	6.71	0.28	0.40	1.84	0.00	1.84	9.23
Sprayer w/20 ft Boom	335.10	1.00	0.03	0.04	0.84	0.00	0.84	1.91
Trailer-Pipe	300.00	0.28	0.01	0.02	0.03	0.00	0.03	0.34
Triplane 15 ft	16.10	60.57	2.55	3.64	2.69	0.00	2.69	69.45
Truck 1 ton #1	1,150.20	2.50	0.08	0.11	2.94	2.44	5.38	8.07

UC COOPERATIVE EXTENSION

Table 7. OPERATIONS WITH EQUIPMENT & MATERIALS

CENTRAL COAST - Santa Cruz & Monterey Counties

Operation	Month	Equipment		Field Labor Hrs/Acre	Material	Rate/ Broadcast Acre	Unit
		Tractor	Implement				
Land Prep: Disk 2X (Cover Crop)	Sept	90HP 4WD	Disk - Offset				
Fertilize: Compost Bloodmeal	Sept	Custom			Compost	5.00	ton
					Spread	1.00	acre
	Oct				Bloodmeal	500.00	lb
					Spread	1.00	acre
Irrigate: Sprinklers Setup/Remove	Sept	55HP 2WD	Trailer - Pipe	1.50			
	Nov	55HP 2WD	Trailer - Pipe	1.50			
Irrigate: Sprinkle 2X	Sept			0.30	Water	1.00	acin
	Nov			0.30	Water	1.00	acin
Land Prep: Subsoil 2X	Sept	90HP 4WD	Ripper 18'				
Land Prep: Level (Triplane)	Sept	90HP 4WD	Triplane				
Land Prep: Disk 3X	Sept	90HP 4WD	Disk - Offset				
Land Prep: Rototill 2x	Sept	75HP 4WD	Rototiller				
Land Prep: Beds List/Shape	Oct	90HP 4WD	Lister/Shaper				
Irrigate: Install Drip Tape	Oct	55HP 2WD	Drip Machine	1.00	Drip Tape	21,780	feet
Irrigate: Ditch for Laterals	Oct	55HP 2WD	Blade - Rear	1.00			
Plant: Lay Mulch	Oct	55HP 2WD	Mulch Machine		Black Plastic	2.75	rolls
Plant: Punch Planting Holes	Oct	55HP 2WD	Punch Machine				
Plant: Transplants	Oct			100.00	Plants	22,050.00	each
Weed: Hand Weed	Dec			20.00			
	Jan			20.00			
	Feb			20.00			
	Mar			20.00			
	Apr			20.00			
	May			20.00			
	Jun			20.00			
	Jul			20.00			
	Aug			20.00			
	Sept			20.00			
Vertebrate: Trapping	Feb			0.40			
	Mar			0.40			
	Apr			0.40			
	May			0.40			
	Jun			0.40			
Weed: Cultivate	Feb	75HP 4WD	Cultivator 3 Row				
	Mar	75HP 4WD	Cultivator 3 Row				
	Apr	75HP 4WD	Cultivator 3 Row				
Fertilize: Foliar (Biomin)	Feb	75HP 4WD	Sprayer		Biomin	1.00	gal
	Mar	75HP 4WD	Sprayer		Biomin	1.00	gal
	Apr	75HP 4WD	Sprayer		Biomin	1.00	gal
	May	75HP 4WD	Sprayer		Biomin	1.00	gal
	Jun	75HP 4WD	Sprayer		Biomin	1.00	gal
	Jul	75HP 4WD	Sprayer		Biomin	1.00	gal
	Aug	75HP 4WD	Sprayer		Biomin	1.00	gal
	Sept	75HP 4WD	Sprayer		Biomin	1.00	gal

UC COOPERATIVE EXTENSION

Table 7. Continued (page 2)

CENTRAL COAST - Santa Cruz & Monterey Counties

Operation	Month	Equipment		Field Labor Hrs/Acre	Material	Rate/ Broadcast Acre	Unit
		Tractor	Implement				
Fertilize: Foliar (Maxi)	Feb	75HP 4WD	Sprayer		Maxi-Crop	2.50	lb
	Mar	75HP 4WD	Sprayer		Maxi-Crop	2.50	lb
	Apr	75HP 4WD	Sprayer		Maxi-Crop	2.50	lb
	May	75HP 4WD	Sprayer		Maxi-Crop	2.50	lb
	Jun	75HP 4WD	Sprayer		Maxi-Crop	2.50	lb
	Jul	75HP 4WD	Sprayer		Maxi-Crop	2.50	lb
	Aug	75HP 4WD	Sprayer		Maxi-Crop	2.50	lb
	Sept	75HP 4WD	Sprayer		Maxi-Crop	2.50	lb
Irrigate: Drip	Mar			1.70	Water	4.28	acin
	Apr			1.70	Water	4.28	acin
	May			1.70	Water	4.28	acin
	Jun			1.70	Water	4.30	acin
	Jul			1.70	Water	4.30	acin
	Aug			1.70	Water	4.28	acin
	Sept			1.70	Water	4.28	acin
Fertilize: Drip (Agrolizer)	Mar			0.20	Agrolizer	5.00	gal
	Apr			0.20	Agrolizer	5.00	gal
	May			0.20	Agrolizer	5.00	gal
	Jun			0.20	Agrolizer	5.00	gal
	Jul			0.20	Agrolizer	5.00	gal
	Aug			0.20	Agrolizer	5.00	gal
	Sept			0.20	Agrolizer	5.00	gal
Fertilize: Drip (Phytamin)	Mar			0.20	Phytamin	5.00	gal
	Apr			0.20	Phytamin	5.00	gal
	May			0.20	Phytamin	5.00	gal
	Jun			0.20	Phytamin	5.00	gal
	Jul			0.20	Phytamin	5.00	gal
	Aug			0.20	Phytamin	5.00	gal
	Sept			0.20	Phytamin	5.00	gal
Insect: Mites (Spread Predatory Mites)	Apr			2.00	Persimilis	20.00	thou
	May			2.00	Persimilis	20.00	thou
Insect: Worms (Dipel)	May	75HP 4WD	Sprayer		Dipel	2.00	lb
	Jun	75HP 4WD	Sprayer		Dipel	2.00	lb
Disease: Powdery Mildew (Thiolux)	Apr	75HP 4WD	Sprayer		Thiolux	5.00	lb
	Apr	75HP 4WD	Sprayer		Thiolux	5.00	lb
	May	75HP 4WD	Sprayer		Thiolux	5.00	lb
	May	75HP 4WD	Sprayer		Thiolux	5.00	lb
	Jun	75HP 4WD	Sprayer		Thiolux	5.00	lb
	Jun	75HP 4WD	Sprayer		Thiolux	5.00	lb
	Jul	75HP 4WD	Sprayer		Thiolux	5.00	lb
	Aug	75HP 4WD	Sprayer		Thiolux	5.00	lb
	Sept	75HP 4WD	Sprayer		Thiolux	5.00	lb

UC COOPERATIVE EXTENSION

Table 7. Continued (page 3)

CENTRAL COAST - Santa Cruz & Monterey Counties

Operation	Month	Equipment		Field Labor Hrs/Acre	Material	Rate/ Broadcast Acre	Unit
		Tractor	Implement				
Pickup	All	Pickup 1/2 ton					
ATV	All	ATV					
Post Harvest Cleanup	Oct	Truck 1 Ton			Mulch & Drip Tape	600.00	lb
		55HP 2WD	Mower	6.00			
Harvest: Regular	Apr			67.71	Trays	188.00	each
	May			97.50	Trays	450.00	each
	Jun			11.20	Trays	937.00	each
	Jul			11.20	Trays	938.00	each
	Aug			121.90	Trays	675.00	each
	Sept			97.50	Trays	450.00	each
	Oct			37.50	Trays	112.00	each
Harvest: Haul to Cooler	Apr	Truck 1 Ton		1.00			
	May	Truck 1 Ton		1.50			
	Jun	Truck 1 Ton		2.20			
	Jul	Truck 1 Ton		2.20			
	Aug	Truck 1 Ton		1.90			
	Sept	Truck 1 Ton		1.50			
	Oct	Truck 1 Ton		0.60			
Harvest: Piece Work	Jun				Per Tray	937.00	each
					Per Hour	117.00	hrs
	Jul				Per Tray	938.00	each
					Per Hour	117.00	hrs