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**UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION**

**2011**

**SAMPLE COSTS TO PRODUCE  
SECOND YEAR  
STRAWBERRIES**



**CENTRAL COAST REGION  
Santa Cruz & Monterey Counties**

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**Central Coast Region - Santa Cruz & Monterey Counties - 2011**

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**INTRODUCTION**

Sample costs to produce second year 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 representative production procedures 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, business overhead, and calculations are described under assumptions. Newer developed strawberry varieties such as Albion and San Andreas have enabled second year strawberry production in this area. Roughly 15 to 20% of the industry now produces second year strawberries. Second year fruit is marketed as both fresh and processed or freezer strawberries. Approximately one-half of second year strawberries are shipped and one-half are direct marketed.

This study builds on, and is a companion to, the 2010 *Sample Costs to Produce Strawberries, Central Coast Region*. For additional information or explanation of the calculations in this or other studies, call the Department of Agricultural and Resource Economics, University of California, Davis, (530) 752-3589, or UC Cooperative Extension, Santa Cruz County, (831) 763-8040. Additional current and archived 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) 752-6887 or obtained from the local county UC Cooperative Extension office.

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## ASSUMPTIONS

The following assumptions refer to Tables 1 to 7 and pertain to sample costs to produce second year strawberries in the Central Coast Region - Santa Cruz and Monterey counties. The cultural practices described and materials used are representative for a well-managed strawberry operation in the region. The costs, materials and practices will not apply to all situations every production year. Cultural practices and costs for the production of strawberries vary by grower and region, resulting in significant cost differences. **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.** The farm consists of 50 contiguous acres of rented land. Strawberries are planted on 45 acres with 20 acres dedicated to second year production. Some growers prefer to keep a higher proportion of their producing acres in first year production. The unplanted five acres are roads, open areas and irrigation system. The crop is farmed by the renter and is established on ground previously planted to vegetable and/or strawberry crops in a vegetable – strawberry rotation. In this area, some strawberries are planted on rolling hills, which will require erosion prevention measures. The planted ground is assumed to be fairly flat; therefore no costs are shown for erosion prevention.

### Second Year Production Operating Costs

**Second Year Land Renovation and Maintenance.** Following the end of the first year harvest, strawberry leaves are pruned in January with a flail mower. The bed tops are cleaned by hand to remove remaining leaves and brush the debris to the ground and into the furrows. On emergence of first leaves (second year growth), pest management applications of Lorsban or equivalent material are applied, followed by an application of Sevin in late February.

**Second Year Replants.** Five percent (1,089) of the first year strawberry plants are replanted in January and drip irrigated with the established plants, using 3-acre inches of water per acre at the beginning of the second season irrigations. It is assumed that replanting takes approximately two hours per acre. See *Sample Costs to Produce Strawberries, 2010, Central Coast* at <http://coststudies.ucdavis.edu> for establishment and first year production information.

**Fertilization.** Prior to pruning strawberry plants in January, 10 to 15 pounds of nitrogen (N) fertilizer (CAN17) is applied twice (November & December) through the drip irrigation system to support plant vitality during the winter months. Weekly applications of a complete fertilizer (20-20-20) will then supply four pounds of nitrogen per week from February until harvest ends in September. A total of 158 pounds of nitrogen will be used during the entire second year production season. Grower fertilizer programs and timing vary widely, but most will use an N fertilizer as well as a complete NPK and micronutrient fertilizer, depending upon seasonal nutrient needs.

**Irrigation.** Strawberry plants are drip irrigated from late March through the end of September, the last month of second year harvest. A total of 24-acre inches per acre of water is applied during the production period. With the 3-acre inches per acre applied after replanting at the beginning of the 2011 season, total water use is 27-acre inches per acre for second year strawberries. Roughly, 2% of the total drip tape is replaced or repaired by hand, which is calculated at two hours per acre.

*Water.* An estimated water cost of \$21.67 per acre-inch (\$260/acre foot) based on growers who pay utility charges for pumped well water along with charges or costs associated with a water management district or agency. Water cost will vary depending upon water district or agency and well characteristics.

**Pest Management.** The pesticides and rates mentioned in this cost study 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 [www.ipm.ucdavis.edu](http://www.ipm.ucdavis.edu). Pesticide applications, timing, and materials vary according to pest pressure. The pesticides shown in Table A are for a representative program for second year strawberries in the region. Written recommendations are required for many commercially applied pesticides and are made by licensed Pest Control Advisers (PCAs). For information and pesticide use permits, contact the local county Agricultural Commissioner's office. Adjuvants are recommended with many pesticides for effective control and are an added cost. Adjuvants are not included in this study as a cost associated with pest management applications. Material costs will vary by location and grower use (volume). Pesticide costs in this study are taken from a single dealer and shown as full retail.

*Scouting Service/PCA.* Pest Control Advisers (PCAs) monitor the fields for agronomic, nutrition and pest problems, and write pesticide and other recommendations. The grower contracts for this service at an estimated cost of \$100 per acre per year.

*Fumigation.* Fumigants are not used in second year strawberries; therefore no cost is shown in this study. Fumigants are generally used during first year establishment of strawberries to manage arthropods, soilborne diseases, nematodes and weeds. For more information on first year practices and the cost of fumigation, please refer to the study, *Sample Costs to Produce Strawberries, 2010, Central Coast Region, UC Cooperative Extension*, <http://coststudies.ucdavis.edu>.

*Weeds and Runner Removal.* To manage weeds in the furrows, as well as aerate the lower part of the strawberry beds, furrow bottoms are broken monthly during the season (March through August) with a tractor drawn chisel. To optimize plant yield, weeds and runners are removed by hand labor from December through September. Although weeding times vary by grower and month, the study assumes an average of 10.2 hours per acre per month over 10 months.

*Diseases.* Powdery mildew (*Sphaerotheca macularis*), Botrytis fruit rot (*Botrytis cinerea*), and Anthracnose (*Colletotrichum actatum*) are the diseases treated in this study. Treatments are combined (tank

TABLE A. DISEASE AND INSECT MATERIAL APPLICATIONS

MONTH	DISEASE			INSECTS		
	Botrytis	Mildew	Anthracnose	Whitefly/Aphids	Worms	Lygus
January				Admire		
January				Lorsban	Lorsban	Lorsban
February				Sevin	Sevin	Sevin
March	Captan	Rally				Malathion+Actara
April	Switch	Thiolux				Assail
April		Rally				
April		Quadris	Quadris		Dipel	Rimon
April	Elevate	Rally			Success	
May	Captan	Thiolux			Dipel	
May		Quadris	Quadris			Malathion+Actara
June	Elevate	Rally				
June	Captan	Thiolux				Rimon
June	Pristine				Dipel	
July		Quadris				Rimon
August					Success	Dibrom
September	Captan	Thiolux				

RATES PER ACRE in study: (Not Recommendations - see label or your PCA)

Captan	4.0 lb	Dibrom	16.0 oz
Elevate	1.5 lb	Dipel	1.0 lb
Rally	5.0 oz	Malathion	2.0 pt
Thiolux	5.0 lb	Savey	6.0 oz
Quadris	12.0 floz	Success	5.0 floz
Acramite	1.0 lb	Rimon	12.0 oz
Danitol	16.0 oz	Pristine	23.0 oz
Switch	14.0 oz	Assail	3.0 oz
Actara	3.0 oz	Lorsban 4E	1.0 qt
Admire	14.0 floz	Sevin XLR	2.0 qt

mixed) with the insect control applications. Fungicide treatments are made every 12 to 16 days through March and every 20 to 25 days thereafter ending in early September.

*Insects/Arthropods.* Lygus bug (*Lygus hesperus*), whitefly, aphids and various lepidopterous larvae including light brown apple moth (LBAM) are the arthropods controlled in this study. Insecticide treatments are combined with the fungicide treatments, which are shown in Table A.

*Second Year Pest Management 'Trade Offs'.* For second year strawberry production, growers report some 'trade offs' in non-use of fumigants. For example, populations of the arthropod pest, lygus bug (*Lygus hesperus*) generally increase in second year fields, and may also increase in neighboring fields, which necessitates increased management. In contrast, populations for two-spotted spider mites may decrease because the biological control agent *P. persimillis* is released during first year production and is already established in the field. Pest populations vary depending on a number of factors, including yearly production conditions, neighboring fields and wildlands, and crop rotation and diversification.

**Harvest.** In this study the crop is harvested from end of March through the end of September. Some growers end the harvest in late July or August to have land available in the fall for a subsequent crop. Based

	Mar	Apr	May	Jun	Jul	Aug	Sept
Fresh	5	10	10	15	15	10	5
Freezer		5	5	5	5	5	5

on weight, month harvested, and whether fruit goes to the fresh or freezer market, the percent of the estimated crop production is shown on Table B. The grower hires a crew foreman to supervise one 30-man crew early and late in the season and two 30-man crews during the peak season. For the fresh market, the picker pushes a picking cart that holds a tray with eight one-pound containers down the furrow. The ripe strawberries are picked by hand and placed in the containers/tray. Other container types and sizes are used, but are not included in this study. Harvest rate 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 harvest, and one harvest card puncher per crew to count the trays harvested by each picker. For the freezer market, the picker places a 19-pound plastic tray on the picking cart. Growers purchase and supply fresh market trays; the freezer furnishes the plastic freezer trays. 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 two one-ton flatbed trucks that hold pallets for both the fresh and freezer market per load 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. (See Labor for picking wage).

**Yields.** Strawberry yields are measured in trays per acre for the fresh and freezer market. Various tray weights are used to convert the yields to total weight per acre. The standard consumer tray holds 8 x 1-pound containers and ranges from 9.5 to 10.5 pounds per tray. There are other tray arrangements with different size containers as well as the former standard tray containing 12 one-pint containers, which range from 10.5 to 12 pounds per tray. The weight used in this study is 10 pounds per tray for fresh market fruit and 19 pounds per tray for freezer strawberries. Freezer trays delivered to the cooler usually weigh 18 to 20 pounds. Total yield per acre in this study for second year strawberries is estimated to be 50,000 pounds, with 70% or 35,000 pounds (3,500 trays) delivered to the fresh market and 30% or 15,000 pounds (789 trays) delivered to the freezer market. This yield falls within the range of yields (40,000 to 60,000 pounds per acre) reported by second year strawberry growers along the Central Coast.

**Returns.** Based on 2010 USDA Watsonville-Salinas Shipping Point returns, the average grower return for fresh market fruit is \$9.50 per tray (8x1 lb clamshells). Fresh market strawberry prices are based on trays and not weight. First year strawberry price was estimated at a \$9.00 tray price less an 8% selling commission of \$0.70 (rounded) for a net return of \$8.30. In this study second year strawberry price is adjusted downward, to

an \$8.75 tray price less an 8% selling commission of \$0.70 for a tray price of \$8.00 (rounded). This price takes into consideration that late season berry size for second year strawberries can be smaller, and that in some cases quality may decline slightly. A range of potential yields and prices for a fresh market 10-pound tray is shown in Table 4. Price for freezer fruit is estimated to be \$0.32 per pound, which falls within the range of prices growers receive.

*Cooling.* Cooling costs for fresh market strawberries varies by cooler and grower volume. Also, the grower may have the option to negotiate the price with the cooler. The cost used in this study is \$0.50 per tray.

*Sales/Marketing.* Selling costs are calculated as 8% of selling price for fresh fruit as noted above. The grower receives the rounded or adjusted net proceeds on a per tray basis. Therefore no selling costs are specifically shown here.

*Assessments.* Current assessment for an 8 x 1 pound tray (9.5 – 10.5 pounds) is \$0.035 per tray split equally between grower and shipper. The grower pays \$0.0175 per tray to the Strawberry Commission for research and marketing. Fresh market assessment is per 6 – 12 pound tray and the freezer assessment is per pound. Freezer (processing) fruit is assessed at \$0.0025 per pound. The assessment is split evenly (\$0.00125) between the grower and the processor.

**Second Year Cleanup.** In early October after the end of the second year harvest, strawberry plants are mowed. The plastic mulch and drip tape are pulled and rolled by hand and hauled to a waste disposal site. The field is then disked twice in preparation for the next crop. All operations are done by a custom operator.

### **Labor, Equipment, and Operating Interest**

**Labor.** Labor rates of \$14.52 per hour for machine operators and \$11.88 for general labor includes payroll overhead of 32%. The basic hourly wages are \$11.00 for machine operators and \$9.00 for general labor. Pickers are often paid a base pay plus piecework, or straight piecework depending on the time of harvest and if machine or non-machine harvest. In this study, picker pay is calculated using the field labor rate. An additional 4% is added to cover various picking costs such as contractor overhead and piece rate costs, not included in the general labor payroll overhead. 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 2011 (California Department of Insurance, unreferenced). 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. Please also see Risk section for more information about second year strawberry labor.

**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 red dye diesel and gasoline are \$3.44 (excludes excise taxes) and \$3.85 per gallon, respectively. The cost includes a 2.5% local sales tax on diesel fuel, but does not include excise taxes. Gasoline costs include a 7.5% sales tax plus federal and state excise tax. Some federal excise tax can be refunded for on-farm use when filing your income tax. The costs are based on 2011 January to June, Department of Energy (DOE) monthly data. 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 5.75% 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 interest rate is the basic rate provided by a farm lending agency as of January 2011.

**Risk.** While this study makes every effort to model a production system based on typical, real world practices, it cannot fully represent production, financial, market, legal and human resource risks that affect the profitability and economic viability of strawberry production. The risks associated with producing and marketing strawberries should not be minimized. For second year strawberries, harvest labor availability, scheduling and cost should be specially noted here. Because second year berry harvest begins in March, labor is generally available and can be scheduled with relative ease. However, as first year berries come into production and harvest, labor scheduling and availability can become more challenging due to ‘competition’ for labor between the two harvests. Labor generally favors harvest work on farms and in fields with larger fruit size and fruit loads, because higher incomes can be generated for some workers. If harvest labor for second year berries becomes constrained, growers may be unable to harvest and market some fruit. Alternatively, growers may choose to switch from the fresh to the freezer market. In either scenario net returns and overall profitability of the crop can be negatively impacted.

### **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, 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 2 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 0.775% of the average value of the assets over their useful life. Liability insurance covers accidents on the farm and costs \$587 for the entire farm.

**Office Expense.** Office and business expenses are approximated at \$750 per acre. These expenses include office supplies, telephones, bookkeeping, accounting, legal fees, office and shop utilities, and regulatory expenses.

**Food Safety Program.** Most growers of fresh market commodities incorporate and participate in food safety programs for their operations. Part of a food safety program is participation in third party (independent) audits that are performed to ensure the safety of fresh products and accommodate buyer requests, and to enhance marketability of the crop. Farms may have their own program, work through the processor or a combination of the two. Costs will vary depending upon the farm or processor and inspection circumstances. For this study, costs are estimated at \$100 per acre.

**Land Rent.** The 50 acres are rented for cash at \$3,000 per acre. The rented land includes the irrigation system that is maintained by the landlord.

**Sanitation Services.** Sanitation services provide portable toilets with washing equipment and cost the farm \$9,000 annually or \$200 per producing acre.

**Supervisor/Management Salaries.** Foreman/Supervisor salaries are estimated at \$750 per acre. Wages for management are not included as cash cost. Returns above total costs are considered a return to management and risk.

### **Non-Cash Overhead**

Non-cash overhead, shown on an annual per acre basis is calculated as the capital recovery cost for equipment and other farm investments. Farm equipment on strawberry farms in the Central Coast Region is purchased new or used; this study shows the current purchase price for new equipment. The new purchase price is adjusted to 40% to indicate a mix of new and used equipment. Annual ownership costs are shown in Table 5.

*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  $((\text{Purchase Price} - \text{Salvage Value}) \times \text{Capital Recovery Factor}) + (\text{Salvage Value} \times \text{Interest Rate})$ .

*Salvage Value.* Salvage value is an estimate of the remaining value of an investment at the end of its useful life. For farm machinery 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 and purchase price for land are the same because land does not depreciate. The purchase price and salvage value for equipment and investments are shown in Table 5.

*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 4.75% used to calculate capital recovery cost is the effective long term interest rate effective January 1, 2011. The interest rate is provided by a local farm lending agency and will vary according to risk and amount of loan.

**Land.** Land values in the region range from \$15,000 to \$55,000 per acre for row crop land. Because the land is assumed to be rented, ownership costs are not shown in this study.

**Irrigation System.** Water is pumped through a filtration station into main lines. Reusable lateral lines 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 lateral lines have a 5-year life and the drip lines are an annual expense. For second year planting, lines remain buried and repaired (repair costs are shown under cultural practices). The system is based on one 75 horsepower electric pump lifting 24 acre-inches



from a water level depth of 120 feet. The pump and 300-foot deep well already existed on the site and the irrigation system costs are charged to the landowner.

**Equipment.** Farm equipment is purchased new or used, but the study shows the current purchase price for new equipment. Strawberry production requires much specialized equipment including modifications to commercial tractors. Many of these modifications are made in machine shops and are not necessarily included in the equipment costs shown in the tables. Some of the other specialized equipment is also built in machine or farmer shops and retail prices are not readily available. The new purchase price is adjusted to 40% to indicate a mix of new and used equipment. Annual ownership costs for equipment and other investments are shown in the Whole Farm Annual Equipment, Investment, and Business Overhead Costs table. 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.

**Growing Costs.** Some growers prefer to separate harvest costs from total cash costs to reflect total growing costs. For this study growing costs are estimated at \$10,367 or total cash costs of \$32,449 minus harvest costs of \$22,082.

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

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UC COOPERATIVE EXTENSION  
**Table 1. COSTS PER ACRE TO PRODUCE SECOND YEAR STRAWBERRIES\***  
 CENTRAL COAST - Santa Cruz/Monterey Counties 2011

Operation	Operation Time (Hrs/A)	Cash and Labor Costs per Acre					Total Cost	Your Cost
		Labor Cost	Fuel	Lube & Repairs	Material Cost	Custom/ Rent		
<b>Cultural:</b>								
Fertilize (CAN17)	0.50	6	0	0	31	0	37	
Grade Field Roads 2X	0.05	1	0	0	0	0	1	
Weed-hand	102.00	1,212	0	0	0	0	1,212	
Prune Leaves	0.41	7	4	2	0	0	13	
Clean Bed Tops (hand)	25.00	297	0	0	0	0	297	
Irrigate: Drip Line Repair	2.00	24	0	0	9	0	32	
Plant (replants)	2.00	24	0	0	114	0	138	
Irrigate: established and replants (drip)	0.25	2	0	0	65	0	67	
Whitefly/Aphid (drip)	0.25	3	0	0	160	0	163	
Whitefly/Aphid/Worm/Lyigus	0.14	4	1	0	17	0	23	
Fertilize: (drip) 20-20-20	0.50	6	0	0	704	0	710	
Whitefly/Aphid/Worm/Lyigus	0.14	4	1	0	16	0	22	
Break Bottoms - furrows	4.91	85	50	14	0	0	150	
Botrytis/Mildew/Lyigus	0.56	15	6	2	367	0	389	
Irrigate: production season (drip)	2.10	23	0	0	520	0	544	
Mildew	0.14	4	1	0	26	0	32	
Mildew/Anthr/Worm/Lyigus	0.14	4	1	0	79	0	85	
Botrytis/Mildew/Worm	0.28	7	3	1	186	0	197	
Mildew/Anthr/Lyigus	0.14	4	1	0	79	0	84	
Botrytis/Worm	0.14	4	1	0	102	0	108	
Mildew/Lyigus	0.14	4	1	0	64	0	69	
Worm/Lyigus	0.14	4	1	0	53	0	58	
Botrytis/Mildew	0.14	4	1	0	33	0	38	
Year End Cleanup	0.00	0	0	0	0	400	400	
PCA	0.00	0	0	0	0	100	100	
<b>TOTAL Cultural COSTS</b>	<b>142.09</b>	<b>1,745</b>	<b>76</b>	<b>23</b>	<b>2,625</b>	<b>500</b>	<b>4,969</b>	
<b>Harvest:</b>								
Harvest Fresh	671	7,971	0	0	5,880	1,295	15,146	
Load/Haul Fresh	11	434	187	53	200	0	874	
Cooling Fresh	0	0	0	0	0	1,750	1,750	
Harvest Freezer	286	3,398	0	0	0	555	3,953	
Load/Haul Freezer	4	181	76	21	0	0	279	
Assessments Cal Strawberry	0	0	0	0	80	0	80	
<b>TOTAL Harvest COSTS</b>	<b>971.92</b>	<b>11,985</b>	<b>263</b>	<b>74</b>	<b>6,160</b>	<b>3,600</b>	<b>22,082</b>	
Interest on Operating Capital @ 5.75%							525	
<b>TOTAL OPERATING COSTS/ACRE</b>	<b>1,114.01</b>	<b>13,730</b>	<b>340</b>	<b>97</b>	<b>8,785</b>	<b>4,100</b>	<b>27,576</b>	
<b>CASH OVERHEAD:</b>								
Food Safety							100	
Land Rent							3,000	
Liability Insurance							13	
Office Expense							750	
Ranch Supervisor							750	
Sanitation Fee							200	
Property Taxes							13	
Property Insurance							10	
Investment Repairs							36	
<b>TOTAL CASH OVERHEAD</b>							<b>4,873</b>	
<b>TOTAL CASH COSTS/ACRE</b>							<b>32,449</b>	

UC COOPERATIVE EXTENSION  
**Table 1. CONTINUED**  
 CENTRAL COAST - Santa Cruz/Monterey Counties 2011

Operation	Operation	Cash and Labor Costs per Acre					Total Cost	Your Cost
	Time (Hrs/A)	Labor Cost	Fuel	Lube & Repairs	Material Cost	Custom/Rent		
NON-CASH OVERHEAD:		Per producing Acre		Annual Cost				
				Capital Recovery				
Buildings		1,092		86			86	
Fuel Tanks/Above Ground		78		6			6	
Hand Tools		102		9			9	
Harvest Carts (70)		23		5			5	
Lateral Lines		222		51			51	
Shop Tools		281		25			25	
Equipment		1,636		167			167	
<b>TOTAL NON-CASH OVERHEAD</b>		<b>3,434</b>		<b>349</b>			<b>349</b>	
<b>TOTAL COSTS/ACRE</b>							<b>32,798</b>	

\*Some growers prefer to separate harvest costs from total cash costs to reflect growing costs. Growing costs = \$32,449 - \$22,082 = \$10,367

UC COOPERATIVE EXTENSION  
**Table 2. COSTS AND RETURNS PER ACRE TO PRODUCE SECOND YEAR STRAWBERRIES\***  
 CENTRAL COAST - Santa Cruz/Monterey Counties 2011

	Quantity/ Acre	Unit	Price or Cost/Unit	Value or Cost/Acre	Your Costs
<b>GROSS RETURNS</b>					
Strawberry Fresh	3,500.00	tray	8.00	28,000	
Strawberry Freezer	15,000.00	lb	0.32	4,800	
<b>TOTAL GROSS RETURNS</b>				<b>32,800</b>	
<b>OPERATING COSTS</b>					
<b>Insecticide:</b>				<b>534</b>	
Admire Pro	14.00	floz	11.40	160	
Lorsban 4E	2.00	pint	8.64	17	
Sevin XLR	2.00	pint	8.17	16	
Malathion 8	4.00	pint	7.76	31	
Actara	6.00	oz	8.10	49	
Assail 70WP	3.00	oz	16.82	50	
Dipel DF	3.00	lb	15.65	47	
Rimon 0.83EC	36.00	floz	2.06	74	
Success	10.00	floz	7.43	74	
Dibrom 8 Emulsive	16.00	floz	0.98	16	
<b>Fungicide:</b>				<b>647</b>	
Captan 50W	16.00	lb	6.92	111	
Rally 40W	20.00	oz	5.23	105	
Switch 62.5 WG	14.00	oz	4.27	60	
Thiolux	20.00	lb	1.04	21	
Quadris	36.00	floz	3.25	117	
Elevate 50WDG	3.00	lb	49.12	147	
Pristine	23.00	oz	3.76	86	
<b>Fertilizer:</b>				<b>735</b>	
CAN 17 17-0-0	30.00	lb N	1.04	31	
20-20-20	640.00	lb	1.10	704	
<b>Custom:</b>				<b>2,250</b>	
Misc Picking Costs (based on 10 lb tray or equivalent)	5,000.00	tray	0.37	1,850	
Crop Removal Yr End	1.00	acre	400.00	400	
<b>Materials:</b>				<b>6,089</b>	
T-Tape	436.00	foot	0.02	9	
Crate/Basket/Wire	3,500.00	each	1.68	5,880	
Misc Packing/Transport Material (Fresh)	1.00	acre	200.00	200	
<b>Water:</b>				<b>585</b>	
Water	27.00	acin	21.67	585	
<b>Plants:</b>				<b>114</b>	
Strawberry Plants	1,089.00	each	0.11	114	
<b>Contract:</b>				<b>1,850</b>	
Cooler	3,500.00	tray	0.50	1,750	
PCA	1.00	acre	100.00	100	
<b>Assessment:</b>				<b>80</b>	
Strawberry Fresh	3,500.00	tray	0.02	61	
Strawberry Freezer	15,000.00	lb	0.00	19	
<b>Labor:</b>				<b>13,730</b>	
Equipment Operator Labor	26.89	hrs	14.52	390	
Non-Machine Labor	1,123.02	hrs	11.88	13,339	
<b>Machinery:</b>				<b>437</b>	
Fuel-Gas	68.38	gal	3.85	263	
Fuel-Diesel	22.20	gal	3.44	76	
Lube				51	
Machinery Repair				46	
Interest on Operating Capital ( 5.75%)				525	
<b>TOTAL OPERATING COSTS/ACRE</b>				<b>27,576</b>	
<b>NET RETURNS ABOVE OPERATING COSTS</b>				<b>5,224</b>	

UC COOPERATIVE EXTENSION  
**Table 2. CONTINUED**  
 CENTRAL COAST - Santa Cruz/Monterey Counties 2011

	Quantity/ Acre	Unit	Price or Cost/Unit	Value or Cost/Acre	Your Costs
<b>CASH OVERHEAD COSTS</b>					
Food Safety				100	
Land Rent				3,000	
Liability Insurance				13	
Office Expense				750	
Ranch Supervisor				750	
Sanitation Fee				200	
Property Taxes				13	
Property Insurance				10	
Investment Repairs				36	
<b>TOTAL CASH OVERHEAD COSTS/ACRE</b>				<b>4,873</b>	
<b>TOTAL CASH COSTS/ACRE</b>				<b>32,449</b>	
<b>NON-CASH OVERHEAD COSTS (Capital Recovery)</b>					
Buildings				86	
Fuel Tanks/Above Ground				6	
Hand Tools				9	
Harvest Carts (70)				5	
Lateral Lines				51	
Shop Tools				26	
Equipment				167	
<b>TOTAL NON-CASH OVERHEAD COSTS</b>				<b>349</b>	
<b>TOTAL COST/ACRE</b>				<b>32,798</b>	
<b>NET RETURNS ABOVE TOTAL COST</b>				<b>2</b>	

\*Some growers prefer to separate harvest costs from total cash costs to reflect growing costs. Growing costs = \$32,449 - \$22,082 = \$10,367

UC COOPERATIVE EXTENSION  
**Table 3. MONTHLY CASH COSTS PER ACRE TO PRODUCE SECOND YEAR STRAWBERRIES**  
 CENTRAL COAST - Santa Cruz/Monterey Counties 2011

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	TOTAL
Beginning 11-10													
Ending 10-11	10	10	11	11	11	11	11	11	11	11	11	11	
Cultural:													
Fertilize (CAN17)	19	19											37
Grade Field Roads 2X		1			1								1
Weed-hand		121	121	121	121	121	121	121	121	121	121		1,212
Prune Leaves			13										13
Clean Bed Tops (hand)			297										297
Irrigate: Drip Line Repair			32										32
Plant (replants)			138										138
Irrigate: established & replants (drip)			67										67
Whitefly/Aphid (drip)			163										163
Whitefly/Aphid/Worm/Lygid			23										23
Fertilize: (drip) 20-20-20				91	91	88	88	88	88	88	88		710
Whitefly/Aphid/Worm/Lygid				22									22
Break Bottoms - furrows					25	25	25	25	25	25			150
Botrytis/Mildew/Lygid					99	121		169					389
Irrigate: production season (drip)					58	81	81	81	81	81	81		544
Mildew						32							32
Mildew/Anthr/Worm/Lygid						85							85
Botrytis/Mildew/Worm						143	54						197
Mildew/Anthr/Lygid							84						84
Botrytis/Worm								108					108
Mildew/Lygid									69				69
Worm/Lygid										58			58
Botrytis/Mildew											38		38
Year End Cleanup												400	400
PCA	8	8	8	8	8	8	8	8	8	8	8	8	100
<b>TOTAL Cultural COSTS</b>	<b>27</b>	<b>149</b>	<b>863</b>	<b>242</b>	<b>404</b>	<b>704</b>	<b>462</b>	<b>600</b>	<b>393</b>	<b>382</b>	<b>337</b>	<b>408</b>	<b>4,969</b>
Harvest:													
Harvest Fresh					1,308	2,082	2,082	3,118	3,118	2,296	1,142		15,146
Load/Haul Fresh					69	122	122	184	184	129	64		874
Cooling Fresh					125	250	250	375	375	250	125		1,750
Harvest Freezer						627	627	627	627	722	722		3,953
Load/Haul Freezer						45	45	45	45	49	49		279
Assessments Cal Strawberry											80		80
<b>TOTAL Harvest COSTS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,503</b>	<b>3,127</b>	<b>3,127</b>	<b>4,349</b>	<b>4,349</b>	<b>3,445</b>	<b>2,182</b>	<b>0</b>	<b>22,082</b>
Interest on Operating Capital (5.75%)	0	1	5	6	15	34	51	75	97	116	128	-2	525
<b>TOTAL OPERATING COSTS/ACRE</b>	<b>27</b>	<b>150</b>	<b>868</b>	<b>249</b>	<b>1,921</b>	<b>3,864</b>	<b>3,639</b>	<b>5,023</b>	<b>4,839</b>	<b>3,943</b>	<b>2,646</b>	<b>406</b>	<b>27,576</b>



UC COOPERATIVE EXTENSION  
**Table 3. CONTINUED**  
 CENTRAL COAST - Santa Cruz/Monterey Counties 2011

Beginning 11-10 Ending 10-11	NOV 10	DEC 10	JAN 11	FEB 11	MAR 11	APR 11	MAY 11	JUN 11	JUL 11	AUG 11	SEP 11	OCT 11	TOTAL
<b>CASH OVERHEAD</b>													
Food Safety	8	8	8	8	8	8	8	8	8	8	8	8	100
Land Rent										3,000			3,000
Liability Insurance			13										13
Office Expense	63	63	63	63	63	63	63	63	63	63	63	63	750
Ranch Supervisor	63	63	63	63	63	63	63	63	63	63	63	63	750
Sanitation Fee	17	17	17	17	17	17	17	17	17	17	17	17	200
Property Taxes			13										13
Property Insurance			10										10
Investment Repairs	3	3	3	3	3	3	3	3	3	3	3	3	36
<b>TOTAL CASH OVERHEAD COSTS</b>	<b>153</b>	<b>153</b>	<b>190</b>	<b>153</b>	<b>153</b>	<b>153</b>	<b>153</b>	<b>153</b>	<b>153</b>	<b>3,153</b>	<b>153</b>	<b>153</b>	<b>4,873</b>
<b>TOTAL CASH COSTS/ACRE</b>	<b>180</b>	<b>303</b>	<b>1,058</b>	<b>402</b>	<b>2,074</b>	<b>4,017</b>	<b>3,792</b>	<b>5,176</b>	<b>4,992</b>	<b>7,096</b>	<b>2,799</b>	<b>559</b>	<b>32,449</b>

See Table A for insecticide/fungicide applied

UC COOPERATIVE EXTENSION  
**Table 4. RANGING ANALYSIS FOR SECOND YEAR STRAWBERRIES**  
 CENTRAL COAST - Santa Cruz/Monterey Counties 2011

COST PER ACRE AT VARYING YIELDS TO PRODUCE STRAWBERRIES

	YIELD (lbs/acre)						
	35,000	40,000	45,000	50,000	55,000	60,000	65,000
<b>OPERATING COSTS:</b>							
Cultural	4,969	4,969	4,969	4,969	4,969	4,969	4,969
Harvest	15,648	17,793	19,937	22,082	24,227	26,371	28,516
Interest on operating capital @ 5.75%	410	448	487	525	563	602	640
<b>TOTAL OPERATING COSTS/ACRE</b>	<b>21,027</b>	<b>23,210</b>	<b>25,393</b>	<b>27,576</b>	<b>29,759</b>	<b>31,942</b>	<b>34,125</b>
Total Operating Costs/lb	0.60	0.58	0.56	0.55	0.54	0.53	0.52
<b>CASH OVERHEAD COSTS/ACRE</b>							
<b>TOTAL CASH COSTS/ACRE</b>	<b>25,900</b>	<b>28,083</b>	<b>30,266</b>	<b>32,449</b>	<b>34,632</b>	<b>36,815</b>	<b>38,998</b>
Total Cash Costs/lb	0.74	0.70	0.67	0.65	0.63	0.61	0.60
<b>NON-CASH OVERHEAD COSTS/ACRE</b>							
<b>TOTAL COSTS/ACRE</b>	<b>26,249</b>	<b>28,432</b>	<b>30,615</b>	<b>32,798</b>	<b>34,981</b>	<b>37,164</b>	<b>39,347</b>
Total Costs/lb	0.75	0.71	0.68	0.66	0.64	0.62	0.61

NET RETURNS PER ACRE ABOVE OPERATING COSTS

Fresh \$/tray		YIELD (10 lb trays/acre)						
		2,450	2,800	3,150	3,500	3,850	4,200	4,550
	Freezer	YIELD (lbs/acre)						
	\$/lb	10,500	12,000	13,500	15,000	16,500	18,000	19,500
5.00	0.32	-5,417	-5,370	-5,323	-5,276	-5,229	-5,182	-5,135
6.00	0.32	-2,967	-2,570	-2,173	-1,776	-1,379	-982	-585
7.00	0.32	-517	230	977	1,724	2,471	3,218	3,965
8.00	0.32	1,933	3,030	4,127	5,224	6,321	7,418	8,515
9.00	0.32	4,383	5,830	7,277	8,724	10,171	11,618	13,065
10.00	0.32	6,833	8,630	10,427	12,224	14,021	15,818	17,615
11.00	0.32	9,283	11,430	13,577	15,724	17,871	20,018	22,165

NET RETURNS PER ACRE ABOVE CASH COSTS

Fresh \$/tray		YIELD (10 lb trays/acre)						
		2,450	2,800	3,150	3,500	3,850	4,200	4,550
	Freezer	YIELD (lbs/acre)						
	\$/lb	10,500	12,000	13,500	15,000	16,500	18,000	19,500
5.00	0.32	-10,290	-10,243	-7,615	-7,532	-7,448	-7,365	-7,282
6.00	0.32	-7,840	-7,443	-7,046	-6,649	-6,252	-5,855	-5,458
7.00	0.32	-5,390	-4,643	-3,896	-3,149	-2,402	-1,655	-908
8.00	0.32	-2,940	-1,843	-746	351	1,448	2,545	3,642
9.00	0.32	-490	957	2,404	3,851	5,298	6,745	8,192
10.00	0.32	1,960	3,757	5,554	7,351	9,148	10,945	12,742
11.00	0.32	4,410	6,557	8,704	10,851	12,998	15,145	17,292

NET RETURNS PER ACRE ABOVE TOTAL COSTS

Fresh \$/tray		YIELD (10 lb trays/acre)						
		2,450	2,800	3,150	3,500	3,850	4,200	4,550
	Freezer	YIELD (lbs/acre)						
	\$/lb	10,500	12,000	13,500	15,000	16,500	18,000	19,500
5.00	0.32	-10,639	-10,592	-10,545	-10,498	-10,451	-10,404	-10,357
6.00	0.32	-8,189	-7,792	-7,395	-6,998	-6,601	-6,204	-5,807
7.00	0.32	-5,739	-4,992	-4,245	-3,498	-2,751	-2,004	-1,257
8.00	0.32	-3,289	-2,192	-1,095	2	1,099	2,196	3,293
9.00	0.32	-839	608	2,055	3,502	4,949	6,396	7,843
10.00	0.32	1,611	3,408	5,205	7,002	8,799	10,596	12,393
11.00	0.32	4,061	6,208	8,355	10,502	12,649	14,796	16,943

UC COOPERATIVE EXTENSION  
**Table 5. WHOLE FARM ANNUAL EQUIPMENT, INVESTMENT & BUSINESS OVERHEAD COSTS**  
 CENTRAL COAST - Santa Cruz/Monterey Counties 2011

Yr	Description	Price	Yrs Life	Salvage Value	Capital Recovery	Cash Overhead			Total
						Insur- ance	Taxes		
11	42HP 4WD Tractor	27,830	15	5,418	2,380	129	166		2,675
11	55HP 2WD Tractor	32,269	15	6,282	2,760	149	193		3,102
11	Blade Rear 3 pt 6'	1,012	15	97	91	4	6		101
11	Sprayer 20' boom	3,630	15	349	327	15	20		363
11	Truck 1 Ton #1	36,000	10	10,634	3,750	181	233		4,164
11	Truck 1 Ton #2	36,000	10	10,634	3,750	181	233		4,164
11	Mower 5'	3,500	15	336	316	15	19		350
11	Chisel 4'	2,500	15	240	225	11	14		250
<b>TOTAL</b>		<b>142,741</b>		<b>33,990</b>	<b>13,601</b>	<b>685</b>	<b>884</b>		<b>15,169</b>
40% of new cost*		57,096		13,596	5,440	274	353		6,068

\*Used to reflect a mix of new and used equipment

ANNUAL INVESTMENT COSTS

Description	Price	Yrs Life	Salvage Value	Capital Recovery	Cash Overhead			Total
					Insur- ance	Taxes	Repairs	
<b>INVESTMENT</b>								
Buildings	49,162	20	0	3,862	191	246	983	5,281
Fuel Tanks/Above Ground	3,500	20	651	255	16	21	70	362
Hand Tools	4,595	15	460	414	20	25	92	550
Harvest Carts (70)	1,042	5	0	239	4	5	21	269
Lateral Lines	10,000	5	0	2,294	39	50	200	2,583
Shop Tools	12,637	15	1,264	1,137	54	70	253	1,514
<b>TOTAL INVESTMENT</b>	<b>80,936</b>		<b>2,375</b>	<b>8,200</b>	<b>323</b>	<b>417</b>	<b>1,619</b>	<b>10,558</b>

ANNUAL BUSINESS OVERHEAD COSTS

Description	Units/ Farm	Unit	Price/ Unit	Total Cost
Food Safety	45	acre	100.00	4,500
Land Rent	50	acre	3,000.00	150,000
Liability Insurance	45	acre	13.04	587
Office Expense	45	acre	750.00	33,750
Ranch Supervisor	45	acre	750.00	33,750
Sanitation Fee	45	acre	200.00	9,000

UC COOPERATIVE EXTENSION  
**Table 6. HOURLY EQUIPMENT COSTS for SECOND YEAR STRAWBERRIES**  
 CENTRAL COAST - Santa Cruz/Monterey Counties 2011

Yr	Description	Strawberries Hours Used	Total Hours Used	COSTS PER HOUR						Total Costs/Hr.
				Cash Overhead			Operating			
				Capital Recovery	Insur- ance	Taxes	Lube & Repairs	Fuel	Total Oper.	
11	42HP 4WD Tractor	1	1,067	0.89	0.05	0.06	1.54	7.10	8.63	9.63
11	55HP 2WD Tractor	164	810	1.36	0.07	0.10	2.34	9.29	11.63	13.17
11	Blade Rear 3 pt 6'	1	101	0.36	0.02	0.02	0.00	0.00	0.00	0.40
11	Sprayer 20' boom	42	100	1.31	0.06	0.08	0.64	0.00	0.64	2.09
11	Truck 1 Ton #1	149	200	7.50	0.36	0.47	4.97	17.65	22.61	30.94
11	Truck 1 Ton #2	149	200	7.50	0.36	0.47	4.97	17.65	22.61	30.94
11	Mower 5'	8	133	0.95	0.04	0.06	1.09	0.00	1.09	2.14
11	Chisel 4'	98	166	0.54	0.03	0.03	0.28	0.00	0.28	0.88

## UC COOPERATIVE EXTENSION

**Table 7. OPERATIONS WITH EQUIPMENT SECOND YEAR STRAWBERRIES**

CENTRAL COAST - Santa Cruz/Monterey Counties 2011

Operation	Operation Month	Tractor	Implement	Labor Type	Labor Hours	Material	Rate/acre	Unit
Fertilize (CAN17)	Nov			Non-Machine	0.25	CAN 17 17-0-0	15.00	lb N
	Dec			Non-Machine	0.25	CAN 17 17-0-0	15.00	lb N
Grade Field Roads 2X	Dec	42HP 4WD	Blade Rear 3 pt 6'	Equipment Operator	0.03			
	Mar	42HP 4WD	Blade Rear 3 pt 6'	Equipment Operator	0.03			
Weed-hand	Dec			Non-Machine	10.20			
	Jan			Non-Machine	10.20			
	Feb			Non-Machine	10.20			
	Mar			Non-Machine	10.20			
	Apr			Non-Machine	10.20			
	May			Non-Machine	10.20			
	June			Non-Machine	10.20			
	July			Non-Machine	10.20			
	Aug			Non-Machine	10.20			
	Sept			Non-Machine	10.20			
Prune Leaves	Jan	55HP 2WD	Mower 5'					
Clean Bed Tops (hand)	Jan			Non-Machine	25.00			
Irrigate: Drip Line Repair	Jan			Non-Machine	2.00	T-Tape	436.00	foot
Plant (replants)	Jan			Non-Machine	2.00	Strawberry Plants	1,089.00	each
Irrigate: (drip)	Jan			Non-Machine	0.25	Water	3.00	acin
Whitefly/Aphid (drip)	Jan			Non-Machine	0.25	Admire Pro	14.00	floz
Whitefly/Aphid/Worm/Lygyus	Jan	55HP 2WD	Sprayer 20' boom	Non-Machine	0.10	Lorsban 4E	2.00	pint
Fertilize: (drip) 20-20-20	Feb			Non-Machine	0.25	20-20-20	80.00	lb
	Mar			Non-Machine	0.25	20-20-20	80.00	lb
	Apr					20-20-20	80.00	lb
	May					20-20-20	80.00	lb
	June					20-20-20	80.00	lb
	July					20-20-20	80.00	lb
	Aug					20-20-20	80.00	lb
	Sept					20-20-20	80.00	lb
Whitefly/Aphid/Worm/Lygyus	Feb	55HP 2WD	Sprayer 20' boom	Non-Machine	0.10	Sevin XLR	2.00	pint
Break Bottoms - furrows	Mar	55HP 2WD	Chisel 4'	Equipment Operator	0.98			
	Apr	55HP 2WD	Chisel 4'	Equipment Operator	0.98			
	May	55HP 2WD	Chisel 4'	Equipment Operator	0.98			
	June	55HP 2WD	Chisel 4'	Equipment Operator	0.98			
	July	55HP 2WD	Chisel 4'	Equipment Operator	0.98			
	Aug	55HP 2WD	Chisel 4'	Equipment Operator	0.98			

UC COOPERATIVE EXTENSION  
**Table 7. CONTINUED (2)**  
 CENTRAL COAST - Santa Cruz/Monterey Counties 2011

Operation	Operation Month	Tractor	Implement	Labor Type	Labor Hours	Material	Rate/acre	Unit
Botrytis/Mildew/Lygos	Mar	55HP 2WD	Sprayer 20' boom	Non-Machine	0.10	Captan 50W	4.00	lb
						Rally 40W	5.00	oz
	Apr	55HP 2WD	Sprayer 20' boom	Non-Machine	0.10	Malathion 8	2.00	pint
						Actara	3.00	oz
June	55HP 2WD	Sprayer 20' boom	Non-Machine	0.10	Switch 62.5 WG	14.00	oz	
Irrigate	June	55HP 2WD	Sprayer 20' boom	Non-Machine	0.10	Thiolux	5.00	lb
						Assail 70WP	3.00	oz
						Elevate 50WDG	1.50	lb
						Rally 40W	5.00	oz
Irrigate	June	55HP 2WD	Sprayer 20' boom	Non-Machine	0.10	Captan 50W	4.00	lb
						Thiolux	5.00	lb
						Rimon 0.83EC	12.00	floz
						Water	1.86	acin
						Water	3.69	acin
						Water	3.69	acin
						Water	3.69	acin
						Water	3.69	acin
Water	3.69	acin						
Mildew	Apr	55HP 2WD	Sprayer 20' boom	Non-Machine	0.10	Rally 40W	5.00	oz
Mildew/Anthr/Worm/Lygos	Apr	55HP 2WD	Sprayer 20' boom	Non-Machine	0.10	Quadris	12.00	floz
						Dipel DF	1.00	lb
						Rimon 0.83EC	12.00	floz
Botrytis/Mildew/Worm	Apr	55HP 2WD	Sprayer 20' boom	Non-Machine	0.10	Rally 40W	5.00	oz
						Elevate 50WDG	1.50	lb
						Success	5.00	floz
Botrytis/Mildew/Worm	May	55HP 2WD	Sprayer 20' boom	Non-Machine	0.10	Captan 50W	4.00	lb
						Thiolux	5.00	lb
						Dipel DF	1.00	lb
Mildew/Anthr/Lygos	May	55HP 2WD	Sprayer 20' boom	Non-Machine	0.10	Quadris	12.00	floz
						Malathion 8	2.00	pint
						Actara	3.00	oz
Botrytis/Worm	June	55HP 2WD	Sprayer 20' boom	Non-Machine	0.10	Pristine	23.00	oz
						Dipel DF	1.00	lb
Mildew/Lygos	July	55HP 2WD	Sprayer 20' boom	Non-Machine	0.10	Quadris	12.00	floz
						Rimon 0.83EC	12.00	floz
Worm/Lygos	Aug	55HP 2WD	Sprayer 20' boom	Non-Machine	0.10	Success	5.00	floz
						Dibrom 8 Emulsive	16.00	floz
Botrytis/Mildew	Sept	55HP 2WD	Sprayer 20' boom	Non-Machine	0.10	Captan 50W	4.00	lb
						Thiolux	5.00	lb
Year End Cleanup	Oct					Crop Removal YrEnd	1.00	acre
PCA	Oct					PCA	1.00	acre

UC COOPERATIVE EXTENSION  
**Table 7. CONTINUED (3)**  
 CENTRAL COAST - Santa Cruz/Monterey Counties 2011

Operation	Operation Month	Tractor	Implement	Labor Type	Labor Hours	Material	Rate/acre	Unit
Harvest Fresh	Mar			Non-Machine	67.00	Crate/Basket/Wire	250.00	each
						Misc Picking Costs	250.00	tray
	Apr			Non-Machine	89.00	Crate/Basket/Wire	500.00	each
						Misc Picking Costs	500.00	tray
	May			Non-Machine	89.00	Crate/Basket/Wire	500.00	each
						Misc Picking Costs	500.00	tray
	June			Non-Machine	133.00	Crate/Basket/Wire	750.00	each
						Misc Picking Costs	750.00	tray
	July			Non-Machine	133.00	Crate/Basket/Wire	750.00	each
						Misc Picking Costs	750.00	tray
	Aug			Non-Machine	107.00	Crate/Basket/Wire	500.00	each
						Misc Picking Costs	500.00	tray
	Sept			Non-Machine	53.00	Crate/Basket/Wire	250.00	each
						Misc Picking Costs	250.00	tray
Load/Haul	Mar		Truck 1 Ton #1	Non-Machine	1.04	Misc Pack/Transport Mat Fresh	0.04	acre
	Mar		Truck 1 Ton #2	Non-Machine	1.04	Misc Pack/Transport Mat Fresh	0.04	acre
	Apr		Truck 1 Ton #1	Non-Machine	1.39	Misc Pack/Transport Mat Fresh	0.07	acre
	Apr		Truck 1 Ton #2	Non-Machine	1.39	Misc Pack/Transport Mat Fresh	0.07	acre
	May		Truck 1 Ton #1	Non-Machine	1.39	Misc Pack/Transport Mat Fresh	0.07	acre
	May		Truck 1 Ton #2	Non-Machine	1.39	Misc Pack/Transport Mat Fresh	0.07	acre
	June		Truck 1 Ton #1	Non-Machine	2.09	Misc Pack/Transport Mat Fresh	0.11	acre
	June		Truck 1 Ton #2	Non-Machine	2.09	Misc Pack/Transport Mat Fresh	0.11	acre
	July		Truck 1 Ton #1	Non-Machine	2.09	Misc Pack/Transport Mat Fresh	0.11	acre
	July		Truck 1 Ton #2	Non-Machine	2.09	Misc Pack/Transport Mat Fresh	0.11	acre
	Aug		Truck 1 Ton #1	Non-Machine	1.67	Misc Pack/Transport Mat Fresh	0.07	acre
	Aug		Truck 1 Ton #2	Non-Machine	1.67	Misc Pack/Transport Mat Fresh	0.07	acre
	Sept		Truck 1 Ton #1	Non-Machine	0.83	Misc Pack/Transport Mat Fresh	0.04	acre
	Sept		Truck 1 Ton #2	Non-Machine	0.83	Misc Pack/Transport Mat Fresh	0.04	acre
Cooling	Mar					Cooler	250.00	tray
	Apr					Cooler	500.00	tray
	May					Cooler	500.00	tray
	June					Cooler	750.00	tray
	July					Cooler	750.00	tray
	Aug					Cooler	500.00	tray
	Sept					Cooler	250.00	tray
	Sept					Cooler	250.00	tray
Harvest Freezer	Apr			Non-Machine	45.00	Misc Picking Costs	250.00	tray
	May			Non-Machine	45.00	Misc Picking Costs	250.00	tray
	June			Non-Machine	45.00	Misc Picking Costs	250.00	tray
	July			Non-Machine	45.00	Misc Picking Costs	250.00	tray
	Aug			Non-Machine	53.00	Misc Picking Costs	250.00	tray
	Sept			Non-Machine	53.00	Misc Picking Costs	250.00	tray

UC COOPERATIVE EXTENSION  
**Table 7. CONTINUED (4)**  
 CENTRAL COAST - Santa Cruz/Monterey Counties 2011

Operation	Operation Month	Tractor	Implement	Labor Type	Labor Hours	Material	Rate/acre	Unit	
Load/Haul Freezer	Apr		Truck 1 Ton #1	Non-Machine	0.70				
	Apr		Truck 1 Ton #2	Non-Machine	0.70				
	May		Truck 1 Ton #1	Non-Machine	0.70				
	May		Truck 1 Ton #2	Non-Machine	0.70				
	June		Truck 1 Ton #1	Non-Machine	0.70				
	June		Truck 1 Ton #2	Non-Machine	0.70				
	July		Truck 1 Ton #1	Non-Machine	0.70				
	July		Truck 1 Ton #2	Non-Machine	0.70				
	Aug		Truck 1 Ton #1	Non-Machine	0.83				
	Aug		Truck 1 Ton #2	Non-Machine	0.83				
	Sept		Truck 1 Ton #1	Non-Machine	0.83				
	Sept		Truck 1 Ton #2	Non-Machine	0.83				
	Assessments Cal Strawberry	Sept					Strawberry Fresh	3,500.00	tray
							Strawberry Freezer	15,000.00	lb