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UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION

2014

# SAMPLE COSTS TO PRODUCE ORGANIC STRAWBERRIES

FRESH MARKET



## CENTRAL COAST

**Santa Cruz, Monterey, and San Benito Counties**

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CENTRAL COAST - Santa Cruz, Monterey, and San Benito Counties 2014  
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**CONTENTS**

|   |    |
|---|----|
| INTRODUCTION .....  | 2  |
| ASSUMPTIONS .....   | 3  |
| Production Cultural Practices and Material Inputs .....                             | 3  |
| Labor, Interest, Equipment .....  | 6  |
| Cash Overhead .....   | 7  |
| Non-Cash Overhead.....  | 8  |
| REFERENCES .....  | 10 |
| Table 1. Cost Per Acre to Produce Organic Strawberries .....                        | 11 |
| Table 2. Costs and Returns per Acre to Produce Organic Strawberries .....           | 13 |
| Table 3. Monthly Cash Costs Per Acre to Produce Organic Strawberries .....          | 15 |
| Table 4. Ranging Analysis .....   | 17 |
| Table 5. Whole Farm Annual Equipment, Investment, and Business Overhead Costs ..... | 18 |
| Table 6. Hourly Equipment Costs .....   | 19 |
| Table 7. Operations with Equipment & Materials.....                                 | 20 |

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**INTRODUCTION**

Organic production, as defined by the USDA’s 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, Monterey, and San Benito 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 titled "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) 752-5489, UC Cooperative Extension Santa Cruz County: Mark Bolda (831) 763-8025 and Laura Tourte (831) 763-8005, or the UC Cooperative Extension office in your county.

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 at (530) 752-1515, or obtained from selected county UC Cooperative Extension offices.

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## 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, Monterey, and San Benito 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 in 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. Organic growers should be certain that any material inputs and applications meet the regulatory requirements of state and national programs, and their certifying agent(s). **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.**

Conventional strawberries represent approximately 85 percent of total strawberry acreage along the Central Coast, according to 2014 California Strawberry Commission data. Many of the practices that are used in organic production are also used in conventional production. Differences between the two production systems are found primarily, though not exclusively, in crop fertilization and pest management.

**Farm.** This study assumes a farm operation size of 30 contiguous acres of rented land. Organic strawberries are planted on 27 acres; roads, the irrigation system, and on-farm buildings account for the remaining three acres. In this area, arrangements are often made with other farmers and owners of organically certified land to rotate strawberries with vegetable and other berry crops. In some cases organic strawberries may be planted on the same land for more than one year. The grower rents the land, which includes a small shop, for \$2,700 per acre, per year, and owns the machinery and equipment used. Farming on sloped or hilly land may result in varying costs for land rent and cultural practices.

### Production Cultural Practices and Material 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, Pre-Plant Fertilization, and Irrigation.** Two soil samples for the planted 27 acres are taken for analysis in the fall before land preparation to help determine fertilization practices. This study assumes that in September a previously planted cover or cash crop is disced twice to incorporate plant residue. Compost, at five tons per acre, is purchased and spread by a custom operator immediately after incorporating the cover crop. Fields are sprinkler irrigated with one acre-inch of water once during this time to assist with weed management and soil preparation. The field is then subsoiled five times, leveled, disked four times, and chiseled twice. In October, blood meal, as a fertilizer, and gypsum, as a soil amendment, are spread by a custom operator and incorporated into the soil at the rate of 500 pounds and 2 tons per acre, respectively. In mid-to-late October, 48-inch wide beds are listed, shaped, sprinkler irrigated with 0.5 acre inches of water, and then re-listed and re-shaped. Drip irrigation tape at two lines per bed is installed immediately after, and the beds are covered with black plastic mulch using a mulch laying implement.

**Plant Establishment.** Prior to planting, a slotting implement is used to open the plastic mulch at appropriate intervals to prepare for transplanting. Strawberry plants are delivered to the field edge and then transplanted into two rows, 12 inches apart, for a per acre plant density of 21,780. Planting takes approximated 50 hours per acre. Several strawberry varieties such as Seascape, Albion, Chandler, Sweet Anne, and a number of proprietary varieties are suitable for organic production in the region, but no specific variety is assumed in this study. Fields are irrigated with roughly one acre-inch of water immediately after planting. Typically, five percent of the field, or 1,089 plants per acre, is replanted in the weeks and months that follow because of poor planting and field conditions.

**Post-Plant Fertilization.** From February to September (eight months), the grower applies a series of foliar sprays, including Biomin Calcium (2-0-0-7, a calcium supplement) and Maxi Crop Seaweed Extract, 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 nitrogen, phosphorus, and potassium (NPK) and micronutrients are supplied to the plants.

From March to September, liquid fertilizers are applied to the soil through the drip irrigation system. Agrothrive LF, a fish emulsion, is the applied twice per month at the rate of five gallons each per acre, per application, for a total of fourteen applications. Fertilization materials and rates will vary by grower and year depending soil tests and plant needs.

**Post-Plant Irrigation.** From March through September (seven months), strawberries are drip irrigated two to three times per week using a total of 24 acre-inches of water over the entire growing season. Including the 2.5 acre inches applied by sprinkler irrigation earlier in the season, a total of 26.5 acre inches is applied to the field. The cost of pumping water is estimated at \$270 per acre-foot or \$22.50 per acre-inch. Effective rainfall is not taken into account. The amount and cost of water can differ substantially from farm to farm in the area depending on factors such as climatic conditions, soil type, well depth, and irrigation district cost.

**Pest Management.** The pesticides and rates mentioned in this cost study are listed in the *UC Integrated Pest Management Guidelines, Strawberries*. For more information on pesticides, pest identification, monitoring, and management visit the UC IPM website at <http://ipm.ucdavis.edu>, or contact your local UCCE farm advisor. Pesticide use permits and regulatory information are available through the local county agricultural commissioner's office. Pesticides mentioned in this study are used to calculate rates and costs; 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; the effectiveness of practices depends upon field and environmental conditions.

*Pest Control Adviser (PCA).* To assist with pest management decisions in this study, the grower contracts with a PCA at an estimated cost of \$125 per acre, per year. Pest Control Advisers write pest management recommendations and monitor the fields for production, nutrition, and pest problems.

*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. Although weeding times vary by grower and month, the study assumes an average of 20 hours of hand weeding per acre, per month. Weeds in furrows between beds are controlled using mechanical cultivations.

*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.

*Insects and mites.* Pests common to strawberries in this area include lygus bug (*Lygus hesperus*), light brown apple moth (LBAM [*Epiphyas postvittana*]), two-spotted spider mite (*Tetranychus urticae*), greenhouse whitefly (*Trialeurodes vaporariorum*), Western flower thrips (*Frankliniella occidentalis*), vinegar flies (*generic*) and certain species of aphids and other Lepidoptera (*worms*).

Lygus bug is considered to be one of the most challenging pests to manage in strawberry production, including organic production. To assist with management, growers use a bug vacuum twice per week beginning in April and ending in October (or end of the season).

To assist with the control of two-spotted spider mite, a predatory mite (*Phytoseiulus persimilis*), is released four times during the season, twice in February and twice in March, for a total of 80,000 mites per acre, per year. Application time is estimated at one hour per acre, per release. Lepidopterous 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. LBAM is managed using three applications of Entrust, one each in May, June, and September, at the rate of 2.5 ounces per acre. The Entrust applications also assist with management of vinegar flies, as does the culling of fruit mentioned below.

*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 (Kumulus) is applied for powdery mildew control at the rate of five pounds per acre, per application, every three weeks, beginning in late March and ending in early October, totaling nine applications per year. Because no organically acceptable fungicide has proven consistently effective for Botrytis fruit rot, the associated disease pressure is minimized by culling diseased fruit by hand during harvest. It is assumed to be included in harvest costs.

**Harvest.** The crop is harvested twice per week from April through early October with peak harvest in June, July, and August. The percent of the total crop harvested each month is shown in Table A. Crew size will vary according to the amount of fruit ready for harvest. In this study, it is assumed that the grower will use a 30 person crew early in the season, with two 30 person crews during peak harvest; labor availability may dictate exact crew size and number throughout the season. The grower hires a ranch supervisor (shown under Cash Overhead) to manage the harvest and other operations. Fruit is harvested into a tray on a picking cart that contains eight, one-pound-sized, clamshells. At the same time that strawberries are harvested, Botrytis infected, bronzed, overripe, and misshapen fruit is culled and discarded in the furrows. Other container types and sizes are used, but are not included in this study. Harvest rates per picker range 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 person to check for proper picking and one card puncher per crew (the foreman may perform this work) to count the trays harvested by each picker. To load and haul the fruit, one truck loader stacks the trays on a flat bed truck and the driver delivers the strawberries to the cooler. The grower uses two one-ton flatbed trucks that each alternately holds two pallets at 120 trays per pallet for prompt delivery to the cooler. Trays per pallet will vary by container types. The truck driver takes about one hour per load to deliver the filled trays to the cooler and return to the farm. 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). For ease in calculating, hourly wages are paid to an average crew size of 1.5 crews (45 people).

Table A. Percent Crop Harvested by Month

|           | April | May | June | July | Aug | Sept | Oct |
|-----------|-------|-----|------|------|-----|------|-----|
| Harvest % | 5     | 12  | 25   | 25   | 18  | 12   | 3   |

*Yields.* Yields for organic strawberries vary depending on season and growing conditions. In this area, yields typically range from 3,500 to 5,000 eight-pound trays per acre; however, some varieties may produce higher yields. This study uses an average yield of 4,250 trays per acre.

*Returns.* For this study, the unit price to growers for organic fruit is \$15 per tray. This price falls within the \$8 to \$26 per tray range of the Salinas-Watsonville 2014 shipping point averages of the USDA Agricultural Marketing Service reports. Fresh market fruit harvested early and late in the season is generally sold at prices higher than fruit harvested mid-season. Estimated returns for a range of prices and yields are shown on Table 4.

**California Strawberry Commission (CSC) Assessments.** The CSC charges an assessment of \$0.04 per tray to the grower to support the commission's goals, focusing on production and nutrition research, trade relations, public relations, and public policy.

**Sales/Marketing.** Selling costs for fresh market 6 to 12 pound trays are calculated as 8% of selling price or \$1.20 ( $\$15 \times 8\%$ ) per tray. The selling cost is deducted from the grower returns and the grower receives the net proceeds (\$13.80).

**Cooling Costs.** Cooling costs vary by cooler and grower volume. Growers are responsible for these costs, which may be negotiable with a cooler. The estimated cost used in this study is \$0.70 per tray.

**Post-Harvest Cleanup.** After all harvest operations have been completed, the plants are mowed. The plastic mulch and drip tape are removed from the field by the grower and hauled to a disposal site. The field is then disked twice in preparation for the next crop.

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

**Labor.** Labor rates of \$19.10 per hour for machine operators and \$12.37 for general labor includes payroll overhead of 33%. The basic hourly wages are \$14.35 for machine operators and \$9.30 for general labor. Typically, the pickers are paid an hourly labor rate early and late in the season. During the peak harvest period, pickers are usually paid an hourly base pay plus piecework. The piece rate during the peak season (June, July, and August) in this study is calculated at \$5.25 per hour plus \$1.10 per tray. Adding 33% for overhead, the piece rate is \$6.98 per hour and \$1.46 per tray. Labor rates at harvest will vary from grower to grower in the region depending on variety planted, production conditions, and fruit load. 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 March, 2014 (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 and Biological Engineers (ASABE). Fuel and lubrication costs are also determined by ASABE equations based on maximum power takeoff (PTO) horsepower, and fuel type. Prices for on-farm delivery of diesel and gasoline are \$3.56 and \$3.93 per gallon, respectively. The cost includes the local sales tax on diesel fuel and gasoline. Gasoline also includes federal and state excise tax, which are refundable for on-farm use when filing income taxes. 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 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, 2014.

**Risk.** The risks associated with producing and marketing organic strawberries are high. While this study makes every effort to model a production system based on typical, real world practices, it cannot fully represent financial, production, market, legal, and human resource risks that ultimately affect the profitability and economic viability of organic strawberries. In this area invasive pests pose particular high regulatory and management challenges and increase production and marketing risks for growers. In addition, labor availability, scheduling, and cost is a noteworthy human resource risk. In recent years labor constraints have meant challenges in securing and retaining a sufficient number of workers to ensure timely and effective farm operations. Some growers report paying higher wages to attract and retain workers; others may pay overtime because of labor constraints. Overall profitability of the crop is negatively impacted in either case.

### **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 expenses, liability and property insurance, sanitation services, and equipment repairs. Employee benefits, insurance, and payroll taxes are included in labor costs and not in overhead costs (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 0.829% of the average value of the assets over their useful life. Liability insurance covers accidents on the farm and costs \$627 for the entire farm.

**Office Expenses.** Office and business expenses are estimated at \$750 per acre. These expenses include office supplies, telephones, bookkeeping, accounting, legal fees, road maintenance, utilities, and miscellaneous expenses.

**Organic Certification and Registration Fees.** Organic strawberry certification and registration fees are estimated at \$176 per acre. This includes fees associated with field inspection, certification, and inspection by a USDA accredited certification agent and the California Department of Food and Agriculture's Organic Program registration fee. Depending on income and variability in inspection time, fees will vary from year to year.

**Food Safety Program.** Growers of fresh market commodities, such as strawberries, 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 done to ensure the safety of fresh products, accommodate buyer requests, and to

enhance marketability of the crop. Costs will vary depending upon farm or inspection circumstances. For this study, costs for the farm are estimated at approximately \$30 per acre for a total of \$810 per year.

**Regulatory Programs.** Costs associated with regulatory programs, such as water and air quality, are estimated at \$50 per acre, per year for monitoring and reporting.

**Sanitation Services.** Sanitation services provide two sets of triple-portable toilets with hand washing equipment and cost the farm \$6,340 annually. Sanitation facilities required vary by state regulations and crew size.

**Land Rent.** The grower pays \$2,700 per acre per year for the 30-acres; land rent for the 27 producing acres is therefore estimated at \$3,000 per acre per year. The land includes a small shop and storage area.

**Farm Supervisor.** The grower hires a farm supervisor to oversee some of the cultural and harvest operations as well as fill in on some of the operations where temporary assistance is needed. The estimated cost for the supervisor is \$1,000 per acre.

### **Non-Cash Overhead**

Non-cash overhead costs, shown on an annual per acre basis, are 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  $((\text{Purchase Price} - \text{Salvage Value}) \times (\text{Capital Recovery Factor})) + (\text{Salvage Value} \times \text{Interest Rate})$ .

*Salvage Value.* Salvage value is an estimate of the remaining value of an investment at the end of its useful life. For farm machinery (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 and Biological Engineers (ASABE) based on equipment type and years of life. The life in years is estimated by dividing the wear out life, as given by ASABE 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 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% 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, 2014.

**Buildings.** The grower maintains a 1,200 square foot metal building on a cement slab.

**Fuel Tanks.** Two 300-gallon fuel tanks set in containment are installed for equipment fuel.

**Shop/Hand Tools.** Shop, hand, and various small field tools are included in these costs. Tools vary considerably from farm to farm and cost does not represent any specific inventory.

**Irrigation System.** The irrigation systems include the filtration system and laterals that connect to drip lines. Water is pumped through the filtration system into the main lines. Reusable telescoping lateral lines are buried each year at the edge of the strawberry field and are connected to the main and drip lines. The drip lines are included in irrigation system costs. The grower owns enough sprinkler pipes to cover 27 acres per setting.

**Irrigation Pump & Well.** This study assumes that the grower refurbished a 75 HP electric pump and well that services the farm. In general, growers in the region are responsible for the portion above ground such as the pump, and the landowner is responsible for what is below ground, such as the well running dry.

**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 60% 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.

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CENTRAL COAST - 2014

**Table 1. COSTS PER ACRE TO PRODUCE ORGANIC STRAWBERRIES**

| Operation                                 | Equipment<br>Operation | Cash and Labor Costs per Acre |            |                   |                  |                 |               | Total<br>Cost | Your<br>Cost |
|---|------------------------|-------------------------------|------------|-------------------|------------------|-----------------|---------------|---------------|--------------|
|   | Time<br>(Hrs/A)        | Labor<br>Cost                 | Fuel       | Lube &<br>Repairs | Material<br>Cost | Custom/<br>Rent |               |               |              |
| Cultural:                                 |                        |                               |            |                   |                  |                 |               |               |              |
| Soil Samples (2 per 27 Acre Farm)         | 0.00                   | 0                             | 0          | 0                 | 0                | 6               | 6             |               |              |
| Disk 2X (Cover Crop)                      | 0.50                   | 11                            | 9          | 3                 | 0                | 0               | 23            |               |              |
| Compost + Spread                          | 0.00                   | 0                             | 0          | 0                 | 275              | 12              | 287           |               |              |
| Sprinklers: Setup and Removal             | 3.00                   | 106                           | 32         | 10                | 0                | 0               | 147           |               |              |
| Irrigate: Sprinkler                       | 0.00                   | 46                            | 0          | 0                 | 56               | 0               | 103           |               |              |
| Subsoil 5X                                | 1.80                   | 41                            | 31         | 13                | 0                | 0               | 85            |               |              |
| Level (Triplane)                          | 1.00                   | 23                            | 17         | 7                 | 0                | 0               | 47            |               |              |
| Disk 4X                                   | 1.00                   | 23                            | 17         | 6                 | 0                | 0               | 47            |               |              |
| Chisel 2X                                 | 0.54                   | 12                            | 8          | 3                 | 0                | 0               | 24            |               |              |
| Blood Meal + Gypsum Spread                | 0.00                   | 0                             | 0          | 0                 | 880              | 12              | 892           |               |              |
| Beds List/Shape                           | 1.00                   | 23                            | 17         | 5                 | 0                | 0               | 45            |               |              |
| Beds Re-List/Re-Shape (Post irrigation)   | 1.00                   | 23                            | 17         | 5                 | 0                | 0               | 45            |               |              |
| Install Drip System, Tape & Laterals      | 3.00                   | 82                            | 32         | 12                | 240              | 0               | 365           |               |              |
| Plant: Lay Mulch                          | 1.50                   | 34                            | 16         | 5                 | 363              | 0               | 419           |               |              |
| Plant: Punch Planting Holes               | 0.75                   | 17                            | 8          | 3                 | 0                | 0               | 28            |               |              |
| Plant: Strawberries (Includes 5% Replant) | 0.00                   | 649                           | 0          | 0                 | 2,744            | 0               | 3,394         |               |              |
| Weed: Hand                                | 0.00                   | 2,474                         | 0          | 0                 | 0                | 0               | 2,474         |               |              |
| Insect: Mites (Predatory)                 | 0.00                   | 49                            | 0          | 0                 | 880              | 0               | 929           |               |              |
| Weed: Cultivate                           | 0.75                   | 17                            | 11         | 4                 | 0                | 0               | 32            |               |              |
| Fertilize: Foliar (Biomin)                | 0.78                   | 18                            | 11         | 4                 | 144              | 0               | 177           |               |              |
| Fertilize: Foliar (Maxi Crop)             | 0.78                   | 18                            | 11         | 4                 | 226              | 0               | 260           |               |              |
| Vertebrate Trapping                       | 0.00                   | 25                            | 0          | 0                 | 0                | 0               | 25            |               |              |
| Pest Control Adviser (PCA)                | 0.00                   | 0                             | 0          | 0                 | 0                | 125             | 125           |               |              |
| Irrigate: Drip                            | 0.00                   | 148                           | 0          | 0                 | 540              | 0               | 688           |               |              |
| Fertilize: Soil (Agrothrive)              | 0.00                   | 37                            | 0          | 0                 | 250              | 0               | 287           |               |              |
| Insect: Vacuum Lygus 8X/month             | 23.73                  | 544                           | 251        | 307               | 0                | 0               | 1,101         |               |              |
| Disease: Powdery Mildew (Kumulus)         | 0.98                   | 22                            | 14         | 5                 | 75               | 0               | 117           |               |              |
| Insect: LBAM (Entrust)                    | 0.29                   | 7                             | 4          | 2                 | 332              | 0               | 344           |               |              |
| Worms: (Dipel)                            | 0.20                   | 4                             | 3          | 1                 | 74               | 0               | 82            |               |              |
| Post Harvest Cleanup                      | 3.00                   | 372                           | 20         | 14                | 18               | 0               | 423           |               |              |
| Pickup: Business Use                      | 1.71                   | 39                            | 17         | 6                 | 0                | 0               | 62            |               |              |
| ATV                                       | 0.59                   | 14                            | 2          | 1                 | 0                | 0               | 16            |               |              |
| <b>TOTAL Cultural COSTS</b>               | <b>47.89</b>           | <b>4,881</b>                  | <b>548</b> | <b>419</b>        | <b>7,097</b>     | <b>155</b>      | <b>13,099</b> |               |              |
| Harvest:                                  |                        |                               |            |                   |                  |                 |               |               |              |
| Harvest: Regular and Peak Production      | 0.00                   | 11,732                        | 0          | 0                 | 6,885            | 0               | 18,617        |               |              |
| Harvest: Load & Haul                      | 50.00                  | 1,351                         | 246        | 214               | 0                | 0               | 1,812         |               |              |
| Harvest: Cooler                           | 0.00                   | 0                             | 0          | 0                 | 0                | 2,975           | 2,975         |               |              |
| CSC Assessment                            | 0.00                   | 0                             | 0          | 0                 | 170              | 0               | 170           |               |              |
| Sales/Marketing                           | 0.00                   | 0                             | 0          | 0                 | 5,100            | 0               | 5,100         |               |              |
| <b>TOTAL Harvest COSTS</b>                | <b>50.00</b>           | <b>13,083</b>                 | <b>246</b> | <b>214</b>        | <b>12,155</b>    | <b>2,975</b>    | <b>28,673</b> |               |              |
| Interest on Operating Capital @ 5.75%     |                        |                               |            |                   |                  |                 | 710           |               |              |
| <b>TOTAL OPERATING COSTS/ACRE</b>         | <b>97.89</b>           | <b>17,964</b>                 | <b>793</b> | <b>634</b>        | <b>19,252</b>    | <b>3,130</b>    | <b>42,482</b> |               |              |

## UC COOPERATIVE EXTENSION

CENTRAL COAST - 2014

Table 1. CONTINUED

| Operation                          | Equipment<br>Operation | Cash and Labor Costs per Acre |      |                                 |                  |                 |  | Total<br>Cost | Your<br>Cost |
|------------------------------------|------------------------|-------------------------------|------|---------------------------------|------------------|-----------------|--|---------------|--------------|
|                                    | Time<br>(Hrs/A)        | Labor<br>Cost                 | Fuel | Lube &<br>Repairs               | Material<br>Cost | Custom/<br>Rent |  |               |              |
| CASH OVERHEAD:                     |                        |                               |      |                                 |                  |                 |  |               |              |
| Office Expense                     |                        |                               |      |                                 |                  |                 |  | 833           |              |
| Food Safety                        |                        |                               |      |                                 |                  |                 |  | 30            |              |
| Land Rent                          |                        |                               |      |                                 |                  |                 |  | 2,700         |              |
| Liability Insurance                |                        |                               |      |                                 |                  |                 |  | 21            |              |
| Sanitation Fee                     |                        |                               |      |                                 |                  |                 |  | 235           |              |
| Regulatory Programs                |                        |                               |      |                                 |                  |                 |  | 50            |              |
| Organic Certification/Registration |                        |                               |      |                                 |                  |                 |  | 176           |              |
| Ranch Supervisor                   |                        |                               |      |                                 |                  |                 |  | 1,000         |              |
| Property Taxes                     |                        |                               |      |                                 |                  |                 |  | 60            |              |
| Property Insurance                 |                        |                               |      |                                 |                  |                 |  | 50            |              |
| Investment Repairs                 |                        |                               |      |                                 |                  |                 |  | 102           |              |
| TOTAL CASH OVERHEAD COSTS/ACRE     |                        |                               |      |                                 |                  |                 |  | 5,257         |              |
| TOTAL CASH COSTS/ACRE              |                        |                               |      |                                 |                  |                 |  | 47,739        |              |
| NON-CASH OVERHEAD:                 |                        |                               |      |                                 |                  |                 |  |               |              |
|                                    |                        | Per producing<br>Acre         |      | Annual Cost<br>Capital Recovery |                  |                 |  |               |              |
| Buildings 1,200 sqft               |                        | 1,556                         |      | 98                              |                  |                 |  | 98            |              |
| Fuel Tanks 2-300 gal               |                        | 130                           |      | 9                               |                  |                 |  | 9             |              |
| Harvest Carts (70)                 |                        | 52                            |      | 12                              |                  |                 |  | 12            |              |
| 75HP Pump                          |                        | 556                           |      | 44                              |                  |                 |  | 44            |              |
| Sprinkler Pipe                     |                        | 2,222                         |      | 210                             |                  |                 |  | 210           |              |
| Lateral Lines                      |                        | 444                           |      | 102                             |                  |                 |  | 102           |              |
| Shop Tools                         |                        | 556                           |      | 50                              |                  |                 |  | 50            |              |
| Equipment                          |                        | 5,236                         |      | 779                             |                  |                 |  | 779           |              |
| TOTAL NON-CASH OVERHEAD COSTS      |                        |                               |      |                                 |                  |                 |  | 1,305         |              |
| TOTAL COSTS/ACRE                   |                        |                               |      |                                 |                  |                 |  | 49,044        |              |

Note: Growing Costs/Acre = Total Cash Costs/Acre – Harvest Costs/Acre (\$47,739 - \$28,673 = **\$19,066**)

UC COOPERATIVE EXTENSION  
CENTRAL COAST - 2014

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

|  | Quantity/<br>Acre | Unit        | Price or<br>Cost/Unit | Value or<br>Cost/Acre | Your<br>Cost |
|--|-------------------|-------------|-----------------------|-----------------------|--------------|
| <b>GROSS RETURNS</b>                     |                   |             |                       |                       |              |
| Organic                                  | 4,250.00          | tray        | 15.00                 | <b>63,750</b>         |              |
| <b>TOTAL GROSS RETURNS</b>               | <b>4,250.00</b>   | <b>tray</b> |                       | <b>63,750</b>         |              |
| <b>OPERATING COSTS</b>                   |                   |             |                       |                       |              |
| <b>Insecticide:</b>                      |                   |             |                       | <b>1,285</b>          |              |
| Persimilis (Predatory Mites)             | 80.00             | thou        | 11.00                 | 880                   |              |
| Entrust                                  | 7.50              | oz          | 44.21                 | 332                   |              |
| Dipel DF (Bt)                            | 4.00              | lb          | 18.38                 | 74                    |              |
| <b>Fungicide:</b>                        |                   |             |                       | <b>75</b>             |              |
| Kumulus DF                               | 45.00             | lb          | 1.67                  | 75                    |              |
| <b>Fertilizer:</b>                       |                   |             |                       | <b>1,775</b>          |              |
| Compost                                  | 5.00              | ton         | 55.00                 | 275                   |              |
| Blood Meal                               | 500.00            | lb          | 1.60                  | 800                   |              |
| Gypsum                                   | 2.00              | ton         | 40.00                 | 80                    |              |
| Biomin Calcium                           | 8.00              | gal         | 18.02                 | 144                   |              |
| Maxi-Crop                                | 20.00             | lb          | 11.32                 | 226                   |              |
| Agrothrive LF                            | 70.00             | gal         | 3.57                  | 250                   |              |
| <b>Custom:</b>                           |                   |             |                       | <b>6</b>              |              |
| Soil Analysis (2 per 27 acres)           | 0.04              | farm        | 150.00                | 6                     |              |
| <b>Materials:</b>                        |                   |             |                       | <b>7,506</b>          |              |
| T-Tape                                   | 21,780.00         | feet        | 0.01                  | 240                   |              |
| Black Plastic Mulch                      | 2.75              | rolls       | 132.00                | 363                   |              |
| 8 Clamshell +Tray                        | 4,250.00          | each        | 1.62                  | 6,885                 |              |
| Disposal Site Fees                       | 600.00            | lb          | 0.03                  | 18                    |              |
| <b>Water:</b>                            |                   |             |                       | <b>596</b>            |              |
| Water - Pumped                           | 26.50             | acin        | 22.50                 | 596                   |              |
| <b>Plants:</b>                           |                   |             |                       | <b>2,744</b>          |              |
| Strawberry Plants                        | 22,869.00         | each        | 0.12                  | 2,744                 |              |
| <b>Contract:</b>                         |                   |             |                       | <b>3,124</b>          |              |
| Spread Compost/Blood Meal                | 2.00              | acre        | 12.00                 | 24                    |              |
| Pest Control Adviser (PCA)               | 1.00              | acre        | 125.00                | 125                   |              |
| Cooler                                   | 4,250.00          | tray        | 0.70                  | 2,975                 |              |
| <b>Assessments/Sales Commission:</b>     |                   |             |                       | <b>5,270</b>          |              |
| CSC Assessment                           | 4,250.00          | tray        | 0.04                  | 170                   |              |
| Sales Commission @ 8%                    | 4,250.00          | tray        | 1.20                  | 5,100                 |              |
| <b>Labor:</b>                            |                   |             |                       | <b>17,964</b>         |              |
| Equipment Operator Labor                 | 117.46            | hrs         | 19.10                 | 2,244                 |              |
| Non-Machine Labor                        | 319.99            | hrs         | 12.37                 | 3,958                 |              |
| Irrigation Labor                         | 2.45              | hrs         | 12.37                 | 30                    |              |
| Harvest Labor (Regular & Peak)*          | 948.41            | hrs         | 12.37                 | 11,732                |              |
| <b>Machinery:</b>                        |                   |             |                       | <b>1,427</b>          |              |
| Fuel-Gas                                 | 70.14             | gal         | 3.93                  | 276                   |              |
| Fuel-Diesel                              | 145.40            | gal         | 3.56                  | 518                   |              |
| Lube                                     |                   |             |                       | 119                   |              |
| Machinery Repair                         |                   |             |                       | 515                   |              |
| Interest on Operating Capital (5.75%)    |                   |             |                       | 710                   |              |
| <b>TOTAL OPERATING COSTS/ACRE</b>        |                   |             |                       | <b>42,482</b>         |              |
| <b>NET RETURNS ABOVE OPERATING COSTS</b> |                   |             |                       | <b>21,268</b>         |              |

\* Peak Harvest Labor Hours/Acre are the equivalent of hourly wage plus piece rate.

## UC COOPERATIVE EXTENSION

CENTRAL COAST - 2014

**Table 2. CONTINUED**

|   | Quantity/<br>Acre | Unit | Price or<br>Cost/Unit | Value or<br>Cost/Acre | Your<br>Cost |
|---|-------------------|------|-----------------------|-----------------------|--------------|
| <b>CASH OVERHEAD COSTS</b>                        |                   |      |                       |                       |              |
| Office Expense                                    |                   |      |                       | 833                   |              |
| Food Safety                                       |                   |      |                       | 30                    |              |
| Land Rent   |                   |      |                       | 2,700                 |              |
| Liability Insurance                               |                   |      |                       | 21                    |              |
| Sanitation Fee                                    |                   |      |                       | 235                   |              |
| Regulatory Programs                               |                   |      |                       | 50                    |              |
| Organic Certification/Registration                |                   |      |                       | 176                   |              |
| Ranch Supervisor                                  |                   |      |                       | 1,000                 |              |
| Property Taxes                                    |                   |      |                       | 60                    |              |
| Property Insurance                                |                   |      |                       | 50                    |              |
| Investment Repairs                                |                   |      |                       | 102                   |              |
| <b>TOTAL CASH OVERHEAD COSTS/ACRE</b>             |                   |      |                       | <b>5,257</b>          |              |
| <b>TOTAL CASH COSTS/ACRE</b>                      |                   |      |                       | <b>47,739</b>         |              |
| <b>NET RETURNS ABOVE CASH COSTS</b>               |                   |      |                       | <b>16,011</b>         |              |
| <b>NON-CASH OVERHEAD COSTS (Capital Recovery)</b> |                   |      |                       |                       |              |
| Buildings 1,200 sqft                              |                   |      |                       | 98                    |              |
| Fuel Tanks 2-300 gal                              |                   |      |                       | 9                     |              |
| Harvest Carts                                     |                   |      |                       | 12                    |              |
| 75HP Pump   |                   |      |                       | 44                    |              |
| Sprinkler Pipe                                    |                   |      |                       | 210                   |              |
| Lateral Lines                                     |                   |      |                       | 102                   |              |
| Shop Tools  |                   |      |                       | 50                    |              |
| Equipment   |                   |      |                       | 779                   |              |
| <b>TOTAL NON-CASH OVERHEAD COSTS/ACRE</b>         |                   |      |                       | <b>1,305</b>          |              |
| <b>TOTAL COST/ACRE</b>                            |                   |      |                       | <b>49,044</b>         |              |
| <b>TOTAL COST/ TRAY</b>                           |                   |      |                       | <b>11.54</b>          |              |
| <b>NET RETURNS ABOVE TOTAL COST</b>               |                   |      |                       | <b>14,706</b>         |              |

UC COOPERATIVE EXTENSION  
CENTRAL COAST - 2014

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

| Beginning 09-13                           | SEP        | OCT          | NOV | DEC        | JAN        | FEB        | MAR        | APR        | MAY        | JUN        | JUL        | AUG        | SEP        | OCT        | TOTAL         |
|---|------------|--------------|-----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Ending 10-14                              | 13         | 13           | 13  | 13         | 14         | 14         | 14         | 14         | 14         | 14         | 14         | 14         | 14         | 14         |               |
| Cultural:                                 |            |              |     |            |            |            |            |            |            |            |            |            |            |            |               |
| Soil Samples (2 per 27 Acre Farm)         | 6          |              |     |            |            |            |            |            |            |            |            |            |            |            | 6             |
| Disk 2X (Cover Crop)                      | 23         |              |     |            |            |            |            |            |            |            |            |            |            |            | 23            |
| Compost + Spread                          | 287        |              |     |            |            |            |            |            |            |            |            |            |            |            | 287           |
| Sprinklers: Setup and Removal             | 74         | 74           |     |            |            |            |            |            |            |            |            |            |            |            | 147           |
| Irrigate: Sprinkler                       | 39         | 64           |     |            |            |            |            |            |            |            |            |            |            |            | 103           |
| Subsoil 5X                                | 85         |              |     |            |            |            |            |            |            |            |            |            |            |            | 85            |
| Level (Triplane)                          | 47         |              |     |            |            |            |            |            |            |            |            |            |            |            | 47            |
| Disk 4X                                   | 47         |              |     |            |            |            |            |            |            |            |            |            |            |            | 47            |
| Chisel 2X                                 | 24         |              |     |            |            |            |            |            |            |            |            |            |            |            | 24            |
| Blood Meal + Gypsum Spread                |            | 892          |     |            |            |            |            |            |            |            |            |            |            |            | 892           |
| Beds List/Shape                           |            | 45           |     |            |            |            |            |            |            |            |            |            |            |            | 45            |
| Beds Re-List/Re-Shape (Post irrigation)   |            | 45           |     |            |            |            |            |            |            |            |            |            |            |            | 45            |
| Install Drip System, Tape & Laterals      |            | 365          |     |            |            |            |            |            |            |            |            |            |            |            | 365           |
| Plant: Lay Mulch                          |            | 419          |     |            |            |            |            |            |            |            |            |            |            |            | 419           |
| Plant: Punch Planting Holes               |            | 28           |     |            |            |            |            |            |            |            |            |            |            |            | 28            |
| Plant: Strawberries (Includes 5% Replant) |            | 3,394        |     |            |            |            |            |            |            |            |            |            |            |            | 3,394         |
| Weed: Hand                                |            |              |     | 247        | 247        | 247        | 247        | 247        | 247        | 247        | 247        | 247        | 247        | 247        | 2,474         |
| Insect: Mites (Predatory)                 |            |              |     |            |            | 465        | 465        |            |            |            |            |            |            |            | 929           |
| Weed: Cultivate                           |            |              |     |            |            | 11         | 11         | 11         |            |            |            |            |            |            | 32            |
| Fertilize: Foliar (Biomin)                |            |              |     |            |            | 22         | 22         | 22         | 22         | 22         | 22         | 22         | 22         | 22         | 177           |
| Fertilize: Foliar (Maxi Crop)             |            |              |     |            |            | 32         | 32         | 32         | 32         | 32         | 32         | 32         | 32         | 32         | 260           |
| Vertebrate Trapping                       |            |              |     |            |            | 5          | 5          | 5          | 5          | 5          |            |            |            |            | 25            |
| Pest Control Adviser (PCA)                |            | 125          |     |            |            |            |            |            |            |            |            |            |            |            | 125           |
| Irrigate: Drip                            |            |              |     |            |            |            | 98         | 98         | 98         | 98         | 98         | 98         | 98         | 98         | 688           |
| Fertilize: Soil (Agrothrive)              |            |              |     |            |            |            | 41         | 41         | 41         | 41         | 41         | 41         | 41         | 41         | 287           |
| Insect: Vacuum Lygus 8X/month             |            |              |     |            |            |            |            | 157        | 157        | 157        | 157        | 157        | 157        | 157        | 1,101         |
| Disease: Powdery Mildew (Kumulus)         |            |              |     |            |            |            | 17         | 17         | 13         | 21         | 13         | 13         | 13         | 13         | 117           |
| Insect: LBAM (Entrust)                    |            |              |     |            |            |            |            |            | 115        | 115        |            |            | 115        |            | 344           |
| Worms: (Dipel)                            |            |              |     |            |            |            |            |            | 41         | 41         |            |            |            |            | 82            |
| Post Harvest Cleanup                      |            |              |     |            |            |            |            |            |            |            |            |            |            | 423        | 423           |
| Pickup: Business Use                      |            |              |     |            |            |            |            |            |            |            |            |            |            | 62         | 62            |
| ATV                                       |            |              |     |            |            |            |            |            |            |            |            |            |            | 16         | 16            |
| <b>TOTAL Cultural COSTS</b>               | <b>631</b> | <b>5,450</b> |     | <b>247</b> | <b>247</b> | <b>782</b> | <b>938</b> | <b>631</b> | <b>772</b> | <b>780</b> | <b>611</b> | <b>611</b> | <b>726</b> | <b>671</b> | <b>13,099</b> |

UC COOPERATIVE EXTENSION

CENTRAL COAST - 2014

Table 3. CONTINUED

| Beginning 09-13                       | SEP        | OCT          | NOV        | DEC        | JAN          | FEB          | MAR          | APR          | MAY          | JUN          | JUL          | AUG          | SEP          | OCT          | TOTAL         |
|---------------------------------------|------------|--------------|------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| Ending 10-14                          | 13         | 13           | 13         | 13         | 14           | 14           | 14           | 14           | 14           | 14           | 14           | 14           | 14           | 14           |               |
| Harvest:                              |            |              |            |            |              |              |              |              |              |              |              |              |              |              |               |
| Harvest: Regular and Peak Production  |            |              |            |            |              |              |              | 1,279        | 2,283        | 4,414        | 4,414        | 3,178        | 2,283        | 767          | 18,617        |
| Harvest: Load & Haul                  |            |              |            |            |              |              |              | 105          | 211          | 455          | 455          | 327          | 210          | 48           | 1,812         |
| Harvest: Cooler                       |            |              |            |            |              |              |              | 149          | 357          | 744          | 744          | 536          | 357          | 89           | 2,975         |
| CSC Assessment                        |            |              |            |            |              |              |              | 9            | 20           | 43           | 43           | 31           | 20           | 5            | 170           |
| Sales/Marketing                       |            |              |            |            |              |              |              | 255          | 612          | 1,275        | 1,275        | 918          | 612          | 153          | 5,100         |
| <b>TOTAL Harvest COSTS</b>            | <b>0</b>   | <b>0</b>     | <b>0</b>   | <b>0</b>   | <b>0</b>     | <b>0</b>     | <b>0</b>     | <b>1,796</b> | <b>3,483</b> | <b>6,930</b> | <b>6,930</b> | <b>4,989</b> | <b>3,482</b> | <b>1,062</b> | <b>28,673</b> |
| Interest on Operating Capital (5.75%) | 3          | 29           | 29         | 30         | 32           | 35           | 40           | 51           | 72           | 109          | 145          | 172          | -28          | -8           | 710           |
| <b>TOTAL OPERATING COSTS/ACRE</b>     | <b>634</b> | <b>5,479</b> | <b>29</b>  | <b>278</b> | <b>279</b>   | <b>818</b>   | <b>978</b>   | <b>2,479</b> | <b>4,327</b> | <b>7,819</b> | <b>7,686</b> | <b>5,772</b> | <b>4,179</b> | <b>1,725</b> | <b>42,482</b> |
| <b>CASH OVERHEAD</b>                  |            |              |            |            |              |              |              |              |              |              |              |              |              |              |               |
| Office Expense                        | 60         | 60           | 60         | 60         | 60           | 60           | 60           | 60           | 60           | 60           | 60           | 60           | 60           | 60           | 833           |
| Food Safety                           |            |              |            |            |              |              |              | 30           |              |              |              |              |              |              | 30            |
| Land Rent                             |            |              |            |            | 2,700        |              |              |              |              |              |              |              |              |              | 2,700         |
| Liability Insurance                   |            |              |            |            | 21           |              |              |              |              |              |              |              |              |              | 21            |
| Sanitation Fee                        |            |              |            |            | 235          |              |              |              |              |              |              |              |              |              | 235           |
| Regulatory Programs                   |            |              |            |            |              | 50           |              |              |              |              |              |              |              |              | 50            |
| Organic Certification/Registration    |            |              |            |            |              |              |              |              |              |              |              |              |              | 176          | 176           |
| Ranch Supervisor                      | 71         | 71           | 71         | 71         | 71           | 71           | 71           | 71           | 71           | 71           | 71           | 71           | 71           | 71           | 1,000         |
| Property Taxes                        |            |              |            | 30         |              |              |              | 30           |              |              |              |              |              |              | 60            |
| Property Insurance                    |            |              |            |            | 25           |              |              |              |              | 25           |              |              |              |              | 50            |
| Investment Repairs                    | 7          | 7            | 7          | 7          | 7            | 7            | 7            | 7            | 7            | 7            | 7            | 7            | 7            | 7            | 102           |
| <b>TOTAL CASH OVERHEAD COSTS</b>      | <b>138</b> | <b>138</b>   | <b>138</b> | <b>168</b> | <b>3,119</b> | <b>188</b>   | <b>138</b>   | <b>198</b>   | <b>138</b>   | <b>163</b>   | <b>138</b>   | <b>138</b>   | <b>138</b>   | <b>314</b>   | <b>5,257</b>  |
| <b>TOTAL CASH COSTS/ACRE</b>          | <b>772</b> | <b>5,618</b> | <b>167</b> | <b>446</b> | <b>3,398</b> | <b>1,006</b> | <b>1,116</b> | <b>2,677</b> | <b>4,465</b> | <b>7,982</b> | <b>7,824</b> | <b>5,911</b> | <b>4,318</b> | <b>2,039</b> | <b>47,739</b> |

UC COOPERATIVE EXTENSION  
CENTRAL COAST - 2014  
**Table 4. RANGING ANALYSIS**

COST PER ACRE AT VARYING YIELDS TO PRODUCE ORGANIC STRAWBERRIES

|                                       | YIELD (trays/acre) |               |               |               |               |               |               |
|---------------------------------------|--------------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                                       | 3,500              | 3,750         | 4,000         | 4,250         | 4,500         | 4,750         | 5,000         |
| <b>OPERATING COSTS:</b>               |                    |               |               |               |               |               |               |
| Cultural                              | 13,099             | 13,099        | 13,099        | 13,099        | 13,099        | 13,099        | 13,099        |
| Harvest                               | 24,863             | 26,133        | 27,403        | 28,673        | 29,944        | 31,214        | 32,484        |
| Interest on operating capital @ 5.75% | 674                | 686           | 698           | 710           | 722           | 734           | 746           |
| <b>TOTAL OPERATING COSTS/ACRE</b>     | <b>38,636</b>      | <b>39,918</b> | <b>41,200</b> | <b>42,482</b> | <b>43,764</b> | <b>45,047</b> | <b>46,329</b> |
| Total Operating Costs/tray            | 11.04              | 10.64         | 10.30         | 10.00         | 9.73          | 9.48          | 9.27          |
| <b>CASH OVERHEAD COSTS/ACRE</b>       | <b>5,257</b>       | <b>5,257</b>  | <b>5,257</b>  | <b>5,257</b>  | <b>5,257</b>  | <b>5,257</b>  | <b>5,257</b>  |
| <b>TOTAL CASH COSTS/ACRE</b>          | <b>43,892</b>      | <b>45,174</b> | <b>46,457</b> | <b>47,739</b> | <b>49,021</b> | <b>50,303</b> | <b>51,585</b> |
| Total Cash Costs/tray                 | 12.54              | 12.05         | 11.61         | 11.23         | 10.89         | 10.59         | 10.32         |
| <b>NON-CASH OVERHEAD COSTS/ACRE</b>   | <b>1,305</b>       | <b>1,305</b>  | <b>1,305</b>  | <b>1,305</b>  | <b>1,305</b>  | <b>1,305</b>  | <b>1,305</b>  |
| <b>TOTAL COSTS/ACRE</b>               | <b>45,197</b>      | <b>46,479</b> | <b>47,762</b> | <b>49,044</b> | <b>50,326</b> | <b>51,608</b> | <b>52,890</b> |
| Total Costs/tray                      | 12.91              | 12.39         | 11.94         | 11.54         | 11.18         | 10.86         | 10.58         |

NET RETURNS PER ACRE ABOVE OPERATING COSTS

| PRICE(\$/tray) | YIELD (tray/acre) |        |        |        |        |        |        |
|----------------|-------------------|--------|--------|--------|--------|--------|--------|
|                | 3,500             | 3,750  | 4,000  | 4,250  | 4,500  | 4,750  | 5,000  |
| 10.50          | -1,886            | -543   | 800    | 2,143  | 3,486  | 4,828  | 6,171  |
| 12.00          | 3,364             | 5,082  | 6,800  | 8,518  | 10,236 | 11,953 | 13,671 |
| 13.50          | 8,614             | 10,707 | 12,800 | 14,893 | 16,986 | 19,078 | 21,171 |
| 15.00          | 13,864            | 16,332 | 18,800 | 21,268 | 23,736 | 26,203 | 28,671 |
| 16.50          | 19,114            | 21,957 | 24,800 | 27,643 | 30,486 | 33,328 | 36,171 |
| 18.00          | 24,364            | 27,582 | 30,800 | 34,018 | 37,236 | 40,453 | 43,671 |
| 19.50          | 29,614            | 33,207 | 36,800 | 40,393 | 43,986 | 47,578 | 51,171 |

NET RETURNS PER ACRE ABOVE CASH COSTS

| PRICE(\$/tray) | YIELD (tray/acre) |        |        |        |        |        |        |
|----------------|-------------------|--------|--------|--------|--------|--------|--------|
|                | 3,500             | 3,750  | 4,000  | 4,250  | 4,500  | 4,750  | 5,000  |
| 10.50          | -7,142            | -5,799 | -4,457 | -3,114 | -1,771 | -428   | 915    |
| 12.00          | -1,892            | -174   | 1,543  | 3,261  | 4,979  | 6,697  | 8,415  |
| 13.50          | 3,358             | 5,451  | 7,543  | 9,636  | 11,729 | 13,822 | 15,915 |
| 15.00          | 8,608             | 11,076 | 13,543 | 16,011 | 18,479 | 20,947 | 23,415 |
| 16.50          | 13,858            | 16,701 | 19,543 | 22,386 | 25,229 | 28,072 | 30,915 |
| 18.00          | 19,108            | 22,326 | 25,543 | 28,761 | 31,979 | 35,197 | 38,415 |
| 19.50          | 24,358            | 27,951 | 31,543 | 35,136 | 38,729 | 42,322 | 45,915 |

NET RETURNS PER ACRE ABOVE TOTAL COSTS

| PRICE(\$/tray) | YIELD (tray/acre) |        |        |        |        |        |        |
|----------------|-------------------|--------|--------|--------|--------|--------|--------|
|                | 3,500             | 3,750  | 4,000  | 4,250  | 4,500  | 4,750  | 5,000  |
| 10.50          | -8,447            | -7,104 | -5,762 | -4,419 | -3,076 | -1,733 | -390   |
| 12.00          | -3,197            | -1,479 | 238    | 1,956  | 3,674  | 5,392  | 7,110  |
| 13.50          | 2,053             | 4,146  | 6,238  | 8,331  | 10,424 | 12,517 | 14,610 |
| 15.00          | 7,303             | 9,771  | 12,238 | 14,706 | 17,174 | 19,642 | 22,110 |
| 16.50          | 12,553            | 15,396 | 18,238 | 21,081 | 23,924 | 26,767 | 29,610 |
| 18.00          | 17,803            | 21,021 | 24,238 | 27,456 | 30,674 | 33,892 | 37,110 |
| 19.50          | 23,053            | 26,646 | 30,238 | 33,831 | 37,424 | 41,017 | 44,610 |

UC COOPERATIVE EXTENSION  
CENTRAL COAST - 2014

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

ANNUAL EQUIPMENT COSTS

| Yr               | Description          | Price   | Yrs<br>Life | Salvage<br>Value | Capital<br>Recovery | Cash Overhead  |       | Total  |
|------------------|----------------------|---------|-------------|------------------|---------------------|----------------|-------|--------|
|                  |                      |         |             |                  |                     | Insur-<br>ance | Taxes |        |
| 14               | 55HP 2WD Tractor     | 32,269  | 10          | 9,532            | 3,362               | 173            | 209   | 3,744  |
| 14               | 75HP 4WD Tractor     | 45,000  | 20          | 5,774            | 3,355               | 210            | 254   | 3,820  |
| 14               | 90HP 4WD Tractor     | 47,000  | 20          | 6,031            | 3,505               | 220            | 265   | 3,990  |
| 14               | ATV 4WD              | 7,430   | 7           | 2,818            | 924                 | 42             | 51    | 1,017  |
| 14               | Blade Rear 3 pt 8'   | 1,560   | 20          | 81               | 120                 | 7              | 8     | 135    |
| 14               | Cultivator 3R 12'    | 5,000   | 20          | 261              | 385                 | 22             | 26    | 433    |
| 14               | Disc-Offset 14'      | 16,000  | 20          | 834              | 1,231               | 70             | 84    | 1,385  |
| 14               | Drip Machine 1-48"R  | 3,500   | 15          | 336              | 316                 | 16             | 19    | 351    |
| 14               | Lister/Shaper 3-48"R | 5,000   | 15          | 480              | 451                 | 23             | 27    | 501    |
| 14               | Mulch Machine 1-48"R | 3,000   | 20          | 156              | 231                 | 13             | 16    | 260    |
| 14               | Pickup Truck 1/2 T   | 28,000  | 5           | 12,549           | 4,140               | 168            | 203   | 4,511  |
| 14               | Punch Machine 1-48"R | 5,000   | 20          | 261              | 385                 | 22             | 26    | 433    |
| 14               | Ripper-5 Shank 18'   | 10,800  | 20          | 563              | 831                 | 47             | 57    | 935    |
| 14               | Sprayer w/20'Boom    | 3,700   | 5           | 1,205            | 630                 | 20             | 25    | 674    |
| 14               | Trailer-Pipe         | 1,950   | 20          | 102              | 150                 | 9              | 10    | 169    |
| 14               | Triplane 15'         | 22,200  | 20          | 1,157            | 1,708               | 97             | 117   | 1,921  |
| 14               | Truck 1 Ton #1       | 36,000  | 5           | 16,134           | 5,323               | 216            | 261   | 5,800  |
| 14               | Mower 4'             | 3,500   | 20          | 182              | 269                 | 15             | 18    | 303    |
| 14               | Bug Vacuum           | 35,000  | 2           | 16,448           | 10,723              | 213            | 257   | 11,194 |
| 14               | Chisel 12'           | 12,000  | 20          | 625              | 923                 | 52             | 63    | 1,039  |
| 14               | Truck 1 Ton #2       | 36,000  | 5           | 16,134           | 5,323               | 216            | 261   | 5,800  |
| TOTAL            |                      | 359,909 |             | 91,664           | 44,284              | 1,872          | 2,258 | 48,414 |
| 60% of new cost* |                      | 215,945 |             | 54,998           | 26,570              | 1,123          | 1,355 | 29,048 |

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

ANNUAL INVESTMENT COSTS

| Description          | Price   | Yrs<br>Life | Salvage<br>Value | Capital<br>Recovery | Cash Overhead  |       |         | Total  |
|----------------------|---------|-------------|------------------|---------------------|----------------|-------|---------|--------|
|                      |         |             |                  |                     | Insur-<br>ance | Taxes | Repairs |        |
| INVESTMENT           |         |             |                  |                     |                |       |         |        |
| Buildings 1,200 sqft | 42,000  | 30          | 0                | 2,655               | 174            | 210   | 840     | 3,879  |
| Fuel Tanks 2-300 gal | 3,500   | 20          | 650              | 255                 | 17             | 21    | 70      | 363    |
| Harvest Carts (70)   | 1,400   | 5           | 0                | 321                 | 6              | 7     | 22      | 356    |
| 75HP Pump, Filter    | 15,000  | 20          | 0                | 1,178               | 62             | 75    | 100     | 1,415  |
| Sprinkler Pipe       | 60,000  | 15          | 0                | 5,683               | 249            | 300   | 1,200   | 7,432  |
| Lateral Lines        | 12,000  | 5           | 0                | 2,753               | 50             | 60    | 220     | 3,082  |
| Shop Tools           | 15,000  | 15          | 1,500            | 1,350               | 68             | 83    | 300     | 1,801  |
| TOTAL INVESTMENT     | 148,900 |             | 2,150            | 14,195              | 626            | 755   | 2,752   | 18,328 |

ANNUAL BUSINESS OVERHEAD COSTS

| Description               | Units/ |      | Price/<br>Unit | Total<br>Cost |
|---------------------------|--------|------|----------------|---------------|
|                           | Farm   | Unit |                |               |
| Office Expense            | 30     | acre | 750.00         | 22,250        |
| Food Safety               | 27     | acre | 30.00          | 810           |
| Land Rent                 | 30     | acre | 2,700.00       | 81,000        |
| Liability Insurance       | 30     | acre | 20.90          | 627           |
| Sanitation Fee            | 27     | acre | 234.81         | 6,340         |
| Regulatory Programs       | 27     | acre | 50.00          | 1,350         |
| Organic Cert/Registration | 27     | acre | 176.00         | 4,752         |
| Ranch Supervisor          | 30     | acre | 1,000.00       | 30,000        |

UC COOPERATIVE EXTENSION  
CENTRAL COAST - 2014  
**Table 6. HOURLY EQUIPMENT COSTS**

| Yr Description          | Strawberry<br>Hours<br>Used | Total<br>Hours<br>Used | Capital<br>Recovery | COSTS PER HOUR |       |                   |       |       | Total<br>Oper. | Total<br>Costs/Hr. |
|-------------------------|-----------------------------|------------------------|---------------------|----------------|-------|-------------------|-------|-------|----------------|--------------------|
|                         |                             |                        |                     | Cash Overhead  |       | Operating         |       |       |                |                    |
|                         |                             |                        |                     | Insur-<br>ance | Taxes | Lube &<br>Repairs | Fuel  |       |                |                    |
| 14 55HP 2WD Tractor     | 961                         | 1200                   | 1.68                | 0.09           | 0.10  | 2.94              | 9.62  | 12.56 | 14.43          |                    |
| 14 75HP 4WD Tractor     | 128                         | 600                    | 3.36                | 0.21           | 0.25  | 3.89              | 13.11 | 17.00 | 20.82          |                    |
| 14 90HP 4WD Tractor     | 194                         | 800                    | 2.63                | 0.16           | 0.20  | 3.51              | 15.73 | 19.24 | 22.23          |                    |
| 14 ATV 4WD              | 16                          | 285                    | 1.94                | 0.09           | 0.11  | 0.94              | 2.62  | 3.56  | 5.70           |                    |
| 14 Blade Rear 3 pt 8'   | 28                          | 100                    | 0.72                | 0.04           | 0.05  | 0.00              | 0.00  | 0.00  | 0.81           |                    |
| 14 Cultivator 3R 12'    | 20                          | 100                    | 2.31                | 0.13           | 0.16  | 0.99              | 0.00  | 0.99  | 3.58           |                    |
| 14 Disc-Offset 14'      | 47                          | 100                    | 7.39                | 0.42           | 0.51  | 2.47              | 0.00  | 2.47  | 10.78          |                    |
| 14 Drip Machine 1-48"R  | 55                          | 100                    | 1.89                | 0.10           | 0.12  | 0.92              | 0.00  | 0.92  | 3.03           |                    |
| 14 Lister/Shaper 3-48"R | 54                          | 133                    | 2.03                | 0.10           | 0.12  | 1.01              | 0.00  | 1.01  | 3.27           |                    |
| 14 Mulch Machine 1-48"R | 41                          | 100                    | 1.38                | 0.08           | 0.09  | 0.33              | 0.00  | 0.33  | 1.89           |                    |
| 14 Pickup Truck 1/2 T   | 46                          | 400                    | 6.21                | 0.25           | 0.30  | 3.56              | 9.83  | 13.39 | 20.15          |                    |
| 14 Punch Machine 1-48"R | 20                          | 100                    | 2.31                | 0.13           | 0.16  | 0.55              | 0.00  | 0.55  | 3.15           |                    |
| 14 Ripper-5 Shank 18'   | 49                          | 125                    | 3.99                | 0.23           | 0.27  | 3.40              | 0.00  | 3.40  | 7.88           |                    |
| 14 Sprayer w/20'Boom    | 82                          | 300                    | 1.26                | 0.04           | 0.05  | 1.01              | 0.00  | 1.01  | 2.36           |                    |
| 14 Trailer-Pipe         | 89                          | 200                    | 0.45                | 0.03           | 0.03  | 0.00              | 0.00  | 0.00  | 0.51           |                    |
| 14 Triplane 15'         | 27                          | 150                    | 6.83                | 0.39           | 0.47  | 3.30              | 0.00  | 3.30  | 10.99          |                    |
| 14 Truck 1 Ton #1       | 760                         | 760                    | 4.20                | 0.17           | 0.21  | 2.61              | 4.91  | 7.52  | 12.10          |                    |
| 14 Mower 4'             | 10                          | 100                    | 1.62                | 0.09           | 0.11  | 1.57              | 0.00  | 1.57  | 3.38           |                    |
| 14 Bug Vacuum           | 641                         | 750                    | 8.58                | 0.17           | 0.21  | 9.68              | 0.00  | 9.68  | 18.64          |                    |
| 14 Chisel 12'           | 15                          | 75                     | 7.39                | 0.42           | 0.51  | 2.19              | 0.00  | 2.19  | 10.49          |                    |
| 14 Truck 1 Ton #2       | 654                         | 654                    | 4.88                | 0.20           | 0.24  | 2.91              | 4.91  | 7.82  | 13.14          |                    |

UC COOPERATIVE EXTENSION  
CENTRAL COAST - 2014

**Table 7. OPERATIONS WITH EQUIPMENT AND MATERIALS**

| Operation                        | Operation |                  | Implement          | Labor Type/<br>Material  | Rate/<br>acre     | Unit  |       |
|----------------------------------|-----------|------------------|--------------------|--------------------------|-------------------|-------|-------|
|                                  | Month     | Tractor          |                    |                          |                   |       |       |
| Soil Samples (2 per 27 acres)    | Sept      |                  |                    | Soil Analysis            | 0.04              | farm  |       |
| Disk 2X (Cover Crop)             | Sept      | 90HP 4WD Tractor | Disc-Offset 14'    | Equipment Operator Labor | 0.6               | hour  |       |
| Compost + Spread                 | Sept      |                  |                    | Compost                  | 5                 | ton   |       |
|                                  |           |                  |                    | Spread Compost/Meal      | 1                 | acre  |       |
| Sprinklers Setup & Removal       | Sept      | 55HP 2WD Tractor | Trailer-Pipe       | Non-Machine Labor        | 1.5               | hours |       |
|                                  | Oct       | 55HP 2WD Tractor | Trailer-Pipe       | Non-Machine Labor        | 1.5               | hours |       |
| Irrigate OH Sprinkle             | Sept      |                  |                    | Irrigation Labor         | 1.3               | hours |       |
|                                  |           |                  |                    | Water Pumped             | 1                 | acin  |       |
|                                  | Oct       |                  |                    |                          | Irrigation Labor  | 1.15  | hours |
|                                  |           |                  |                    |                          | Water Pumped      | 0.5   | acin  |
|                                  | Oct       |                  |                    |                          | Non-Machine Labor | 1.3   | hours |
|                                  |           |                  |                    | Water Pumped             | 1                 | acin  |       |
| Subsoil 5X                       | Sept      | 90HP 4WD Tractor | Ripper-5 Shank 18' | Equipment Operator Labor | 2.16              | hours |       |
| Level (Triplane)                 | Sept      | 90HP 4WD Tractor | Triplane 15'       | Equipment Operator Labor | 1.2               | hours |       |
| Disk 4X                          | Sept      | 90HP 4WD Tractor | Disc-Offset 14'    | Equipment Operator Labor | 1.2               | hours |       |
| Chisel 2X                        | Sept      | 75HP 4WD Tractor | Chisel 12'         | Equipment Operator Labor | 0.65              | hour  |       |
| Bloodmeal & Gypsum + Spread      | Oct       |                  |                    | Bloodmeal                | 500               | lb    |       |
|                                  |           |                  |                    | Spread Compost/Meal      | 1                 | acre  |       |
|                                  |           |                  |                    | Gypsum                   | 2                 | ton   |       |
| Beds List/Shape                  | Oct       | 90HP 4WD Tractor | Lstr/Shpr 3-48"R   | Equipment Operator Labor | 1.2               | hours |       |
| Beds Re-Listed/Re-Shaped         | Oct       | 90HP 4WD Tractor | Lstr/Shpr 3-48"R   | Equipment Operator Labor | 1.2               | hours |       |
| Install Drip System, Tape, Later | Oct       | 55HP 2WD Tractor | Drip Mchne 1-48"R  | Non-Machine Labor        | 1                 | hour  |       |
|                                  |           |                  |                    | T-Tape                   | 21,780.00         | foot  |       |
|                                  | Oct       | 55HP 2WD Tractor | Blade Rear 3 pt 8' | Non-Machine Labor        | 0.1               | hour  |       |
| Plant: Lay Mulch                 | Oct       | 55HP 2WD Tractor | Mulch Mchne 1-48"R | Equipment Operator Labor | 1.8               | hours |       |
|                                  |           |                  |                    | BlackPlasticMulch        | 2.75              | roll  |       |
| Plant: Punch Planting Holes      | Oct       | 55HP 2WD Tractor | Punch Mchn 1-48"R  | Equipment Operator Labor | 0.9               | hour  |       |
| Plant: Strawberries (5% replant) | Oct       |                  |                    | Non-Machine Labor        | 52.5              | hours |       |
|                                  |           |                  |                    | Strawberry Plants        | 22,869.00         | each  |       |
| Weed: Hand                       | Dec       |                  |                    | Non-Machine Labor        | 20                | hours |       |
|                                  | Jan       |                  |                    | Non-Machine Labor        | 20                | hours |       |
|                                  | Feb       |                  |                    | Non-Machine Labor        | 20                | hours |       |
|                                  | Mar       |                  |                    | Non-Machine Labor        | 20                | hours |       |
|                                  | Apr       |                  |                    | Non-Machine Labor        | 20                | hours |       |
|                                  | May       |                  |                    | Non-Machine Labor        | 20                | hours |       |
|                                  | June      |                  |                    | Non-Machine Labor        | 20                | hours |       |
|                                  | July      |                  |                    | Non-Machine Labor        | 20                | hours |       |
|                                  | Aug       |                  |                    | Non-Machine Labor        | 20                | hours |       |
| Sept                             |           |                  |                    | Non-Machine Labor        | 20                | hours |       |

UC COOPERATIVE EXTENSION  
CENTRAL COAST - 2014  
**Table 7. CONTINUED**

| Operation                  | Operation                |                  | Implement         | Labor Type/              | Rate/ |       |
|----------------------------|--------------------------|------------------|-------------------|--------------------------|-------|-------|
|                            | Month                    | Tractor          |                   | Material                 | acre  | Unit  |
| Insect: Mites (predatory)  | Feb                      |                  |                   | Non-Machine Labor        | 2     | hours |
|                            |                          |                  |                   | Persimilis (Mite)        | 40    | thou  |
|                            | Mar                      |                  |                   | Non-Machine Labor        | 2     | hours |
|                            |                          |                  |                   | Persimilis (Mite)        | 40    | thou  |
| Weed: Cultivate            | Feb                      | 75HP 4WD Tractor | Cultivator 3R 12' | Equipment Operator Labor | 0.3   | hour  |
|                            | Mar                      | 75HP 4WD Tractor | Cultivator 3R 12' | Equipment Operator Labor | 0.3   | hour  |
|                            | Apr                      | 75HP 4WD Tractor | Cultivator 3R 12' | Equipment Operator Labor | 0.3   | hour  |
| Fertilize: Foliar (Biomim) | Feb                      | 75HP 4WD Tractor | Sprayer w/20'Boom | Equipment Operator Labor | 0.12  | hour  |
|                            | Mar                      | 75HP 4WD Tractor | Sprayer w/20'Boom | Biomim Calcium           | 1     | gal   |
|                            |                          |                  |                   | Equipment Operator Labor | 0.12  | hour  |
|                            | Apr                      |                  |                   | Biomim Calcium           | 1     | gal   |
|                            |                          |                  |                   | Equipment Operator Labor | 0.12  | hour  |
|                            | May                      |                  |                   | Equipment Operator Labor | 0.12  | hour  |
|                            |                          |                  |                   | Biomim Calcium           | 1     | gal   |
|                            | June                     |                  |                   | Equipment Operator Labor | 0.12  | hour  |
|                            |                          |                  |                   | Biomim Calcium           | 1     | gal   |
|                            | July                     |                  |                   | Equipment Operator Labor | 0.12  | hour  |
|                            |                          |                  |                   | Biomim Calcium           | 1     | gal   |
|                            | Aug                      |                  |                   | Equipment Operator Labor | 0.12  | hour  |
| Biomim Calcium             |                          |                  |                   | 1                        | gal   |       |
| Sept                       | Equipment Operator Labor | 0.12             | hour              |                          |       |       |
|                            | Biomim Calcium           | 1                | gal               |                          |       |       |
| Fertilize: Foliar (Maxi)   | Feb                      | 75HP 4WD Tractor | Sprayer w/20'Boom | Equipment Operator Labor | 0.12  | hour  |
|                            | Mar                      | 75HP 4WD Tractor | Sprayer w/20'Boom | Maxi-Crop                | 2.5   | lb    |
|                            |                          |                  |                   | Equipment Operator Labor | 0.12  | hour  |
|                            | Apr                      |                  |                   | Maxi-Crop                | 2.5   | lb    |
|                            |                          |                  |                   | Equipment Operator Labor | 0.12  | hour  |
|                            | May                      |                  |                   | Maxi-Crop                | 2.5   | lb    |
|                            |                          |                  |                   | Equipment Operator Labor | 0.12  | hour  |
|                            | June                     |                  |                   | Maxi-Crop                | 2.5   | lb    |
|                            |                          |                  |                   | Equipment Operator Labor | 0.12  | hour  |
|                            | July                     |                  |                   | Maxi-Crop                | 2.5   | lb    |
|                            |                          |                  |                   | Equipment Operator Labor | 0.12  | hour  |
|                            | Aug                      |                  |                   | Maxi-Crop                | 2.5   | lb    |
| Equipment Operator Labor   |                          |                  |                   | 0.12                     | hour  |       |
| Sept                       | Maxi-Crop                | 2.5              | lb                |                          |       |       |
|                            | Equipment Operator Labor | 0.12             | hour              |                          |       |       |

## UC COOPERATIVE EXTENSION

CENTRAL COAST - 2014

**Table 7. CONTINUED**

| Operation                     | Operation                      |                  | Implement         | Labor Type/              | Rate/             | Unit  |      |
|-------------------------------|--------------------------------|------------------|-------------------|--------------------------|-------------------|-------|------|
|                               | Month                          | Tractor          |                   | Material                 | acre              |       |      |
| Vertebrate Trapping           | Feb                            |                  |                   | Non-Machine Labor        | 0.4               | hour  |      |
|                               | Mar                            |                  |                   | Non-Machine Labor        | 0.4               | hour  |      |
|                               | Apr                            |                  |                   | Non-Machine Labor        | 0.4               | hour  |      |
|                               | May                            |                  |                   | Non-Machine Labor        | 0.4               | hour  |      |
|                               | June                           |                  |                   | Non-Machine Labor        | 0.4               | hour  |      |
| Pest Control Adviser (PCA)    | Mar                            |                  |                   | PCA fee                  | 1                 | acre  |      |
| Irrigate: Drip                | Mar                            |                  |                   | Non-Machine Labor        | 1.71              | hours |      |
|                               |                                |                  |                   | Water Pumped             | 3.43              | acin  |      |
|                               | Apr                            |                  |                   | Non-Machine Labor        | 1.71              | hours |      |
|                               |                                |                  |                   | Water Pumped             | 3.43              | acin  |      |
|                               | May                            |                  |                   | Non-Machine Labor        | 1.71              | hours |      |
|                               |                                |                  |                   | Water Pumped             | 3.43              | acin  |      |
|                               | June                           |                  |                   | Non-Machine Labor        | 1.71              | hours |      |
|                               |                                |                  |                   | Water Pumped             | 3.43              | acin  |      |
|                               | July                           |                  |                   | Non-Machine Labor        | 1.71              | hours |      |
|                               |                                |                  |                   | Water Pumped             | 3.43              | acin  |      |
|                               | Aug                            |                  |                   | Non-Machine Labor        | 1.71              | hours |      |
|                               |                                |                  |                   | Water Pumped             | 3.43              | acin  |      |
|                               | Sept                           |                  |                   | Non-Machine Labor        | 1.71              | hours |      |
|                               |                                |                  |                   | Water Pumped             | 3.42              | acin  |      |
|                               | Fertilize: Through Drip (Agro) | Mar              |                   |                          | Non-Machine Labor | 0.43  | hour |
|                               |                                |                  |                   |                          | Agrothrive LF     | 10    | gal  |
| Apr                           |                                |                  |                   | Non-Machine Labor        | 0.43              | hour  |      |
|                               |                                |                  |                   | Agrothrive LF            | 10                | gal   |      |
| May                           |                                |                  |                   | Non-Machine Labor        | 0.43              | hour  |      |
|                               |                                |                  |                   | Agrothrive LF            | 10                | gal   |      |
| June                          |                                |                  |                   | Non-Machine Labor        | 0.43              | hour  |      |
|                               |                                |                  |                   | Agrothrive LF            | 10                | gal   |      |
| July                          |                                |                  |                   | Non-Machine Labor        | 0.43              | hour  |      |
|                               |                                |                  |                   | Agrothrive LF            | 10                | gal   |      |
| Aug                           |                                |                  |                   | Non-Machine Labor        | 0.43              | hour  |      |
|                               |                                |                  |                   | Agrothrive LF            | 10                | gal   |      |
| Sept                          |                                |                  | Non-Machine Labor | 0.42                     | hour              |       |      |
|                               |                                |                  | Agrothrive LF     | 10                       | gal               |       |      |
| Insect: Vacuum Lygus 8X/month | Apr                            | 55HP 2WD Tractor | Bug Vacuum        | Equipment Operator Labor | 4.07              | hours |      |
|                               | May                            | 55HP 2WD Tractor | Bug Vacuum        | Equipment Operator Labor | 4.07              | hours |      |
|                               | June                           | 55HP 2WD Tractor | Bug Vacuum        | Equipment Operator Labor | 4.07              | hours |      |
|                               | July                           | 55HP 2WD Tractor | Bug Vacuum        | Equipment Operator Labor | 4.07              | hours |      |
|                               | Aug                            | 55HP 2WD Tractor | Bug Vacuum        | Equipment Operator Labor | 4.07              | hours |      |
|                               | Sept                           | 55HP 2WD Tractor | Bug Vacuum        | Equipment Operator Labor | 4.07              | hours |      |
|                               | Oct                            | 55HP 2WD Tractor | Bug Vacuum        | Equipment Operator Labor | 4.07              | hours |      |

## UC COOPERATIVE EXTENSION

CENTRAL COAST - 2014

Table 7. CONTINUED

| Operation                        | Month | Tractor          | Implement          | Labor Type/<br>Material  | Rate/<br>acre | Unit  |
|----------------------------------|-------|------------------|--------------------|--------------------------|---------------|-------|
| Disease: Powdery Mildew (Sulfur) | Mar   | 75HP 4WD Tractor | Sprayer w/20'Boom  | Equipment Operator Labor | 0.24          | hour  |
|                                  |       |                  |                    | Kumulus DF               | 5             | lb    |
|                                  | Apr   | 75HP 4WD Tractor | Sprayer w/20'Boom  | Equipment Operator Labor | 0.24          | hour  |
|                                  |       |                  |                    | Kumulus DF               | 5             | lb    |
|                                  | May   | 75HP 4WD Tractor | Sprayer w/20'Boom  | Equipment Operator Labor | 0.12          | hour  |
|                                  |       |                  |                    | Kumulus DF               | 5             | lb    |
|                                  | June  | 75HP 4WD Tractor | Sprayer w/20'Boom  | Equipment Operator Labor | 0.12          | hour  |
|                                  |       |                  |                    | Kumulus DF               | 10            | lb    |
|                                  | July  | 75HP 4WD Tractor | Sprayer w/20'Boom  | Equipment Operator Labor | 0.12          | hour  |
|                                  |       |                  |                    | Kumulus DF               | 5             | lb    |
| Insect: LBAM (Entrust)           | Aug   | 75HP 4WD Tractor | Sprayer w/20'Boom  | Equipment Operator Labor | 0.12          | hour  |
|                                  |       |                  |                    | Kumulus DF               | 5             | lb    |
|                                  | Sept  | 75HP 4WD Tractor | Sprayer w/20'Boom  | Equipment Operator Labor | 0.12          | hour  |
|                                  |       |                  |                    | Kumulus DF               | 5             | lb    |
|                                  | Oct   | 75HP 4WD Tractor | Sprayer w/20'Boom  | Equipment Operator Labor | 0.12          | hour  |
|                                  |       |                  |                    | Kumulus DF               | 5             | lb    |
| Worms: (Dipel)                   | May   | 75HP 4WD Tractor | Sprayer w/20'Boom  | Equipment Operator Labor | 0.12          | hour  |
|                                  |       |                  |                    | Entrust                  | 2.5           | oz    |
|                                  | June  | 75HP 4WD Tractor | Sprayer w/20'Boom  | Equipment Operator Labor | 0.12          | hour  |
|                                  |       |                  | Entrust            | 2.5                      | oz            |       |
| Post Harvest Cleanup             | Sept  | 75HP 4WD Tractor | Sprayer w/20'Boom  | Equipment Operator Labor | 0.12          | hour  |
|                                  |       |                  |                    | Entrust                  | 2.5           | oz    |
| Worms: (Dipel)                   | May   | 75HP 4WD Tractor | Sprayer w/20'Boom  | Equipment Operator Labor | 0.12          | hour  |
|                                  |       |                  |                    | Dipel DF (Bt)            | 2             | lb    |
| Post Harvest Cleanup             | June  | 75HP 4WD Tractor | Sprayer w/20'Boom  | Equipment Operator Labor | 0.12          | hour  |
|                                  |       |                  |                    | Dipel DF (Bt)            | 2             | lb    |
| Post Harvest Cleanup             | Oct   | 55HP 2WD Tractor | Mower 4'           | Non-Machine Labor        | 9.5           | hours |
|                                  | Oct   |                  | Truck 1 Ton #1     | Non-Machine Labor        | 6             | hours |
| Post Harvest Cleanup             |       |                  |                    | DumpFee Monterey         | 600           | lb    |
|                                  | Oct   | 90HP 4WD Tractor | Disc-Offset 14'    | Non-Machine Labor        | 9             | hours |
| Pickup: Business Use             | Oct   |                  | Pickup Truck 1/2 T | Equipment Operator Labor | 2.05          | hours |
| ATV                              | Oct   |                  | ATV 4WD            | Equipment Operator Labor | 0.71          | hour  |
| Harvest: Regular & Peak          | Apr   |                  |                    | Harvest Labor            | 75.89         | hours |
|                                  |       |                  |                    | 8 Clamshell +Tray        | 212.5         | each  |
|                                  | May   |                  |                    | Harvest Labor            | 117.75        | hours |
|                                  |       |                  |                    | 8 Clamshell +Tray        | 510           | each  |
| Harvest: Regular & Peak          | June  |                  |                    | Harvest Labor            | 217.66        | hours |
|                                  |       |                  |                    | 8 Clamshell +Tray        | 1,062.50      | each  |

## UC COOPERATIVE EXTENSION

CENTRAL COAST - 2014

Table 7. CONTINUED

| Operation               | Operation<br>Month | Tractor | Implement      | Labor Type/<br>Material  | Rate/<br>acre         | Unit  |       |
|-------------------------|--------------------|---------|----------------|--------------------------|-----------------------|-------|-------|
| Harvest: Regular & Peak | July               |         |                | Harvest Labor            | 217.66                | hours |       |
|                         |                    |         |                | 8 Clamshell +Tray        | 1,062.50              | each  |       |
|                         | Aug                |         |                | Harvest Labor            | 156.71                | hours |       |
|                         |                    |         |                | 8 Clamshell +Tray        | 765                   | each  |       |
|                         | Sept               |         |                | Harvest Labor            | 117.75                | hours |       |
|                         |                    |         |                | 8 Clamshell +Tray        | 510                   | each  |       |
|                         | Oct                |         |                | Truck 1 Ton #1           | Harvest Labor         | 45.51 | hours |
|                         |                    |         |                |                          | 8 Clamshell +Tray     | 127.5 | each  |
| Harvest: Load & Haul    | Apr                |         | Truck 1 Ton #1 | Non-Machine Labor        | 1.57                  | hours |       |
|                         | May                |         | Truck 1 Ton #2 | Non-Machine Labor        | 2.27                  | hours |       |
|                         | June               |         | Truck 1 Ton #1 | Non-Machine Labor        | 3.37                  | hours |       |
|                         | July               |         | Truck 1 Ton #2 | Non-Machine Labor        | 3.37                  | hours |       |
|                         | Aug                |         | Truck 1 Ton #1 | Non-Machine Labor        | 2.83                  | hours |       |
|                         | Sept               |         | Truck 1 Ton #2 | Non-Machine Labor        | 2.27                  | hours |       |
|                         | Oct                |         | Truck 1 Ton #1 | Non-Machine Labor        | 0.94                  | hour  |       |
|                         | Harvest: Cooler    | Apr     |                |                          | Cooler                | 212.5 | tray  |
| May                     |                    |         |                | Cooler                   | 510                   | tray  |       |
| June                    |                    |         |                | Equipment Operator Labor | 5.32                  | hours |       |
|                         |                    |         |                | Cooler                   | 1,062.50              | tray  |       |
| July                    |                    |         |                | Cooler                   | 1,062.50              | tray  |       |
| Aug                     |                    |         |                | Cooler                   | 765                   | tray  |       |
| Sept                    |                    |         |                | Cooler                   | 510                   | tray  |       |
| Oct                     |                    |         |                | Cooler                   | 127.5                 | tray  |       |
| Assessment              | Apr                |         |                | Strawberry Commiss       | 212.5                 | tray  |       |
|                         | May                |         |                | Strawberry Commiss       | 510                   | tray  |       |
|                         | June               |         |                | Strawberry Commiss       | 1,062.50              | tray  |       |
|                         | July               |         |                | Strawberry Commiss       | 1,062.50              | tray  |       |
|                         | Aug                |         |                | Strawberry Commiss       | 765                   | tray  |       |
|                         | Sept               |         |                | Strawberry Commiss       | 510                   | tray  |       |
|                         | Oct                |         |                | Strawberry Commiss       | 127.5                 | tray  |       |
|                         | Sales              | Apr     |                |                          | Sales Commission @ 8% | 212.5 | tray  |
| May                     |                    |         |                | Sales Commission @ 8%    | 510                   | tray  |       |
| June                    |                    |         |                | Sales Commission @ 8%    | 1,062.50              | tray  |       |
| July                    |                    |         |                | Sales Commission @ 8%    | 1,062.50              | tray  |       |
| Aug                     |                    |         |                | Sales Commission @ 8%    | 765                   | tray  |       |
| Sept                    |                    |         |                | Sales Commission @ 8%    | 510                   | tray  |       |
| Oct                     |                    |         |                | Sales Commission @ 8%    | 127.5                 | tray  |       |