UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION

2006

SAMPLE COSTS TO PRODUCE
STRAWBERRIES

SOUTH COAST REGION – Santa Barbara County
Santa Maria Valley

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CONTENTS

Acknowledgements. Thank you to the California Strawberry Commission growers and staff, the Pest Control Advisers, industry representatives, researchers, and various suppliers who provided cultural and cost information.

INTRODUCTION

The sample costs to produce strawberries in the South Coast Region – Santa Barbara County 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 situation. Sample costs for labor, materials, equipment and custom services are based on current figures. A blank column, "*Your Costs*", is provided to enter your actual costs on Tables 1 and 2.

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

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

ASSUMPTIONS

The following assumptions refer to tables 1 to 7 and pertain to sample costs to produce strawberries in the South Coast Region – Santa Barbara County, Santa Maria Valley. The cultural practices described and materials used are considered typical for a well-managed strawberry field in the region. The costs, materials and practices will not apply to all situations every production year. Cultural practices for the production of strawberries vary by grower and region, resulting in significant cost differences. **The use of trade names and cultural practices in this report does not constitute an endorsement or recommendation by the University of California nor is any criticism implied by omission of other similar products or cultural practices.**

Farm. The farm consists of 90 contiguous acres – 85 rented acres and five acres owned by the grower. Strawberries are being planted on 80 acres and five acres are field roads, and irrigation system. The land is divided into 4-20 acre blocks/fields 250 feet long. The grower owned five acres includes a shop and equipment yard.

Production Operating Costs

Land Preparation. The grower does a series of operations: disc and ringroll 2X (X equals number of passes over the land), subsoil 2X, disc and ringroll 2X, plow 1X, disc and ringroll 1X, triplane 2X, and chisel 1X. The field is disced a total of 5 times and subsoiled or ripped 30 to 36 inches deep. The field is smoothed and leveled with a triplane. Three beds 64 inches wide and 14 inches high are listed and shaped in one operation. Farmers with this acreage will own a large tractor for land preparation. Smaller growers usually rent a large tractor for land preparation or will have the work done by a custom operator.

Plant Establishment. Several varieties are available for planting in the area, but no specific variety is assumed in this study. Plants in the area are planted on 60 to 68 inch beds. In this study, the grower plants on 64-inch beds, 14-inch bed height, 4 rows per bed and a 16-inch plant spacing for a total of 25,000 plants per acre. Five percent of the plants will be replanted and are included in the plant population. The beds are made the entire length of the field. After fumigation, roads, using a tracklayer tractor with blade, are made to divide the field into smaller blocks 200 to 300 feet long. Holes are punched in the plastic mulch that was laid on the beds at fumigation, using a mechanical punch machine. Plants are delivered to the edge of the blocks where planting labor gathers the plants in buckets and places the strawberry plants in the punched holes.

Fertilization. A slow release fertilizer, 18-6-8, at 1,000 pounds per acre is drilled preplant in the bed using a fertilizer drill with bed shaper. Growers may also apply multiple liquid fertilizers during the season through the drip lines or as a foliar spray. Some fertilizers that may be applied are Thiocal (applied in this study) for calcium and sulfur, CAN 17 (17-0-0-8Ca) and CN9 for nitrogen and calcium, potassium nitrate for potassium and nitrogen, and minor nutrient fertilizers such as iron, zinc, and boron.

Irrigation. The grower rents sprinkler pipe for the preplant and establishment sprinkler irrigations. Prior to listing, the field is sprinkler irrigated for 12 hours. Two men plus the tractor driver lay and pickup the pipe. Two drip-lines per bed, using a tape layer machine are buried in the beds prior to fumigation. After the field is divided into blocks/small fields, the lateral lines are buried at the edge of the block and the drip lines connected and tested for leaks. The field is preirrigated using the drip system. Following planting, sprinkler pipe is laid out and the field is sprinkled two-hours per day for 15 days. Two irrigators manage the sprinkler and drip irrigation. From December through February, the field is drip irrigated as necessary, and during the harvest season, February through July, every three to four days. Effective rainfall is not taken into account; therefore a total of 28 acre inches including the preplant irrigations are applied.

Water. Pumping costs for the water is estimated from grower budgets at approximately $11.89 per acre inch. Costs will vary depending upon pump size and well characteristics.

Pests. The pesticides and rates mentioned in this cost study are listed in the *UC IPM Pest Management Guidelines, Strawberries*. For more information on other pesticides available, pest identification, monitoring, and management visit the UC IPM website at www.ipm.ucdavis.edu. Pesticide applications, timing, and materials vary according to pest pressure. The pesticide program shown in Table A represents a typical program for the region. Inputs cited in this report are based on grower surveys and the pesticide use reports. Written recommendations are required for many commercially applied pesticides and are made by licensed pest control advisers. For information and pesticide use permits, contact the local county Agricultural Commissioner's office. Adjuvants are recommended for many pesticides for effective control and are an added cost. The adjuvants in this study are not included as a cost in the applications. Pesticide costs may vary by location and grower volume. **Pesticide costs** in this study are taken from a single dealer and **shown as full retail.**

Fumigation. Arthropods, soilborne fungi/diseases, nematodes, and weeds are controlled with preplant fumigation. The field is bed fumigated using a bedshaper/fumigation/mulch-laying machine. The fumigants Methyl Bromide and Chloropicrin are injected into the beds as the clear plastic mulch is being laid across and down the sides of the bed. Five men including the tractor driver can do approximately 4 acres per 8-hour day. Current regulations have caused growers to do more flat fumigation which cost approximately $1,900 per acre plus the cost for disposing of the plastic fumigation covering. Flat fumigation is usually done by a commercial applicator. Check with your agricultural commissioner and farm advisor for current regulations.

Fumigation Alternatives. The phaseout of methyl bromide has prompted growers to try alternative methods. According to industry information, a common alternative for growers is applying soil fungicide and nematicide materials through the drip line. Inline Fungicide/Nematicide is one of the materials currently being used by growers. Research data has provided information on the alternative methods, although the long-term effects on disease and weed management are unknown. Research data is available on the California Strawberry Commission website at http://www.calstrawberry.com. Grower costs for the drip method using Inline fungicide/nematicide and chloropicrin material and application cost the growers $700 to $1,000 per acre. The effects on yield, weed, and pest control are variable and these variables may add to the production costs and/or reduce yield.

Weeds. In addition to preplant fumigation, weeds are controlled by hand weeding from November through June. Weeding times vary by grower and month; the study assumes a total of 76 hours per acre distributed over the 8 months.

Diseases. Powdery mildew (*Sphaeotheca macularis*) and Botrytis fruit rot (*Botrytis cinerea*) are the two diseases treated in this study. Treatments are combined with the insect applications. Fungicide

Table A. DISEASE and INSECT MATERIAL APPLICATIONS

DATE	DISEASE		INSECTS		
	Botrytis	Mildew	Mites	Worms	Lygus
Dec				Dipel	
Jan	Captan + Elevate				
Jan	Captan				
Jan			Persimilis		
Feb	Captan	Pristine			
Feb	Switch	Quadris			
Feb			Persimilis		
Mar		Rally	Acramite		
Mar		Thiolux	Acramite		
Apr	Elevate	Thiolux	Savey		
May	Captan		Agrimek		Danitol
Jun		Thiolux	Agrimek		Dibrom
RATES PER ACRE in study: (Not Recommendations - See label or PCA)					
	Captan	4.0 lb	Acramite	1.0 lb	
	Elevate	1.5 lb	Agrimek	16.0 oz	
	Pristine	23.0 oz	Danitol	16.0 oz	
	Rally	5.0 oz	Dibrom	16.0 oz	
	Switch	14.0 oz	Dipel	1.0 lb	
	Thiolux	5.0 lb	Persimilis	16,000 ea	
	Quadris	12.0 floz	Savey	6.0 oz	

treatments are made every 12 to 16 days through mid April and every 20 to 25 days thereafter ending in mid June. The treatments are shown in Table A and all treatments are grower applied.

Insects. Two-spotted mite (*Tetranychus urticae*), beet armyworm (*Spodoptera exigua*) and lygus (L*ygus hesperus*) are the main insects controlled. Mites are controlled early in the season with the beneficial insect persimilis (*Phytoseiulus persimilis)* followed by miticide applications. Treatments for insects are combined with the fungicide treatments. The treatments are shown in Table A.

Harvest. The crop is harvested from March through mid-August with peak harvest in May and June. The early harvested strawberries go to fresh market, and as other growing areas such as the Central Coast region come in to production, the growers shift to the freezer market. In this study the percent by weight of the crop harvested each month is shown in Table B. Prior to harvest the plastic mulch is cut from the bottom of the furrow bed with tractor and sickle knife to cool down the soil for harvest. Labor with sickles finishes cutting and pulling the mulch that is hauled to the dump. During harvest, the grower runs three 30 man crews with a general foreman for crew supervision, one field checker to check field for proper picking, and one picking card puncher per crew to count the boxes picked by each picker. For fresh market the picker pushes a picking cart that holds a fiberboard tray and eight one-pound containers. The picker picks the ripe strawberries by hand and places them in the container/trays. Depending upon the market other container sizes and types may be used, but are not included in this study. Picking rate per picker ranges from 3 trays per hour early and late in the season and 5 to 8 trays per hour during the peak harvest. For the freezer market, the picker places an 18-pound plastic tray on the picking cart. The growers purchase the fresh market trays, and the freezer furnishes the plastic freezer trays. (See Labor for picking costs). The grower uses two one-ton flatbed trucks that holds two to three pallets of 110 fresh market trays per pallet or 330 trays per load or 180 freezer trays per load. One truck driver delivers the strawberries to the cooler or freezer; one truck loader stacks the boxes on the truck. The truck driver takes about an hour per load to deliver the filled trays. For the freezer market, the driver picks up the empty freezer trays. In addition, the grower will have at least one tractor, trailer, and toilet in the field.

Table B Percent (by weight) Crop Harvested per Month

	March	April	May	June	July	August
Fresh 68%	5	14	32	9	8	
Freezer 32%			5	14	8	5

Source: Processing Strawberry Advisory Board Crop Trend Report, 2001-03

Yields. Strawberry yields are measured in trays per acre for the fresh and freezer market. Various tray weights are used to convert the yields to weight per acre. The standard consumer tray holds 8 x 1-pound containers and ranges from 8.5 to 10.0 pounds per tray. There are other tray arrangements with different size containers as well as the former standard tray containing 12 1-pint containers, which ranged from 10.5 to 12 pounds per tray. The weight used in this study is 9.5 pounds per tray for fresh market and 18 pounds per tray for freezer strawberries. Freezer trays delivered to the cooler usually weigh 18 to 20 pounds. Total per acre yield in this study is 63,200 pounds with 68% or 42,976 pounds (4,524 trays) delivered to fresh market and 32% or 20,224 pounds (1,124 trays) delivered to the freezer. The yield in this study is based on the 2001-2003 average yields for the Santa Maria area (2003 Processing Strawberry Board). Average per acre yields by year (2001-2005) for Santa Barbara County are shown in Table C.

Table C. YIELDS and RETURNS[1]

		FRESH			FREEZER			TOTAL	
YEAR	ACRE	lb/acre	[2]tray/acre	$/tray	lb/acre	[3]tray/acre	$/tray	lb/acre	% fresh
01	3,092	34,817	2,901	6.06	22,420	1,246	5.59	57,237	61
02	3,725	42,732	3,561	6.56	22,600	1,256	6.16	65,332	65
03	3,763	51,592	4,299	6.88	30,000	1,667	5.03	81,592	63
04	5,239	43,296	3,608	8.21	23,260	1,292	4.92	66,556	65
05	5,518	46,860	3,905	7.92	21,120	1,173	4.92	67,980	69

[1]Ag Commissioner Crop Report-Santa Barbara County [2]12lb [3]18lb

Returns. Based on the 2004 to 2005 USDA Shipping Point fresh market reports and the 2004 and 2005 Ag Commissioner crop reports, the average returns are $7.50 per 9.5-pound tray (8 x 1 lb clamshell). Based on average returns for 2004 – 2005, processor returns to the grower are $5.00 per 18-pound tray for the freezer market. Strawberry prices are based on trays and not weight, therefore the $7.50 tray price is used in this study to provide a basis for a range of yields and prices shown in Table 4. Average grower returns as reported by the Agricultural Commissioner for the last five years are shown in Table C. Fresh market and processor prices vary during the harvest season.

Cooling. Cooling costs for fresh market strawberries varies by cooler and grower volume. Also, the grower may have the option to negotiate the price with the cooler. Depending upon the arrangement, costs may range from $0.40 to $0.50 plus cents per tray. The estimated cost used in this study is $0.50 per tray.

Selling Costs. Selling costs for fresh market strawberries are calculated at 8% or for this study $0.60 per tray.

*Assessments***.** The grower pays $0.04 per tray to the Strawberry Commission for research and marketing. Fresh market assessment is per tray (9.5 lbs in this study) and the freezer assessment on a 14-pound tray.

Year-end Cleanup. The plastic mulch and drip tape are pulled and rolled by hand and hauled to the dump. The field is then disced one time in preparation for the next crop and the operation is incorporated with land preparation in this study.

Labor, Equipment, and Operating Interest

Labor. Labor rates of $13.11 per hour for machine operators and $10.00 for general labor includes payroll overhead of 38%. The basic hourly wages are $9.50 for machine operators and $7.25 for general labor. Pickers are often paid a base pay plus piecework, or straight piecework depending on the time of harvest and if machine or non-machine harvest. In this study, picker pay is calculated using the field labor rate. The overhead includes the employers' share of federal and California state payroll taxes, workers' compensation insurance for strawberry crops (code 0079), and a percentage for other possible benefits. Workers' compensation costs will vary among growers, but for this study the cost is based upon the average industry final rate as of January 5, 2005 (California Department of Insurance). Labor for operations involving machinery are 20% higher than the operation time given in Table 1 to account for the extra labor involved in equipment set up, moving, maintenance, work breaks, and field repair.

Equipment Operating Costs. Repair costs are based on purchase price, annual hours of use, total hours of life, and repair coefficients formulated by the American Society of Agriculture Engineers (ASAE). Fuel and lubrication costs are also determined by ASAE equations based on maximum power takeoff (PTO) horsepower, and fuel type. Prices for on-farm delivery of diesel and gasoline are $2.00 and $2.55 per gallon, respectively. The cost includes a 2.25% sales tax (effective September 2001) on diesel fuel and 7.25% sales tax on gasoline. Gasoline also includes federal and state excise tax, which can be refunded for on-farm use when filing your income tax. The fuel, lube, and repair cost per acre for each operation in Table 1 are determined by multiplying the hours per acre for the selected operation by the total hourly operating cost in Table 6 for each piece of equipment used in that operation. Tractor time is 10% higher than implement time for a given operation to account for setup, travel and down time.

Interest on Operating Capital. Interest on operating capital is based on cash operating costs and is calculated monthly until harvest at a nominal rate of 9.25% per year. A nominal interest rate is the typical

market cost of borrowed funds. The interest cost of post harvest operations is discounted back to the last harvest month using a negative interest charge. The rate will vary depending upon various factors, but the rate in this study is considered a typical lending rate by a farm lending agency as of January 2006.

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

Cash Overhead

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

Property Taxes. Counties charge a base property tax rate of 1% on the assessed value of the property. In some counties special assessment districts exist and charge additional taxes on property including equipment, buildings, and improvements. For this study, county taxes are calculated as 1% of the average value of the property. Average value equals new cost plus salvage value divided by 2 on a per acre basis.

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

Office Expense. Office and business expenses are estimated at $500 per acre. These expenses include office supplies, telephones, bookkeeping, accounting, legal fees, utilities, and miscellaneous expenses.

Sprinkler Pipe. Sprinklers are rented for approximately three months during land preparation and plant establishment. A cost of $215 per acre is used in this study.

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Land Rent. The 85 acres is rented for cash at $1,900 per acre or $2,019 per producing acre (80 acres). The rented land includes the irrigation system that is maintained by the owner.

Sanitation Services. Sanitation services provide portable toilets with washing equipment and cost the farm $9,600 annually or $120 per producing acre. The cost is derived from grower budgets/actuals.

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

Investment Repairs. Investment Repairs or Annual maintenance for farm investments (non-cash overhead) is calculated as two percent of the purchase price, but will vary among investments.

Non-Cash Overhead

Non-cash overhead, shown on an annual per acre basis is calculated as the capital recovery cost for equipment and other farm investments.

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

Salvage Value. Salvage value is an estimate of the remaining value of an investment at the end of its useful life. For farm machinery the remaining value is a percentage of the new cost of the investment (Boehlje and Eidman). The percent remaining value is calculated from equations developed by the American Society of Agricultural Engineers (ASAE) based on equipment type and years of life. The life in years is estimated by dividing the wear out life, as given by ASAE by the annual hours of use in this operation. For other investments including irrigation systems, buildings, and miscellaneous equipment, the value at the end of its useful life is zero. The salvage value and purchase price for land are the same because land does not depreciate. The purchase price and salvage value for equipment and investments are shown in Table 5.

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

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

Land. Land values in the region for this study are approximately $22,000 to $29,000 per acre for row cropland. Land suitable for strawberries appears to be the higher price land.

Irrigation System. The system is based on one 75 horsepower electric pump lifting 28 acre-inches from a water level depth of 120 feet. The pump and 300-foot deep well already existed on the site and the irrigation system costs are charged to the landowner. Water is pumped through a filtration station into main lines. Reusable lateral lines owned by the grower are buried each year at the edge of the strawberry field and are connected to the main and drip lines. The field configuration requires 3,480 feet per block. Two drip lines are buried in each bed prior to planting. The lateral lines have a 3-year life and the drip lines are an annual expense.

Equipment. Farm equipment is purchased new or used, but the study shows the current purchase price for new equipment. Strawberry production requires much specialized equipment including modifications to commercial tractors. Many of these modifications are made in machine shops and are not necessarily included in the equipment costs shown in the tables. Some of the other specialized equipment is also built in machine or farmer shops and retail prices are not readily available. The new purchase price is adjusted to 40% to indicate a mix of new and used equipment. Annual ownership costs for equipment and other investments are shown in the Whole Farm Annual Equipment, Investment, and Business Overhead Costs table. Equipment costs are composed of three parts: non-cash overhead, cash overhead, and operating costs. Both of the overhead factors have been discussed in previous sections. The operating costs consist of repairs, fuel, and lubrication and are discussed under operating costs.

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

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UC COOPERATIVE EXTENSION

Table 1 COSTS PER ACRE to PRODUCE STRAWBERRIES

SOUTH COAST REGION - Santa Barbara County 2006

Operation	Operation Time (Hrs/A)	Cash and Labor Cost per acre					
		Labor Cost	Fuel, Lube & Repairs	Material Cost	Custom/ Rent	Total Cost	Your Cost
Cultural:							
Land Prep: Disc/Roll 5X	0.95	15	34	0	0	49	
Land Prep: Subsoil 2X	1.50	24	52	0	0	76	
Land Prep: Plow 1X	0.30	5	5	0	0	10	
Land Prep: Level/Smooth Field 2X	0.32	5	11	0	0	16	
Land Prep: List/Shape Beds	0.90	14	36	0	0	50	
Fertilize: Preplant (18-6-8)	0.25	4	3	640	0	647	
Fumigate: Fumigate/Lay Mulch	1.00	111	21	1,138	0	1,270	
Irrigate: Install Drip Tape 2 line/bed	1.50	24	20	180	0	224	
Plant: Cut/Grade Roads	2.50	39	28	0	0	68	
Irrigate: Lay Laterals/Connect Drip	0.08	116	1	0	0	117	
Irrigate: Sprinkle/Layout/Pickup Pipe	2.00	246	11	71	0	329	
Irrigate: Drip	29.00	290	0	262	0	552	
Plant: Punch Holes	0.69	11	4	0	0	15	
Plant: Transplant	42.00	420	0	2,000	0	2,420	
Pest: Worms	0.58	9	5	14	0	28	
Pest: Botrytis	1.17	18	10	102	0	130	
Pest: Mites-Persimilis	5.00	50	0	208	0	258	
Pest: Botrytis/Mildew	1.17	18	10	204	0	232	
Pest: Mildew/Mites	1.17	19	10	206	0	234	
Pest: Botrytis/Mildew/Mites	0.58	9	5	173	0	188	
Pest: Botrytis/Mites/Lygus	0.58	9	5	169	0	183	
Pest: Mildew/Mite/Lygus	0.58	9	5	143	0	157	
Weed: Hand	76.00	760	0	0	0	760	
Fertilize: Through drip	0.00	0	0	187	0	187	
Harvest: Cut Mulch Prior to Harvest	0.28	154	2	0	0	156	
Harvest: Haul Mulch to Dump	0.03	1	0	0	1	2	
Year End: Field Cleanup	0.04	66	1	0	21	88	
TOTAL CULTURAL COSTS	170.17	2,447	281	5,696	23	8,446	
Harvest:							
Harvest/Record Fresh	716.44	7,164	0	7,329	0	14,493	
Load/Haul Fresh	4.96	307	156	0	0	463	
Harvest/Record/Haul Freezer	368.01	3,729	71	0	0	3,800	
Cooling	0.00	0	0	2,262	0	2,262	
TOTAL HARVEST COSTS	1,089.41	11,200	228	9,591	0	21,019	
Assessment & Selling Costs:							
Strawberry Commission	0.00	0	0	239	0	239	
Selling Costs	0.00	0	0	2,714	0	2,714	
TOTAL ASSESSMENT & SELLING COSTS	0.00	0	0	2,953	0	2,953	
Interest on operating capital @ 9.25%						890	
TOTAL OPERATING COSTS/ACRE		13,648	508	18,240	23	33,308	
TOTAL OPERATING COSTS/TRAY*						5.90	

UC COOPERATIVE EXTENSION

Table 1 continued

Operation	Operation Time (Hrs/A)	Cash and Labor Cost per acre: Labor Cost	Fuel, Lube & Repairs	Material Cost	Custom/ Rent	Total Cost	Your Cost
CASH OVERHEAD (see Table 5):							
Liability Insurance						7	
Office Expense						500	
Sanitation Fee						120	
Land Rent						2,019	
Pipe Rent						215	
Property Taxes						27	
Property Insurance						20	
Investment Repairs						32	
TOTAL CASH OVERHEAD COSTS						2,940	
TOTAL CASH COSTS/ACRE						36,248	
TOTAL CASH COSTS/TRAY*						6.42	
NON-CASH OVERHEAD (see Table 5)		Per Producing Acre		Annual Cost Capital Recovery			
Buildings		1000		89		89	
Fuel Tanks		44		4		4	
Shop Tools		163		16		16	
Harvest Carts 90		15		4		4	
Hand Tools		63		6		6	
Irrigation System -Lateral Lines		200		75		75	
Equipment		3,214		327		327	
TOTAL NON-CASH OVERHEAD COSTS		4,698		521		521	
TOTAL COSTS/ACRE						36,769	
TOTAL COSTS/TRAY*						6.51	

*Cost per tray is total of 9.5 lb plus 18 lb trays

UC COOPERATIVE EXTENSION

Table 2 COSTS and RETURNS PER ACRE to PRODUCE STRAWBERRIES

SOUTH COAST REGION - Santa Barbara County 2006

	Quantity/ Acre	Unit	Price or Cost/Unit	Value or Cost/Acre	Your Cost
GROSS RETURNS					
Fresh Market 9.5 lb tray	4,524	tray	7.50	33,930	
Freezer Market 18 lb tray	1,124	tray	5.00	5,620	
TOTAL GROSS RETURNS	5,648			39,550	
OPERATING COSTS					
Water:					
Water - pumped	28.00	acin	11.89	333	
Materials:					
T-Tape	16,345.00	foot	0.01	180	
Mulch 1.25m	350.00	lb	1.00	350	
Tray w/ 8 1 lb clamshells (Consumer Pack)	4,524.00	each	1.62	7,329	
Fertilizer:					
18-6-8 (slow release)	1,000.00	lb	0.64	640	
Thiocal (0-0-0-10S-6Ca)	1,246.80	lb	0.15	187	
Plants:					
Strawberry Plants	25,000.00	each	0.08	2,000	
Fumigant:					
Methyl Bromide + Chloropicrin 57/43	225.00	lb	3.50	788	
Insecticide:					
Dipel DF	1.00	lb	14.15	14	
Agri-Mek 0.15 EC	32.00	floz	7.82	250	
Acramite 50WS	2.00	lb	87.69	175	
Savey 50 DF	6.00	oz	17.00	102	
Dibrom 8 Emulsive	16.00	floz	0.84	13	
Danitol	16.00	floz	1.62	26	
Fungicide:					
Captan 50W	16.00	lb	4.40	70	
Elevate 50WDG	3.00	lb	44.57	134	
Pristine	23.00	oz	2.83	65	
Switch 62.5 WG	14.00	oz	5.91	83	
Quadris	12.00	floz	3.19	38	
Rally 40W	5.00	oz	5.16	26	
Thiolux	15.00	lb	0.91	14	
Predatory Mites:					
Persimilis	32.00	thou	6.50	208	
Custom:					
Landfill Fee (Santa Maria)	450.00	lb	0.05	23	
Cooling Costs (Fresh Strawberries)	4,524.00	tray	0.50	2,262	
Selling Costs @ 8% (Fresh Strawberries)	4,524.00	tray	0.60	2,714	
Assessment:				0	
Strawberry Fresh (based on 9.5 lb tray)	4,524.00	tray	0.04	181	
Strawberry Freezer (based on 14 lb tray equivalent)	1,445.00	tray	0.04	58	
Labor (machine)	40.37	hrs	13.11	529	
Labor (non-machine)	1,311.80	hrs	10.00	13,118	
Fuel - Gas	66.65	gal	2.55	170	
Fuel - Diesel	100.90	gal	2.00	202	
Lube				56	
Machinery repair				81	
Interest on operating capital @ 9.25%				890	
TOTAL OPERATING COSTS/ACRE				33,308	
NET RETURNS ABOVE OPERATING COSTS				6,242	

UC COOPERATIVE EXTENSION

Table 2 continued

	Quantity/ Acre	Unit	Price or Cost/Unit	Value or Cost/Acre	Your Cost
CASH OVERHEAD:					
Liability Insurance				7	
Office Expense				500	
Sanitation Fee				120	
Land Rent				2,019	
Pipe Rent				215	
Property Taxes				27	
Property Insurance				20	
Investment Repairs				32	
TOTAL CASH OVERHEAD COSTS/ACRE				2,940	
TOTAL CASH COSTS/ACRE				36,248	
NON-CASH OVERHEAD COSTS (Capital Recovery)					
Buildings				89	
Fuel Tanks				4	
Shop Tools				16	
Harvest Carts 90				4	
Hand Tools				6	
Irrigation System -Lateral Lines				75	
Equipment				328	
TOTAL NON-CASH OVERHEAD COSTS/ACRE				521	
TOTAL COSTS/ACRE				36,769	
NET RETURNS ABOVE TOTAL COSTS				2,781	

UC COOPERATIVE EXTENSION

Table 3 MONTHLY CASH COSTS PER ACRE to PRODUCE STRAWBERRIES

SOUTH COAST REGION - Santa Barbara County 2006

Beginning AUG 05 Ending AUG 06	AUG 05	SEP 05	OCT 05	NOV 05	DEC 05	JAN 06	FEB 06	MAR 06	APR 06	MAY 06	JUN 06	JUL 06	AUG 06	TOTAL
Cultural:														
Land Prep: Disc/Roll 5X	49													49
Land Prep: Subsoil 2X	76													76
Land Prep: Plow 1X	10													10
Land Prep: Level/Smooth Field 2X	16													16
Land Prep: List/Shape Beds		50												50
Fertilize: Preplant (18-6-8)		647												647
Fumigate: Fumigate/Lay Mulch		1,270												1,270
Irrigate: Install Drip Tape 2 line/bed		224												224
Plant: Cut/Grade Roads		68												68
Irrigate: Lay Laterals/Connect Drip		117												117
Irrigate: Sprinkle/Layout/Pickup Pipe		192		137										329
Irrigate: Drip			54		63	22	32	62	86	98	98	39		552
Plant: Punch Holes			15											15
Plant: Transplant			2,420											2,420
Pest: Worms					28									28
Pest: Botrytis						130								130
Pest: Mites-Persimilis						129	129							258
Pest: Botrytis/Mildew							232							232
Pest: Mildew/Mites								234						234
Pest: Botrytis/Mildew/Mites									188					188
Pest: Botrytis/Mites/Lygus										183				183
Pest: Mildew/Mite/Lygus											157			157
Weed: Hand				30	140	90	130	100	100	90	80			760
Fertilize: Through drip							31	31	31	31	31	31		187
Harvest: Cut Mulch Prior to Harvest							156							156
Harvest: Haul Mulch to Dump							2							2
Year End: Field Cleanup												87.51		88
TOTAL CULTURAL COSTS	151	2,568	2,489	167	231	371	712	427	404	401	366	70	0	8,446
Harvest:														
Harvest/Record Fresh								1,417	3,147	6,258	1,873	1,798		14,493
Load/Haul Fresh								42	99	207	61	55		463
Harvest/Record/Haul Freezer										461	1,467	972	900	3,800
Cooling													2,262	2,262
TOTAL HARVEST COSTS	0	0	0	0	0	0	0	1,459	3,246	6,926	3,401	2,826	1,139	18,996
Assessment & Selling Costs:														
Strawberry Commission													239	239
Selling Costs												0	2,714	2,714
TOTAL ASSESSMENT & SELLING COSTS													2,953	2,953
Interest on operating capital @ 9.25%	1	21	40	41	43	46	51	66	94	150	180	202	-48	890
TOTAL OPERATING COSTS/ACRE	152	2,589	2,529	209	274	417	764	1,952	3,744	7,478	3,947	3,098	6,067	33,308
OVERHEAD:														
Liability Insurance						6								6
Office Expense	38	38	38	38	38	38	38	38	38	38	38	38	38	500
Sanitation Fee	8	8	8	8	8	8	8	8	8	8	8	8	8	100
Land Rent											1,381			1381
Pipe Rent				275										275
Property Taxes									24					24
Property Insurance							16							16
Investment Repairs	2	2	2	2	2	2	2	2	2	2	2	2		24
TOTAL CASH OVERHEAD COSTS	50	50	50	265	50	57	71	50	77	50	2,069	50	48	2,940
TOTAL CASH COSTS/ACRE	203	2,639	2,579	474	325	474	835	2,002	3,821	7,528	6,016	3,148	6,115	36,247

UC COOPERATIVE EXTENSION

Table 4. RANGING ANALYSIS

SOUTH COAST REGION - Santa Barbara County 2006

COSTS PER ACRE AT VARYING YIELD TO PRODUCE STRAWBERRIES

Pounds per Acre:	44,253	50,563	56,900	63,210	69,520	75,858	82,168
	YIELD (trays/acre)						
Fresh Market (9.5 lb trays):	3,167	3,619	4,072	4,524	4,976	5,429	5,881
Freezer Market (18 lb trays):	787	899	1,012	1,124	1,236	1,349	1,461
OPERATING COSTS							
Cultural Cost	8,446	8,446	8,446	8,446	8,446	8,446	8,446
Harvest Cost (pick & haul, fresh & freezer)	13,095	14,982	16,869	18,757	20,644	22,531	24,419
Cooling (fresh)	1,584	1,810	2,036	2,262	2,488	2,715	2,941
Sales Commission (fresh)	1,900	2,171	2,443	2,714	2,986	3,257	3,529
Assessment Cost (fresh & freezer)	167	191	215	239	263	287	310
Interest on operating capital	785	820	855	890	924	959	994
TOTAL OPERATING COSTS/acre	25,977	28,420	30,865	33,309	35,751	38,195	40,638
Total Operating Costs/tray	6.57	6.29	6.07	5.90	5.76	5.64	5.54
CASH OVERHEAD COSTS	2,940	2,940	2,940	2,940	2,940	2,940	2,940
TOTAL CASH COSTS/acre	28,917	31,360	33,804	36,249	38,691	41,135	43,578
Total Cash Costs/tray	7.31	6.94	6.65	6.42	6.23	6.07	5.94
NON-CASH OVERHEAD COSTS	521	521	521	521	521	521	521
TOTAL COSTS/acre	29,438	31,882	34,326	36,770	39,212	41,657	44,100
Total Costs/tray	7.45	7.06	6.75	6.51	6.31	6.15	6.01

NET RETURNS PER ACRE ABOVE OPERATING COSTS

$/tray		YIELD (trays/acre)						
Fresh		3,167	3,619	4,072	4,524	4,976	5,429	5,881
	Freezer	787	899	1,012	1,124	1,236	1,349	1,461
5.25	3.50	-6,596	-6,274	-5,945	-5,624	-5,301	-4,972	-4,650
6.00	4.00	-3,827	-3,110	-2,385	-1,669	-951	-225	492
6.75	4.50	-1,058	53	1,175	2,286	3,399	4,521	5,633
7.50	5.00	1,710	3,217	4,735	6,241	7,749	9,267	10,774
8.25	5.55	4,519	6,426	8,346	10,252	12,161	14,081	15,988
9.00	6.00	7,248	9,545	11,855	14,151	16,449	18,760	21,057
9.75	6.50	10,017	12,708	15,415	18,106	20,799	23,506	26,198

NET RETURNS PER ACRE ABOVE CASH COSTS

$/tray		YIELD (trays/acre)						
Fresh		3,167	3,619	4,072	4,524	4,976	5,429	5,881
	Freezer	787	899	1,012	1,124	1,236	1,349	1,461
5.25	3.50	-9,536	-9,214	-8,884	-8,564	-8,241	-7,911	-7,590
6.00	4.00	-6,767	-6,050	-5,324	-4,609	-3,891	-3,165	-2,448
6.75	4.50	-3,998	-2,886	-1,764	-654	459	1,581	2,693
7.50	5.00	-1,229	277	1,796	3,301	4,809	6,327	7,834
8.25	5.55	1,579	3,486	5,406	7,313	9,221	11,141	13,049
9.00	6.00	4,308	6,605	8,916	11,211	13,509	15,820	18,117
9.75	6.50	7,077	9,769	12,476	15,166	17,859	20,566	23,258

UC COOPERATIVE EXTENSION

Table 4. continued

NET RETURNS PER ACRE ABOVE TOTAL COSTS

$/tray		YIELD (trays/acre)						
Fresh		3,167	3,619	4,072	4,524	4,976	5,429	5,881
	Freezer	787	899	1,012	1,124	1,236	1,349	1,461
5.25	3.50	-10,057	-9,735	-9,406	-9,085	-8,762	-8,433	-8,111
6.00	4.00	-7,288	-6,572	-5,846	-5,130	-4,412	-3,687	-2,970
6.75	4.50	-4,520	-3,408	-2,286	-1,175	-62	1,060	2,172
7.50	5.00	-1,751	-244	1,274	2,780	4,288	5,806	7,313
8.25	5.55	1,057	2,965	4,885	6,791	8,700	10,620	12,527
9.00	6.00	3,787	6,083	8,394	10,690	12,988	15,298	17,595
9.75	6.50	6,555	9,247	11,954	14,645	17,338	20,045	22,737

Trays for fresh are 8 x 1 lb clamshells weighing 8 to 10 lbs per tray. 9.5 lbs per tray is used in this study.

UC COOPERATIVE EXTENSION

Table 5. HOURLY EQUIPMENT COSTS

SOUTH COAST REGION - Santa Barbara County 2006

		COSTS PER HOUR						
	Actual		Cash Overhead		Operating			
Yr Description	Hours Used	Capital Recovery	Insur-ance	Taxes	Repairs	Fuel & Lube	Total Oper.	Total Costs/Hr.
06 205HP Crawler	322.90	20.31	0.97	1.26	2.78	27.36	30.14	52.68
06 42HP 4WD Tractor	261.10	4.11	0.20	0.25	0.46	4.74	5.20	9.76
06 55HP 2WD Tractor	601.40	2.07	0.10	0.13	0.92	6.21	7.13	9.43
06 75HP 4WD Tractor	95.30	18.21	0.87	1.13	1.29	8.47	9.76	29.97
06 85HP Crawler	220.00	7.89	0.38	0.49	0.74	9.60	10.34	19.10
06 90HP 4WD Tractor	180.40	12.79	0.55	0.72	0.86	10.17	11.03	25.09
06 Blade Rear 3 pt	206.70	0.20	0.01	0.01	0.00	0.00	0.00	0.22
06 Disk Offset 14'	76.00	10.14	0.37	0.48	1.67	0.00	1.67	12.66
06 Drip Machine 3-64"R	120.00	2.85	0.12	0.16	1.43	0.00	1.43	4.56
06 Fertilizer Drill 3-64"Row 16'	20.00	20.12	0.84	1.10	1.68	0.00	1.68	23.74
06 Fumigation/Mulch Machine 1-64" Row #1	80.00	8.80	0.37	0.48	1.30	0.00	1.30	10.95
06 Fumigation/Mulch Machine 1-64" Row #2	80.00	8.80	0.37	0.48	1.30	0.00	1.30	10.95
06 Knife-Sickle 64"	22.20	2.27	0.10	0.12	0.16	0.00	0.16	2.65
06 Lister/Shaper 3-64"Row	71.60	28.10	1.18	1.53	6.58	0.00	6.58	37.39
06 Plow 5 bottom	24.00	43.16	1.81	2.35	4.52	0.00	4.52	51.84
06 Punch Machine 1-64" Row	55.20	3.65	0.15	0.20	0.37	0.00	0.37	4.37
06 Ringroller 20'	76.00	8.37	0.35	0.46	1.17	0.00	1.17	10.35
06 Ripper - 5 Shank	120.00	2.80	0.12	0.15	1.75	0.00	1.75	4.82
06 Sprayer 21' boom	466.70	0.31	0.01	0.02	0.63	0.00	0.63	0.97
06 Trailer-Pipe	160.00	0.47	0.02	0.03	0.02	0.00	0.02	0.54
06 Triplane 15'	25.90	29.11	1.22	1.59	1.86	0.00	1.86	33.78
06 Truck 1 Ton #1	584.10	2.84	0.12	0.16	2.29	13.44	15.73	18.85
06 Truck 1 Ton #2	578.80	2.87	0.12	0.16	2.29	13.44	15.73	18.88

UC COOPERATIVE EXTENSION

Table 6. WHOLE FARM ANNUAL EQUIPMENT, INVESTMENT, and BUSINESS OVERHEAD COSTS

SOUTH COAST REGION - Santa Barbara County 2006

ANNUAL EQUIPMENT COSTS

						Cash Overhead		
Yr	Description	Price	Yrs Life	Salvage Value	Capital Recovery	Insur-ance	Taxes	Total
06	205HP Crawler	170,000	15	33,096	16,396	782	1,015	18,193
06	42HP 4WD Tractor	27,830	15	5,418	2,684	128	166	2,978
06	55HP 2WD Tractor	32,269	15	6,282	3,112	148	193	3,453
06	75HP 4WD Tractor	45,000	15	8,761	4,340	207	269	4,816
06	85HP Crawler	45,000	15	8,761	4,340	207	269	4,816
06	90HP 4WD Tractor	50,000	10	14,769	5,767	249	324	6,340
06	Blade Rear 3 pt	1,012	15	97	102	4	6	112
06	Disk Offset 14'	15,516	10	2,744	1,927	70	91	2,089
06	Drip Machine 3-64"R	8,500	15	816	855	36	47	938
06	Fertilizer Drill 3-64"Row 16'	10,000	15	960	1,006	42	55	1,103
06	Fumigation/Mulch Machine 1-64" Row #1	17,500	15	1,680	1,761	74	96	1,930
06	Fumigation/Mulch Machine 1-64" Row #2	17,500	15	1,680	1,761	74	96	1,930
06	Knife-Sickle 64"	1,250	15	120	126	5	7	138
06	Lister/Shaper 3-64"Row	50,000	15	4,800	5,030	211	274	5,515
06	Plow 5 bottom	25,740	15	2,471	2,590	109	141	2,839
06	Punch Machine 1-64" Row	5,000	15	480	503	21	27	552
06	Ringroller 20'	15,800	15	1,517	1,590	67	87	1,743
06	Ripper - 5 Shank	8,346	15	801	840	35	46	921
06	Sprayer 21' boom	3,630	15	349	365	15	20	400
06	Trailer-Pipe	2,150	20	112	188	9	11	208
06	Triplane 15'	18,750	15	1,800	1,886	79	103	2,068
06	Truck 1 Ton #1	36,000	10	10,634	4,152	180	233	4,565
06	Truck 1 Ton #2	36,000	10	10,634	4,152	180	233	4,565
TOTAL		642,793		118,782	65,471	2,932	3,808	72,211
	40% of New Cost *	257,117	47,513	26,189	1,173	1,523	28,885	28,956

*Used to reflect a mix of new and used equipment

ANNUAL INVESTMENT COSTS

					Cash Overhead			
Description	Price	Yrs Life	Salvage Value	Capital Recovery	Insur-ance	Taxes	Repairs	Total
Buildings 2,400 sqft	80,000	20		7,117	308	400	1,600	9,425
Fuel Tanks/Above Ground	3,500	20	651	294	16	21	70	401
Hand Tools	5,000	15	460	504	21	27	100	652
Harvest Carts 90	1,200	5		287	5	6	24	321
Lateral Lines	16,008	3		6,016	62	80	534	6,692
Shop Tools	13,000	15	1,264	1,307	55	71	260	1,693
TOTAL INVESTMENT	118,708		2,375	15,525	466	605	2,588	19,185

ANNUAL BUSINESS OVERHEAD COSTS

Description	Units/ Farm	Unit	Price/ Unit	Total Cost
Land Rent	85	acre	1,900.00	161,500
Sprinkler Rent	80	acre	215.00	17,200
Liability Insurance	85	acre	6.22	529
Office Expense	80	acre	500.00	40,000
Sanitation Fee	80	acre	120.00	9,600

UC COOPERATIVE EXTENSION

Table 7. OPERATIONS WITH EQUIPMENT

SOUTH COAST REGION – Santa Barbara County 2006

Operation	Month	Equipment		Non-Machine Total Labor Hours/Acre	Material	Rate/ Broadcast Acre	Unit
		Tractor	Implement				
Land Prep: Disk/Roll 5X	August	205 HP Crawler	Disk - Offset				
			Ringroller				
Land Prep: Subsoil 2X	August	205 HP Crawler	Ripper 5-Shank				
Land Prep: Plow 1X	August	205 HP Crawler	Plow 5 Bottom				
Land Prep: Triplane 2X	August	205 HP Crawler	Triplane				
Land Prep: List/Shape Beds	September	205 HP Crawler	Lister/Shaper				
Irrigate: Sprinkle/Layout/Pickup Pipe	September	42 HP 4WD	Trailer - Pipe	13.50	Water	3.00	acin
	November	42 HP 4WD	Trailer - Pipe	8.00	Water	3.00	acin
Irrigate: Install Drip Tape	September	90 HP 4WD	Tape Machine		T-Tape	16,345.00	ft
Irrigate: Lay Laterals/Connect Drip	September	75 HP 4WD	Blade	11.50			
Irrigate: Drip	October			3.00	Water	2.00	acin
	December			2.70	Water	3.00	acin
	January			1.00	Water	1.00	acin
	February			2.00	Water	1.00	acin
	March			3.80	Water	2.00	acin
	April			5.00	Water	3.00	acin
	May			5.00	Water	4.00	acin
	June			1.50	Water	4.00	acin
Fertilize: Preplant	September	90 HP 4WD	Fertilizer Drill		18-6-8	1,000.00	lb
Fertilize: through drip	February				Thiocal	207.00	lb
	March				Thiocal	207.00	lb
	April				Thiocal	207.00	lb
	May				Thiocal	207.00	lb
	June				Thiocal	207.00	lb
	July				Thiocal	207.00	lb
Fumigate: Fumigate/Lay Mulch	September	75 HP 4WD	Fume/Mulch Machine #1	8.00	Methyl Bromide &	225.00	lb
		55 HP 4WD	Fume/Mulch Machine #2		Mulch	350.00	lb
Plant: Cut/Grade Roads	September	85 HP Crawler	Blade				
Plant: Punch Holes	October	42 HP 4WD	Punch Machine				
Plant: Transplant	October			42.00	Strawberry Plants	25,000.00	each
Pest: Worms	December	55 HP 4WD	Sprayer		Dipel	1.00	lb
Pest: Botrytis	January	55 HP 4WD	Sprayer		Captan	4.00	lb
					Elevate	1.50	lb
	January	55 HP 4WD	Sprayer		Captan	4.00	lb
Pest: Mites - Persimilis 2X	January			2.50	Persimilis	16,000.00	each
	February			2.50	Persimilis	16,000.00	each
Pest: Botrytis/Mildew	February	55 HP 4WD	Sprayer		Captan	4.00	lb
					Pristine	23.00	oz
	February	55 HP 4WD	Sprayer		Switch	14.00	oz
					Quadris	12.00	floz
Pest: Mildew/Mites	March	55 HP 4WD	Sprayer		Rally	5.00	oz
					Acramite	1.00	lb
	March	55 HP 4WD	Sprayer		Thiolux	5.00	lb
					Acramite	1.00	lb
Pest: Botrytis/Mildew/Mites	April	55 HP 4WD	Sprayer		Elevate	1.50	lb
					Thiolux	5.00	lb
					Savey	6.00	oz
Pest: Botrytis/Mites/Lygus	May	55 HP 4WD	Sprayer		Captan	4.00	lb
					Danitol	16.00	floz
					Agri-Mek	16.00	floz
Pest: Mildew/Mite/Lygus	June	55 HP 4WD	Sprayer		Thiolux	5.00	lb
					Agri-Mek	16.00	floz
					Dibrom	16.00	floz

Table 7. continued

Operation		Equipment		Non-Machine Total Labor		Rate/ Broadcast
Cultural:	Month	Tractor	Implement	Hours/Acre	Material	Acre Unit
Weed: Hand	November			3.00		
	December			14.00		
	January			9.00		
	February			13.00		
	March			10.00		
	April			10.00		
	May			9.00		
	June			8.00		
Harvest: Cut Mulch prior to harvest	February	42 HP 4WD	Knife-Sickle	15.00		
Harvest: Haul Mulch to Dump	February	Truck - 1 Ton #1			Dump Cost	65.00 acre
Harvest: Pick Fresh/Record	March			87.80	Trays	333.00 each
	April			163.85	Trays	931.00 each
	May			280.90	Trays	2,129.00 each
	June			90.30	Trays	599.00 each
	July			93.60	Trays	532.00 each
Harvest: Load/Haul Fresh	March	Truck - 1 Ton #1 & #2		1.90		
	April	Truck - 1 Ton #1 & #2		3.50		
	May	Truck - 1 Ton #1 & #2		5.90		
	June	Truck - 1 Ton #1 & #2		1.90		
	July	Truck - 1 Ton #1 & #2		2.00		
Harvest: Pick Freezer/Record/Haul	May	Truck - 1 Ton #1 & #2		43.90		
	June	Truck - 1 Ton #1 & #2		140.44		
	July	Truck - 1 Ton #1 & #2		93.60		
	August	Truck - 1 Ton #1 & #2		87.80		
Year End: Field Cleanup	August	Truck - 1 Ton #1		6.50	Dump Cost	65.00 acre