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Commodity Costs and Returns Estimation Handbook

A Report of the AAEA Task Force on Commodity Costs and Returns

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CHAPTER 15

EXAMPLES OF COST AND RETURN ESTIMATES: COTTON–ALMOND FARM IN SAN JOAQUIN VALLEY, CALIFORNIA – 1992

The purpose of this chapter is to provide an example of the types of information and supporting schedules needed to estimate costs and returns (CARs) for complex multiyear enterprises. Whereas Chapter 14 provided extensive computational detail in order to illustrate the concepts presented in this handbook, this chapter concentrates on the description of the operations necessary to grow cotton and almonds in California. This chapter also provides an example of a composite or representative projected cost estimate based, not on any particular operation, but on a synthetically constructed operation. The format of presentation is similar to that used by the University of California.

The assumptions in this chapter pertain to sample costs of cotton and almond production in San Joaquin Valley. Practices described should not be considered recommendations by the University of California, but rather represent production procedures considered typical for a well-managed field and row crop farm and orchard in this area. Cultural practices vary by grower and region; variations can be significant. The practices and inputs used in this cost study serve only as a sample or guide. These costs are represented on an annual, per acre basis. *The use of trade names 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.*

FARM DESCRIPTION

The hypothetical farm used to develop the projected CARs consists of 1,300 acres in the San Joaquin Valley in California. The farm consists of 500 acres of cotton grown in rotation with 690 acres of other field crops or Acreage Reserve (ACR) land, and 95 acres of almonds. The remaining 15 acres are used for buildings, roads, and burn. The cotton is grown on several fields that are roughly 60 acres in size. The almonds are grown on 40-50 acre blocks. In this study, the almond land is owned and the cotton ground is rented with a cash rent arrangement. Water is supplied by a water irrigation district and wells.

Generally cotton is grown three out of five years and not more than any two years in a row. Possible rotations include (1) cotton–cotton–tomato–cotton–barley, and (2) cotton–cotton–wheat/corn double crop–cotton–wheat/corn double crop. Alternatively, cotton can be rotated with alfalfa seed that would be in the ground for two to three years.

The farm in this study participates in the government commodity program for cotton. This means that 10% of the cotton base must be put into ACR in order to be eligible for full benefits. Typically growers do not pick one field and use it for ACR. Instead a grower will pick weak areas of several fields and put attention to them in terms of soil amendments and weed control. There are various options available for treatment of ACR land: (1) The land can be left fallow. In this case the previous crop is disked in, a preplant herbicide is applied, and the land is disked as needed in the summer. Yield following fallow may be lower

than for crops following crops. Salts may come to the surface of the soil from not being irrigated. Also, beneficial organisms in the soil may decline without a crop or moisture. (2) Safflower may be grown as a cover crop. (3) A green manure or wheat may be grown for green chop. (4) An old alfalfa field that was coming out of alfalfa may be left to meet the ACR requirements. The ACR ground is left fallow in this study.

REVENUE

The almond enterprise has revenue only from the sale of almonds. The cotton enterprise has revenue from the sale of lint and seed. The cotton enterprise also receives revenue from a producer option payment and a deficiency payment due to participation in the government program.

LABOR

Basic hourly wages for workers are $8.00 and $5.00 per hour for machine operators and field workers (irrigator), respectively. Adding 34% for SDI, FICA, insurance, and other benefits increases the labor rates to $10.72 per hour for machine labor and $6.70 per hour for nonmachine labor. These rates are assumed to be constant over the year so that a worker paid in February and in June both receive the same hourly salary.

GENERAL OPERATING COSTS

The costs for fertilizer and pesticides are for materials only, the cost of application is included in the calculations for custom operations, labor, and machines. The assessment on almonds is a marketing fee collected by the Almond Board of California. The assessment is $0.0225 per meat pound and is used for advertising of almonds. The cost of $45 is based on expected production of 2,000 pounds. There are several assessments on cotton calculated on a per bale basis. These assessments were computed in a fashion similar to almonds for the purposes of cost estimation.

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 enterprise. These costs include property taxes, office expense, liability and property insurance, sanitation services, and equipment repairs.

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. For owned

land, estimated property taxes are assessed at 1% of the value of the property. For rented land, no property tax assessment is made in the estimates because the rental rate implicitly includes property taxes.

Interest Rates

Interest on operating capital and all other with-in period calculations is charged on a nominal basis. It is calculated monthly until harvest at a nominal rate of 10% per year. All expendable inputs are assumed to be purchased for cash off the farm and so all interest is explicit interest. The real interest rate of 4% used to calculate capital recovery costs is the USDA-ERS's ten-year average of California's agricultural sector long-run rate of return to production assets from current income adjusted for inflation. It is used to reflect the long-term real rate of return to these specialized resources that can only be used effectively in the agricultural sector. In other words, the next best alternative use for these resources is in another agricultural enterprise. With a nominal rate of 10% and a real rate of 4%, the implicit inflation rate is 5.769% $\left(\frac{1.1}{1.04} - 1\right)$.

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 $5 per $1,000 (.5%) of assets on the average value of the assets over their useful life. Liability insurance covers accidents on the farm and costs $850 for the entire farm.

Office Expense

Office and business expenses are estimated at $30 per acre. These expenses include office supplies, telephones, bookkeeping, accounting, legal fees, road maintenance, etc.

NONCASH OVERHEAD

Noncash overhead is the capital recovery cost for equipment, buildings, irrigation system, orchard trees, land, and miscellaneous tools. Although farm equipment might be purchased new or used, this study collected data on current purchase price for new equipment. These prices were obtained from local dealers and are a mixture of list and purchase prices. This new equipment price is adjusted to 60% of its reported value to indicate a mix of new and used equipment.

The value of the trees as an asset is the net total operating costs for the preproductive years of the orchard. It includes land preparation, planting, and operating costs up until the year prior to harvest. For all 95 acres of almonds this cost is estimated to be $171,190 giving a per acre cost of $1,802 as compared to a per acre cost of $4,494.669 for the almond orchard discussed in Chapter 10 and Appendix 10A.

Chapter 15. Examples of Cost and Return Estimates: Cotton–Almond Farm in San Joaquin Valley, California – 1992

Capital Recovery Costs

Capital recovery cost is an estimate of 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). Put another way, 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 appropriately takes the time value of money into account. The calculation for the annual capital recovery costs uses equation 6.8 as follows:

$$CSC = (Purchase\ Price - Salvage\ Value)\left(\frac{r}{1-(1+r)^{-n}}\right) + (Salvage\ Value)(r)$$

$$= (Purchase\ Price - Salvage\ Value) \times \begin{pmatrix} Capital \\ Recovery \\ Factor \end{pmatrix} + (Salvage\ Value) \times (Interest\ Rate)$$

Because the purchase and salvage prices used are beginning of year values, this cost is adjusted to the end of the year using the implicit inflation rate of 5.769%.

Salvage Value

Salvage value is an estimate of the remaining market value of an investment at the end of its useful life. It is calculated differently for different investments. For farm machinery (e.g., tractors and implements) the remaining value is a percentage of the new cost of the investment. Salvage value is calculated as:

$$\text{New Purchase Price} \times \text{\% Remaining Value}$$

Many of the machines used on these operations are not covered by the Cross and Perry or the ASAE remaining value equations. Based on discussions with dealers the % Remaining Value is assumed to be 10% for almost all farm machinery. This is assumed to represent a real salvage value with the same purchasing power as the purchase price. Salvage value for other investments including irrigation systems, buildings, trees, and miscellaneous equipment is zero. The salvage value for land is equal to the purchase price because land does not typically depreciate.

Capital Recovery Factor

The capital recovery factor is the amortization factor or annual payment whose present value at compound interest is 1. It is the function of the interest rate and years of life of the equipment. Its reciprocal is represented by US_0, which for the nominal case is given by equation 2B.8. For real interest rate r and payment length n it is given by

$$US_0(r,n) = \frac{\left(1 - (1+r)^{-n}\right)}{r}.$$

Capital recovery for the establishment of the almonds is computed using equation 6.8 as follows. The purchase price (preproductive cost) is $171,190. The salvage value is $0.00. The capital service cost or capital recovery annuity is

$$\begin{aligned} CSC &= \frac{(PP - SV)r}{1 - (1+r)^{-n}} + SV(r) \\ &= \frac{(171{,}190 - 0)(0.04)}{1 - (1.04)^{-19}} + (0)(0.4) \\ &= \frac{6{,}847.60}{0.525357} \\ &= 13{,}034.17\,. \end{aligned}$$

Dividing this by 95 acres we obtain a real capital recovery cost per acre for the establishment cost of almonds of $137.20. The capital recovery cost of machinery for almonds is $80.92. The capital recovery for buildings, irrigation equipment, fuel tanks, pruning equipment and shop tools is $28.88 per acre. This gives a total per acre real cost of $247.00 (137.20+80.92+28.88). Adjusted to the end of the year this is $261.25 [(247)(1.05769)]. Capital recovery for cotton is computed in a similar manner.

EQUIPMENT CASH COSTS

Equipment costs are composed of three parts: noncash overhead such as capital recovery, cash overhead such as property taxes, and operating costs. Both of the overhead factors have been discussed in previous sections. The operating costs consist of repairs, fuel, and lubrication.

Repair costs are based on the prices collected from dealers. These prices (which are a mixture of list and purchase prices) may be slightly less than the list price but are assumed to be a list prices for purposes of repair estimation. Using these prices, annual hours of use, total hours of life, and repair coefficients formulated by the American Society of Agricultural Engineers (ASAE), repairs are then estimated using equation 5.8. Fuel and lubrication costs are also determined by ASAE equations based on maximum PTO HP (equation 5.19) and type of fuel used. The fuel and repair cost per acre for each operation in the CAR is determined by multiplying the total hourly operating cost for each piece of equipment used for the cultural practice by the number of hours per acre for that operation. Tractor time is 10% higher than implement time (operation time) for a given operation to account for fueling, moving equipment, and setup time. Prices for

on-farm delivery of diesel and gasoline are $0.71 and $.98 per gallon, respectively. This operation did not use any electricity.

LAND

Owned land was valued at $5,000 per acre. The farm consists of 100 acres of owned land. There are 95 acres in the almond orchard with another 5 acres of owned land for roads and farmstead. The total cost of owned land is $500,000 [(100)(5,000)]. The cost of land is then $5,263.16 per acre in production (500,000/95). Multiplying by the real interest rate of 4% gives an annual cost per acre of $210.52.

All of the land for cotton production was rented at a rate of $140.00 per acre. Total acres rented was 1,200, of which 500 was planted to cotton, 56 was allocated to cotton ACR, 10 was in roads and turnarounds, and 634 was allocated to other field crops. Five of the 10 acres in roads and turnarounds was allocated to cotton production. The rental cost per planted acre of cotton was calculated by adding the total cost of all land needed for the cotton enterprise and dividing this by the 500 planted acres. This gives [(500+56+5)($140)/500] $157.08 per acre.

GOVERNMENT PROGRAM PARTICIPATION

Government payments from participation in the cotton program are included as the gross value of production for cotton. Payments are received for the payment acres at the rates of $.21 per pound of lint deficiency payment and $.08 per pound of lint producer option payment (POP). The POP payment is based on 1,100 pounds of lint at $0.08 per pound for a total payment of $88.00 per planted acre. The deficiency payment is based on $.21 per pound on 1,100 pounds for a potential payment per planted acre of $233.00. But, the deficiency payment is not applicable to flex acres as explained in the paragraph below.

The ASCS base acreage is 556 acres. The required 10% Acreage Reduction (ACR) equals 56 acres and the required 15% flex acres equals 83 acres. All of the flex acres are planted to cotton. Therefore, there are 500 acres of planted cotton of which 417 are payment acres since flex acres are not eligible for payments. The planted acres equal 90% (100-10) of the base acres and the payment acres equal 75% (100 - 10 - 15) of the base acres. The percentage of planted acres that are also payment acres equals the ratio of the payment acres to the planted acres. It follows that 83.33% (.75/.90) of the planted acres receive payments. This gives a payment per planted acre of $192.50 [(233.00)(83.3333)].

The operations performed to maintain the 10% of cotton base that is in ACR land are included. The cost is spread out over the cotton acreage and included in the CAR estimate. For every nine acres of cotton there is one acre that is in ACR. On a per acre basis, the cost of each acre of cotton includes the costs of maintaining an additional .11 (1/9) acre in ACR.

Chapter 15. Examples of Cost and Return Estimates: Cotton–Almond Farm in San Joaquin Valley, California – 1992

Table 15.1 A Sample Brief CAR Summary for an Almond Budget Projected Almond				
Production Costs and Returns per Planted Acre San Joaquin Valley, California 1992				
Item	Dollars			
Gross value of production:				
Almonds	$2,000.00			
Operating costs:				
Fertilizer	$59.25			
Pesticides	212.09			
Water	19.2			
Custom operations	483.5			
Fuel, lube, and electricity	21.78			
Repairs	40.24			
Assessments	45		Almonds	
Interest on operating capital	48.12			
Miscellaneous	16.1			
Total operating expenses	$945.28	$945.28		
Overhead costs:				
General farm overhead	$30.00			
Taxes and insurance	106.13			
Interest on land	210.52		Is this 4% of 499.985	
Capital recovery	203.09	192.01	Based on beginning o	
Hired labor	255.77	72.5		
Opportunity cost of unpaid labor				
Interest on nonland capital	72.5		What is this that is no	
Total overhead costs	$878.01	$866.93	covered in capital recc	
Total costs	$1,823.29	$1,812.21		
Gross value of production less costs	$176.71	$187.75		
Harvest period price (dollars per lbs.)	$1.00			
Yield (pounds per planted acre)	2,000			

Table 15.2 Sample Brief CAR Summary for a Cotton Budget
Projected Cotton Production Costs and Returns per Planted Acre,
San Joaquin Valley, California 1992

Item	Value		
Gross value of production:			
Lint	$627.00		
Seed	108		
Producer option payment	74.8		
Deficiency payment	196.35		
Total Revenue	$1,006.15		
Operating costs:			
Seed	$11.20		
Fertilizer	44.3		
Pesticides	98.28		
Water	87.36	887.36	
Custom operations	197.42		
Fuel, lube, and electricity	22.35		
Repairs	32.21		
Assessments	15.92		
Interest on operating capital	24.22		
Miscellaneous			
Total Operating Costs	$533.26		
Allocated Overhead			
General farm overhead	$30.00		
Taxes and insurance	6.93		
Interest on land			
Opportunity cost of land (rental rate)	155.68		
Capital recovery	92.36	87.32	
Hired labor	91.35		
Opportunity cost of unpaid labor			
Interest on nonland capital	18.48		
Total Allocated Overhead	$394.80	$389.76	$5.04
Total Costs Listed	$928.06	$923.02	$5.04
Value Of Prod. Less Total Costs Listed	$78.09	83.13	($5.04)
Harvest period price			
Lint ($/lb.)	$0.57		
Seed ($/ton)	0.24		
Harvest period yield			
Lint (lb./acre)	1,100		
Seed (tons/acre)			

Schedule 15.1: 1992 Crop Acreage and Production – California Cotton-Almond Farm

Crop	Planted Acres	Harvested Acres	ASCS Base	Payment Acres	Flex Acres	ACR Acres	Production Yield	ASCS Yield	Units	Landlord's Share
Cotton-lint	500	500	556	417	83	56	550,000	1,100	Lbs.	0
Cotton-seed							450		Tons	0
Almonds	95	95					190,000		Lbs.	0

Schedule 15.2: Not applicable.

Schedule 15.3: Not applicable.

Schedule 15.4: 1992 Assumed Labor Hours and Cash Wages – California Cotton–Almond Farm

Labor Category	Compensation		Annual Hours of Work Per Acre	
	Cash Wages	In Kind	Cotton	Almonds
Machine	10.72	0	4.68	10.45
Non-machine	6.70	0	6.14	21.46

Schedule 15.5A: Operating Inputs and Machinery Operations for Almonds – California Cotton–Almond Farm

	Machinery Operations					Operating Input			
Month	Operation	Hrs./A	Machine 1	Machine 2	Machine 3	Item	Units/A	Units	$/Unit
November	Prune	11.00							
November	Stack brush	.70							
November	Buck brush	.12	Tractor 60hp 2wd	Brush rake & loader					
December	Knock mummies					Shake nuts - custom	.50	hr.	60.00
December	Blow & rake	.15				Sweep nuts - custom	.25	hr.	35.00
December	Shred_		Tractor 60hp 2wd	Flail mower - 10 ft.					
December	Stack brush	.70							
December	Buck brush	.12	Tractor 60hp 2wd	Brush rake & loader					
December	Weed control	.12	Tractor 30hp 2wd	Weed sprayer 100gal.		Roundup	.66	pint	5.07
						Surflan	1.00	pint	9.92
						Goal	.34	qt.	21.27
December	Pest control	.20	Tractor 60hp 2wd	Orch. sprayer 500gal.		Dormant oil	2.50	gal.	2.75
						Kocide	4.00	lb.	2.00
						Lorsban	.50	pint	6.48
January	Knock mummies					Shake nuts - custom	.50	hr.	60.00
January	Blow & rake					Sweep nuts - custom	.25	hr.	35.00
January	Shred	.15	Tractor 60hp 2wd	Flail mower - 10 ft.					
January	Stack brush	.70							
January	Buck brush	.12	Tractor 60hp 2wd	Brush rake & loader					
January	Remove a tree	1.00				Backhoe rental	1.00	acre	14.25

Schedule 15.5A (continued)

Month	Machinery Operations					Operating Input			
	Operation	Hrs./A	Machine 1	Machine 2	Machine 3	Item	Units/A	Units	$/Unit
January	Plant Tree, Carton/tank	.30				Almond tree	1	each	3.80
						Tree carton	1	each	.05
						Tank mix	1	tree	.20
January	Burn Prunings	.30							
January	Weed Control	.12	Tractor 30hp 2wd	Weed Sprayer 100gal		Roundup	.67	pint	5.07
						Surflan	1	pint	9.92
						Goal	.33	qt.	21.27
January	Pest Control	.20	Tractor 60hp 2wd	Orch. Sprayer 500gal		Dormant Oil	2.50	gal.	2.75
						Kocide	3	lb.	2.00
						Lorsban	.50	pint	6.48
February	Weed Control	.12	Tractor 30hp 2wd	Weed Sprayer 100gal		Roundup	.67	pint	5.07
						Surflan	1	pint	9.92
						Goal	.33	qt.	21.27
February	Pest Control	.40	Tractor i60hp 2wd	Orch. Sprayer 500gal		Rovral	1	lb.	23.35
February	Pollination					Hive rental	1	hive	30.00
February	Irrigate	.30				Water - district	4	acin	.48
February	Pest Control	.13	Tractor 60hp 2wd	Orch. Sprayer 500gal		Ziram	8	lb.	2.65
						Zinc	5	lb.	1.10
						Boron	4.50	lb.	.79
March	Weed Control	.13	Tractor 30hp 2wd	Weed Sprayer 100gal		Roundup	2	pint	5.07

Schedule 15.5A: Operating Inputs and Machinery Operations for Almonds – California Cotton–Almond Farm (continued)

	Machinery Operations					Operating Input			
Month	Operation	Hrs./A	Machine 1	Machine 2	Machine 3	Item	Units/A	Units	$/Unit
April	Fertilizer & App.	.40	Tractor 30hp 2wd			Sprayer rental	1	acre	5.00
						UN-32	50	lb.	.25
April	Miscellaneous	.30				Miscellaneous	1	acre	2.25
April	Irrigate	.30				Water - district	4	acin	.48
April	Mow Centers	.25	Tractor 60hp 2wd	Flail Mower - 10’					
May	Rodent Control	.06	ATV 4wd	Sprayer		Strychnine	1	each	1.00
May	Irrigate	.30				Water - district	4	acin	.48
May	Mow Centers	.25	Tractor 60hp 2wd	Flail Mower - 10’					
June	Irrigate	.50				Water - district	8	acin	.48
June	Mow Centers	.25	Tractor 60hp 2wd	Flail Mower - 10’					
June	Leaf Analysis	.10				Leaf analysis	1	acre	.50
June	Ant Control	.12	Tractor 60hp 2wd	Weed Sprayer 100gal		Lorsban	.50	pint	6.48
July	Ant Control	.12	Tractor 60hp 2wd	Weed Sprayer 100gal		Lorsban	.50	pint	6.48

Schedule 15.5B: Operating Inputs and Machinery Operations for Cotton – California Cotton–Almond Farm

	Machinery Operations					Operating Input			
Month	Operation	Hrs./A	Machine 1	Machine 2	Machine 3	Item	Units/A	Units	$/Unit
January	Deep rip	.08	Crawler, D8	Ripper 10’		D8 rental	.08	hr.	$44.00
						Delivery	1	hr.	.60
January	Deep rip ACR land	.01	Crawler, D8	Ripper 10’					
January	Primary discing	.14	Crawler, D7	Offset disc 21’		D7 rental	.14	hr.	38.00
						Delivery	1	hr.	.60
January	Primary disc-ACR land	.02	Crawler, D7	Offset disc 21’					
January	Preplant NH3					NH3	122	lb.	.16
						Broadcast, custom	1	app.	4.75
February	Apply herbicide	.12	Tractor 2wd 100hp	Sprayer TM 220gal		Treflan	2	pint	4.13
February	Apply herbicide-ACR	.01	Tractor 2wd 100hp	Sprayer TM 220gal		Treflan	.2	pint	4.13
February	Incorp. herbicide	.10	Tractor 2wd 170hp	Disc, tandem 24’					
February	Incorp. herbicide-ACR	.01	Tractor 2wd 170hp	Disc, tandem 24’					
February	Make beds	.15	Tractor 2wd 170hp	Lister, 6 row					
February	Make ditch	.02	Tractor 2wd 170hp	Ditch opener					
February	Irrigate	1.00				Water	6	acin	2.08
February	Close ditch	.02	Tractor 2wd 170hp	Ditch closer					
April	Plant	.18	Tractor 2wd 100hp	Planter, 6 row		Seed	14	lb.	.80
April	Uncap beds	.15	Tractor 2wd 100hp	Uncapper, 6 row					
April	Cultivate	.25	Tractor 2wd 100hp	Uncapper, 6 row					

Schedule 15.5B (continued)

Month	Machinery Operations					Operating Input			
	Operation	Hrs./A	Machine 1	Machine 2	Machine 3	Item	Units/A	Units	$/Unit
May	Cultivate 2X	.40	Tractor 2wd 100hp	Cultivator, 6 row					
May	Hand weeding					Contractor labor	1	time	25.00
May	Apply miticide					Comite	2	pint	9.00
						Air application	1	app.	5.00
June	Make ditch	.02	Tractor 2wd 170hp	Ditch opener					
June	Irrigate 2X	2.00				Water	18	acin	2.08
June	Close Ditch	.02	Tractor 2wd 170hp	Ditch closer					
June	Cultivate 2X	.50	Tractor 2wd 100hp	Cultivator, 6 row					
	Cultivate 2X-ACR	.05	Tractor 2wd 100hp	Cultivator, 6 row					
June	Insect control					Orthene 90	1.33	lb.	8.35
						Air application	1	app.	5.00
June	Layby cultivate/herbicide					Caporal	4.80	pint	4.13
						Banding, custom	1	acre	6.25
July	Make ditch	.02	Tractor 2wd 170hp	Ditch opener					
July	Irrigate	1.00				Water	9	acin	2.08
July	Apply growth regulator					Pix	1	pint	15.38
						Air application	1	app.	5.00
July	Sidedress fertilizer					11-52-0	177	lb.	.14
						Custom application	1	app.	8.50

Schedule 15.5B (continued)

Month	Machinery Operations					Operating Input			
	Operation	Hrs./A	Machine 1	Machine 2	Machine 3	Item	Units/A	Units	$/Unit
August	Irrigate	1.00				Water	9	acin	2.08
September	Close ditch	.02	Tractor 2wd 170hp	Ditch closer					
October	Defoliate cotton					Pix	1	pint	15.38
						Air application	1	app.	5.00
November	Harvest	.67	Harvester, 2 row						
November	Build module	.43	Tractor 2wd 100hp	Module builder		Tarps, module	.19	each	50.00
November	Cut stalks	.12	Tractor 2wd 170hp	Flail chopper					
November	Cross disc	.19	Tractor 2wd 170hp	Disc, tandem 24’					
November	Ginning					Gin - lint	2.15	bale	50.00
November	Pickup use	.27	Pickup, 3/4 ton						

Schedule 15.6: Buildings and Improvements 1/1/92 – California Cotton–Almond Farm

Item	Year of Purchase	Replacement Purchase Cost	Market Value	Useful Life Remaining	Annual Repairs	Percent Allocation by Enterprise		
						Cotton	Other	Almonds
Buildings	92	$65,000	$65,000	25	$100	38	54	8
Orchard Trees	92	171,190	171,190	19	0	0	0	100
Flood Irrigation System	92	170,772	170,772	20	100	83	0	17
Fuel Tanks & Pumps	92	8,100	8,100	20	125	38	54	8
Land (95 acres in production)	92	500,000	500,000	--	--	--	--	100
Pruning Equipment	92	1,200	1,200	10	25	0	0	100
Shop Tools	92	11,000	11,000	15	100	38	54	8

Schedule 15.7: Machinery and Equipment Inventory and Use – California Cotton–Almond Farm

Description	Size	Useful Life Remaining	Year of Purchase	Replacement Purchase Cost	Salvage Value	Hours of Use by Enterprise		
						Cotton	Other	Almonds
Cultivator #1	6 row	5	92	$ 3,750	$ 375	250	0	
Cultivator #2	6 row	5	92	3,750	375	250	0	
Cultivator #3	6 row	5	92	3,750	375	73	156	
Disc, tandem	24’	15	92	20,000	2,000	152	23	
Ditch closer		15	92	5,629	563	30	136	
Ditch opener		15	92	8,950	895	30	136	
Flail chopper		5	92	9,865	987	50	200	
Harvester #1	2 row	5	92	117,700	11,770	89	0	
Harvester #2	2 row	5	92	117,700	11,770	90	0	
Lister	6 row	10	92	3,750	375	179	0	
Module builder		5	92	21,000	2,100	73	176	
Offset disc	21’	5	92	15,000	1,500	242	0	
Pickup	3/4 ton	5	92	16,000	1,600	80	0	
Planter #1	6 row	5	92	15,000	1,500	133	133	
Planter #2	6 row	5	92	15,000	1,500	44	196	
Ripper	10’	5	92	12,500	1,250	44	196	
Spray TM	220 gal	5	92	8,100	810	72	178	
Tractor 2wd #1	100hp	10	92	40,000	4,000	1,094	106	
Tractor 2wd #2	100hp	10	92	40,000	4,000	48	1,152	
Tractor 2wd	170hp	10	92	$60,000	$6,000	370	830	
Uncapper	6 row	10	92	2,300	230	73	0	
Tractor, 2wd	30hp	15	92	18,100	1,810			128
Tractor, 2wd	60hp	15	92	26,400	2,640			458
ATV & Sprayer, 4wd		10	92	6,955	696			10
Brush Rake & Loader		25	92	6,000	600			38
Flail Mower	10’	10	92	5,000	500			195
Orch. Sprayer	500 gal.	8	92	16,050	1,605			152
Pickup Truck	½ ton	7	92	16,500	1,650			285
Weed Sprayer	100 gal	10	92	3,424	342			72

Schedule 15.8: Annual Business Overhead Costs – California Cotton–Almond Farm

Description	Total Cost	Percent Allocation by Enterprise		
		Cotton	Other	Almonds
Office Expense	$38,550	38	54	8
Property taxes - nonland	2,136	25	35	40
Property taxes - land	5,000			100
Insurance	3,568	25	35	40
Investment repair	450	38	54	8

Schedule 15.9: Rates and Prices – California Cotton–Almond Farm

Description	Rate	Units
Nominal interest rate	10%	annual
Real interest rate	4%	annual
Insurance	$5.00	per $1,000 assets
Property tax	$1.00	per $100 property
Diesel fuel	$.71	gallon
Gasoline	$.98	gallon