EBB3-SU -19 2019 Costs and Returns Estimate

Southcentral Idaho: Magic Valley

Ashlee Westerhold

Magic Valley

Introduction to Costs & Returns Estimates

The University of Idaho Extension produces crop costs and returns estimates every other year. The overall goal of this project is to provide the Idaho agricultural industry with an unbiased and consistently calculated estimate of the cost of producing various crops and to track the change in production costs per acre and per unit over time.

The University of Idaho's costs and returns estimates are based on economic costs, not just accounting costs. All resources are valued at a market rate or "opportunity cost". Input prices are taken from the U of I's annual survey of agricultural supply companies. The selling price is a historical average, not a current year's price. Production practices are based on data from growers, crop consultants, and extension personnel throughout Idaho. Although production practices may be similar for individual farms, each farm has a unique set of resources with different levels of productivity, different production problems, and therefore different costs. Farm size, crop rotation, age and type of equipment, and the quality and intensity of management are all crucial factors that influence costs. The cost of production estimates show the typical or representative production costs by region based on documented production practices. These production costs are not area averages, rather they are based on model farms for four areas of the state.

University of Idaho costs and returns estimates can be used as a management tool to help producers in three ways:

1. **Templates.** Excel spreadsheets have been created by the University of Idaho to make enterprise budgeting and record keeping an easy task. You can start by substituting our costs and returns estimates with your own numbers. You can also enter them in the "Your Cost" column.
2. **Marketing.** Estimating production costs on a per acre or per unit basis can help you calculate your farm's break-even prices. Knowing your break-even price to cover operating costs and total costs can help with contract negotiations and selling on the open market.
3. **Benchmarks.** The University of Idaho costs and returns estimates are based on a typical or model farm and are calculated annually using consistent methodology. You can use these estimates as benchmarks by comparing your own total costs or specific cost categories to our estimates. This is a good way to find strengths and weaknesses in your production practices.

It's important to remember, just because your production costs are similar to our estimates, that isn't necessarily a good thing. Our model farms are also typically unprofitable! Average producers usually don't make an economic profit (which includes opportunity costs and non-cash costs such as depreciation). Being profitable requires fine-tuned management and a competitive advantage that the average producer doesn't have. (Being average is not okay in farming)

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Southcentral Idaho: Magic Valley Sugarbeets

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Background and Assumptions

The University of Idaho's costs and returns estimates are based on economic costs, not accounting costs. All resources are valued at a market rate or "opportunity cost". Input prices are based on data collected annually by the University of Idaho from agricultural supply companies. The selling price for sugarbeets is a forecast price for the current year. The cost estimate shown here is typical for growing Roundup Ready sugarbeets under irrigation in the Magic Valley of Southcentral Idaho. Production practices are based on data from farmers, crop consultants, and extension personnel. These aren't University of Idaho recommendations. Production practices most closely represent those in Cassia, Minidoka, Jerome, Gooding, and Twin Falls counties. Although production practices may be similar for individual farms, each farm has a unique set of resources with different levels of productivity, different production problems, and therefore different costs. Farm size, crop rotation, age and type of equipment, and the quality and intensity of management are all crucial factors that influence production costs.

The Model Farm

This costs and returns estimate models a 2,200-acre farm with 550 acres in sugarbeets, 550 acres in potatoes, 550 acres in wheat or barley, 150 acres in dry beans, and 400 acres in corn or alfalfa.

The farm uses a center pivot irrigation system and surface water delivered to the farm from an irrigation district. The irrigation district charges a flat fee per acre for water. Irrigation power use is based only on pressurization (no lift). Power costs per acre-inch of water applied are calculated using 2019 Idaho Power Schedule 24 Agricultural Irrigation Service rates.

Production Practices

After the previous crop is removed, the ground is irrigated, moldboard plowed and roller harrowed in the fall. In the spring the ground is roller harrowed and marked out prior to planting. Beets are planted in April to a 6-inch stand spacing using a 12-row planter and 22-inch row spacing. A seeding rate of .5 units per acre includes a base rate of .48 units per acre and a 4 percent re-plant factor. Beets are cultivated once during the growing season with a basin tillage tool. Beets are mechanically topped in October before being harvested by a 6-row lifter/loader. Beets are hauled to a local piling station (beet dump) in the farmer's six 10-wheeler trucks, assuming a 14 mile roundtrip.

Most fertilizer is custom applied in the fall, with additional fertilizer applied at row mark-out. Weed control is accomplished using cultivation and Roundup herbicide, which is applied twice. A third application may be needed in some years. A seed treatment is used for insect control. No additional insecticide is applied during the growing season. Two fungicide applications are made by chemigation in August. In some years, no fungicide treatments would be required. In other years, three or more applications may be required based on disease pressure and environmental conditions. Sugarbeets receive 33 inches of water during the growing season: 1 inches in April, 3 inches in May, 4 inches in June, 8 inches in July, 9 inches in August, 7 inches in September, and 1 inch in October. The two inches of water applied before fall tillage is also credited to sugarbeets, for a total of 35 inches.

Machinery

Equipment used to produce sugarbeets is shown in Tables 4 and 5. Table 4 lists the equipment and their hourly operating and ownership costs, while Table 5 lists the equipment and their annual

ownership costs. Machinery ownership capital recovery cost is based on 75% of the replacement cost of a new piece of equipment, except for trucks. Truck prices are for a used vehicle with a new bed. Capital recovery combines depreciation and interest into a single value. To keep machinery prices current between years in which a comprehensive survey is conducted, machinery prices are adjusted using USDA's Farm Machinery Prices Paid Index. Equipment prices are collected approximately every five years.

The University of Idaho uses the budget generator program Budget Planner from the University of California-Davis to produce the various tables shown in this publication. Machinery operating and ownership costs are calculated based on engineering equations in this program. Machinery operating costs include fuel, lubricants and repairs.

Labor and Management

The cost of labor used in this publication includes a base wage, plus a percentage to account for various payroll taxes (FICA, SUTA & FUTA), and workman's compensation, as well as benefits such as paid vacation/personal leave days, health insurance and bonuses. Labor is classified by the type of work performed. Labor classifications, labor rates and payroll overhead are shown below.

Labor Values

Labor Class	Base Rate	Payroll Overhead	Effective Rate
General Farm Labor	$15.25	15%	$17.55
Truck Drivers	$15.25	15%	$17.55
Equipment Operators	$18.00	25%	$22.50
Irrigation Labor			
Set Move: HL & WL	$17.30	30%	$22.50
Continuous Move: CP & L	$18.00	25%	$22.50

Set Move includes: handlines and wheellines
Continuous Move includes: center pivots and linear move
Payroll overhead for set move systems includes housing

Based on the speed, width and overall field efficiency, Budget Planner calculates equipment operator labor hours for all field operations except those performed on a custom basis. Custom operations are listed separately. General farm labor accounts for extra field labor used during planting or harvest. A management fee based on approximately 5% of the total production costs is included. Prior to 2013, the basis of the 5% charge was expected revenue.

Capital, Land and Overhead Costs

Interest on operating capital is charged from the time an input is applied until harvest and is calculated at a nominal rate of 7.00 percent. Interest on intermediate term capital, primarily equipment, is calculated using a nominal rate of 6.75 percent. A general overhead charge, calculated at approximately 2.5 percent of operating expenses, is included to cover unallocated whole-farm costs such as office expenses, legal and accounting fees, cell phones, internet service and utilities. Irrigation power is not included as part of general farm utilities.

Land rent is based on a one-year cash lease for sugarbeets and covers the irrigation system ownership costs (depreciation, interest, and insurance). Since charges for irrigation water, repairs and power costs are listed separately, land rent may appear low because land owners pay some or even all these expenses in many cash leases.

Budget Format

In addition to the Background and Assumption pages, this publication has six tables presenting a variety of cost and returns information.

Table 1 shows both expected revenue, based on a specified yield and price, and expenses. Expenses are broken into two main categories: operating and ownership. Operating expenses are those that typically vary with the level of production and involve inputs that are used in a single production cycle. Ownership expenses include a systematic cost recovery over the useful life for

inputs used in the production process that have a useful life of more than one year. Machinery and land fall into this category. Operating inputs are organized by category. In addition to the cost per unit and cost per acre for each input, a total cost is given for each category. Table 1 also gives a total of all operating, ownership and total costs per acre, as well as these same categories on a yield basis (per bushel, cwt, ton, etc.).

Table 2 has most of the same cost information presented in Table 1 but the data is organized by operation for both pre-harvest and harvest costs. Operations can define a single activity, such as seed hauling, or multiple activities as in the case of tillage. The quantity of labor is shown for each operation. The cash costs per acre for labor, machinery costs, materials and custom are also specified. Cash overhead expenses are listed separately as are the non-cash overhead.

Table 3 is a monthly cash flow of expenses based on when the operation occurs and when inputs are applied. Field operations are classified as pre-harvest, harvest and post-harvest.

Table 4 lists the equipment used to produce this crop and the costs per hour to operate this equipment. Total annual hours of use for the current crop and for all crops on the farm is also shown.

Table 5 lists the purchase price and salvage value of equipment used to produce this crop, as well annual capital recovery and cash overhead expenses.

Table 6 provides a ranging analysis, sometimes referred to as a sensitivity analysis. It shows how the costs and returns per acre will vary as the yield and/or price ranges above and below the base values from Table 1.

Authors
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TABLE 1. COSTS AND RETURNS PER ACRE TO PRODUCE ROUNDUP READY SUGARBEETS

	Quantity/ Acre	Unit	Price or Cost/Unit	Value or Cost/Acre	Your Cost
GROSS RETURNS					
Sugarbeets	42.00	ton	41.50	1,743.00	
TOTAL GROSS RETURNS	42.00	ton		1,743.00	
OPERATING COSTS					
Seed:				**147.12**	
Roundup Ready Beet Seed: Raw	0.50	unit	156.00	78.00	
Roundup Ready Technology Fee	0.48	unit	144.00	69.12	
Fertilizer:				**131.95**	
Dry Nitrogen	115.00	lb	0.40	46.00	
Dry P2O5	45.00	lb	0.38	17.10	
K2O	65.00	lb	0.31	20.15	
Sulfur	55.00	lb	0.22	12.10	
Liquid Nitrogen	10.00	lb	0.50	5.00	
Liquid P205	35.00		0.56	19.60	
Micronutrients - Sugarbeets	1.00	acre	12.00	12.00	
Pesticide:				**44.08**	
Poncho Beta Seed Treatment	0.48	unit	48.50	23.28	
Roundup Power Max 4.5	54.00	fl oz	0.18	9.72	
Ammonium Sulfate	2.40	lb	0.70	1.68	
Tilt	4.00	fl oz	0.70	2.80	
Sulftur 6L	0.66	gal	10.00	6.60	
Custom:				**22.75**	
Custom Fertilize: 400 - 800 lbs	1.00	acre	7.75	7.75	
Consultant/Soil Test - Sugarbeet	1.00	acre	15.00	15.00	
Irrigation:				**133.95**	
Irrigation Power - CP	35.00	ac-in	1.94	67.90	
Water Assessment	1.00	acre	47.50	47.50	
Irrigation Repairs - CP	35.00	ac-in	0.53	18.55	
Other:				**92.15**	
Crop Insurance	1.00	acre	45.00	45.00	
Sugarbeet Hauling Charge`	41.00	ton	1.15	47.15	
Labor				**197.52**	
Equipment Operator Labor	3.42	hrs	22.50	76.85	
Truck Driver Labor	2.88	hrs	17.55	50.54	
Irrigation Labor: CP	1.40	hrs	22.50	31.50	
General Farm Labor	1.74	hrs	17.55	30.53	
Irrigation Labor: Chem-Fert	0.36	hrs	22.50	8.10	
Machinery				**137.64**	
Fuel-Gas	3.33	gal	3.25	10.82	
Fuel-Diesel	18.02	gal	3.00	54.06	
Fuel-Road Diesel	4.41	gal	3.50	15.43	
Lube				12.05	
Machinery Repair				45.28	
Interest on Operating Capital @ 7.00%				33.13	
TOTAL OPERATING COSTS/ACRE				940.29	
TOTAL OPERATING COSTS/TON				22.39	
NET RETURNS ABOVE OPERATING COSTS				802.71	

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TABLE 1. CONTINUED

	Quantity/ Acre	Unit	Price or Cost/Unit	Value or Cost/Acre	Your Cost
CASH OVERHEAD COSTS					
Co-op Stock				35.00	
General Overhead				22.00	
Land Rent				350.00	
Management Fee				78.00	
Property Taxes				0.00	
Property Insurance				5.25	
Investment Repairs				0.00	
TOTAL CASH OVERHEAD COSTS/ACRE				490.25	
TOTAL CASH OVERHEAD COSTS/TON				11.67	
TOTAL CASH COSTS/ACRE				1,430.53	
TOTAL CASH COSTS/TON				34.06	
NET RETURNS ABOVE CASH COSTS				312.47	
NON-CASH OVERHEAD COSTS (Capital Recovery)					
Equipment				189.78	
TOTAL NON-CASH OVERHEAD COSTS/ACRE				189.78	
TOTAL NON-CASH OVERHEAD COSTS/TON				4.52	
TOTAL COST/ACRE				1,620.32	
TOTAL COST/TON				38.58	
NET RETURNS ABOVE TOTAL COST				122.68	

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TABLE 2. COSTS PER ACRE TO PRODUCE ROUNDUP READY SUGARBEETS

	Operation	Cash and Labor Costs per Acre						
Operation	Time (Hrs/A)	Labor Cost	Fuel	Lube &Repairs	Material Cost	Custom/ Rent	Total Cost	Your Cost
Preharvest:								
Irrigation	0.00	31.50	0.00	0.00	67.90	0.00	99.40	
Applying Fertilizer	0.00	0.00	0.00	0.00	95.35	7.75	103.10	
Tillage	0.51	17.92	16.30	10.40	0.00	0.00	44.61	
Mark Rows & Apply Fertilizer	0.09	4.72	3.05	1.49	36.60	0.00	45.87	
Crop Insurance	0.00	0.00	0.00	0.00	45.00	0.00	45.00	
Irrigation Water Assessment	0.00	0.00	0.00	0.00	47.50	0.00	47.50	
Irrigation Repairs	0.00	0.00	0.00	0.00	18.55	0.00	18.55	
Planting	0.16	7.92	4.29	4.38	170.40	0.00	186.99	
Applying Herbicides	0.14	6.78	3.68	1.51	11.40	0.00	23.37	
Consultant & Soil Testing	0.00	0.00	0.00	0.00	0.00	15.00	15.00	
BasinTillage/Cultivate	0.12	5.63	3.82	2.34	0.00	0.00	11.79	
Chemigation-Fertigation	0.00	8.10	0.00	0.00	9.40	0.00	17.50	
General Pickup Use	1.00	27.00	10.82	3.70	0.00	0.00	41.52	
Service Truck Use	0.04	1.13	0.36	0.13	0.00	0.00	1.62	
Fuel Truck Use	0.04	1.13	0.36	0.15	0.00	0.00	1.64	
TOTAL PREHARVEST COSTS	2.11	111.82	42.69	24.10	502.10	22.75	703.46	
Harvest:								
Top Beets	0.37	18.00	11.28	8.03	0.00	0.00	37.31	
Lift Beets	0.36	17.16	11.63	12.52	0.00	0.00	41.32	
Crop Hauling	2.00	42.12	12.25	10.57	0.00	0.00	64.94	
Hauling Assessment	0.00	0.00	0.00	0.00	47.15	0.00	47.15	
TOTAL HARVEST COSTS	2.73	77.28	35.17	31.11	47.15	0.00	190.71	
Harvest :								
Crop Hauling	0.40	8.42	2.45	2.11	0.00	0.00	12.99	
TOTAL HARVEST COSTS	0.40	8.42	2.45	2.11	0.00	0.00	12.99	
Interest on Operating Capital at 7.00%							33.13	
TOTAL OPERATING COSTS/ACRE	5.25	197.52	80.31	57.33	549.25	22.75	940.29	

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TABLE 2. CONTINUED

Operation	Operation Time (Hrs/A)	Cash and Labor Costs per Acre Labor Cost	Fuel	Lube &Repairs	Material Cost	Custom/ Rent	Total Cost	Your Cost
CASH OVERHEAD:								
Co-op Stock							35.00	
General Overhead							22.00	
Land Rent							350.00	
Management Fee							78.00	
Property Taxes							0.00	
Property Insurance							5.25	
Investment Repairs							0.00	
TOTAL CASH OVERHEAD COSTS/ACRE							490.25	
TOTAL CASH COSTS/ACRE							1,430.53	
NON-CASH OVERHEAD:		Per Producing Acre		Annual Cost Capital Recovery				
Equipment		1,885.02		189.78			189.78	
TOTAL NON-CASH OVERHEAD COSTS		1,885.02		189.78			189.78	
TOTAL COSTS/ACRE							1,620.32	

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TABLE 3. MONTHLY COSTS PER ACRE TO PRODUCE ROUNDUP READY SUGARBEETS

	SEP 18	OCT 18	NOV 18	DEC 18	JAN 19	FEB 19	MAR 19	APR 19	MAY 19	JUN 19	JUL 19	AUG 19	SEP 19	OCT 19	Total
Preharvest:															
Irrigation	5.68							2.84	8.52	11.36	22.72	25.56	19.88	2.84	99.40
Applying Fertilizer	103.10														103.10
Tillage	34.92							9.69							44.61
Mark Rows & Apply Fertilizer								45.87							45.87
Crop Insurance								45.00							45.00
Irrigation Water Assessment								47.50							47.50
Irrigation Repairs								18.55							18.55
Planting								186.99							186.99
Applying Herbicides									10.78	12.58					23.37
Consultant & Soil Testing										15.00					15.00
BasinTillage/Cultivate										11.79					11.79
Chemigation-Fertigation												17.50			17.50
General Pickup Use	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	41.52
Service Truck Use	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	1.62
Fuel Truck Use	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	1.64
TOTAL PREHARVEST COSTS	146.90	3.20	3.20	3.20	3.20	3.20	3.20	359.63	22.50	53.93	25.92	46.26	23.08	6.04	703.46
Harvest:															
Top Beets														37.31	37.31
Lift Beets														41.32	41.32
Crop Hauling														64.94	64.94
Hauling Assessment														47.15	47.15
TOTAL HARVEST COSTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	190.71	190.71
Harvest :															
Crop Hauling														12.99	12.99
TOTAL HARVEST COSTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.99	12.99
Interest on Operating Capital @7.00%	0.86	0.88	0.89	0.91	0.93	0.95	0.97	3.07	3.20	3.51	3.66	3.93	4.07	5.29	33.13
TOTAL OPERATING COSTS/ACRE	147.76	4.07	4.09	4.11	4.13	4.15	4.17	362.70	25.70	57.45	29.58	50.19	27.15	215.03	940.29
CASH OVERHEAD															
Co-op Stock															35.00
General Overhead	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57	22.00
Land Rent															350.00
Management Fee	5.57	5.57	5.57	5.57	5.57	5.57	5.57	5.57	5.57	5.57	5.57	5.57	5.57	5.57	78.00
Property Taxes															0.00
Property Insurance								5.25							5.25
Investment Repairs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL CASH OVERHEAD COSTS	7.14	7.14	7.14	7.14	7.14	7.14	7.14	12.39	7.14	7.14	7.14	7.14	7.14	7.14	490.25
TOTAL CASH COSTS/ACRE	154.90	11.22	11.24	11.25	11.27	11.29	11.31	375.09	32.84	64.59	36.73	57.34	34.29	222.17	1,430.53

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TABLE 4. HOURLY EQUIPMENT COSTS

		Roundup Ready Sugarbeets	Total		Cash Overhead		Operating			
		Hours	Hours	Capital	Insur-		Lube&		Total	Total
Yr	Description	Used	Used	Recovery	ance	Taxes	Repairs	Fuel	Oper.	Costs/Hr.
19	Moldboard Plow 4b	178	180	7.86	0.18	0.00	4.66	0.00	4.66	12.70
19	Pickup 1 - 3/4 ton	220	750	9.33	0.17	0.00	3.70	10.82	14.52	24.02
19	Pickup 2 - 3/4 ton	220	750	9.33	0.17	0.00	3.70	10.82	14.52	24.02
19	Planter - 12R 22"	91	125	37.70	0.92	0.00	17.49	0.00	17.49	56.11
19	Service Truck	23	80	41.85	1.24	0.00	3.16	8.75	11.91	55.00
19	Sprayer - 30'	78	150	3.14	0.07	0.00	1.64	0.00	1.64	4.85
19	Tractor - 160hp	185	350	31.02	0.98	0.00	8.25	23.70	31.95	63.95
19	Tractor - 185hp	342	400	30.56	0.96	0.00	10.15	27.39	37.54	69.06
19	Tractor - 200hp	128	500	26.05	0.82	0.00	12.49	29.61	42.10	68.98
19	Tractor 2 -200hp	412	500	26.05	0.82	0.00	12.49	29.61	42.10	68.98
19	Truck 1SB 10-Wheeler	220	300	26.49	0.77	0.00	5.28	6.13	11.41	38.67
19	Truck 2SB 10-Wheeler	220	300	26.49	0.77	0.00	5.28	6.13	11.41	38.67
19	Truck 3SB 10-Wheeler	220	300	26.49	0.77	0.00	5.28	6.13	11.41	38.67
19	Truck 4SB 10-Wheeler	220	300	26.49	0.77	0.00	5.28	6.13	11.41	38.67
19	Truck 5SB 10-Wheeler	220	300	26.49	0.77	0.00	5.28	6.13	11.41	38.67
19	Basin Tillage Tool 12-Row 22"	64	75	53.75	1.41	0.00	6.22	0.00	6.22	61.39
19	Beet Defoliator 6-Row	206	210	32.57	0.58	0.00	10.26	0.00	10.26	43.41
19	Beet Harvester 6-Row	196	200	49.23	1.20	0.00	21.32	0.00	21.32	71.75
19	Roller Harrow 24'	105	125	41.25	1.09	0.00	12.09	0.00	12.09	54.43
19	Truck 6SB 10-Wheeler	220	300	26.49	0.77	0.00	5.28	6.13	11.41	38.67
19	Pickup 3 - 3/4 ton	110	325	13.27	0.34	0.00	3.70	10.82	14.52	28.14
19	Fuel Truck	23	80	52.27	1.52	0.00	3.61	8.75	12.36	66.14
19	Markout Bar 12-Row 22" SB	52	60	42.94	1.05	0.00	2.17	0.00	2.17	46.17

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

ANNUAL EQUIPMENT COSTS

						Cash Overhead		
Yr	Description	Price	Yrs Life	Salvage Value	Capital Recovery	Insur-ance	Taxes	Total
19	Moldboard Plow 4b	12,300.00	10	2,175.15	1,571.76	36.19	0.00	1,607.95
19	Pickup 1 - 3/4 ton	42,000.00	5	13,750.00	7,771.98	139.38	0.00	7,911.36
19	Pickup 2 - 3/4 ton	42,000.00	5	13,750.00	7,771.98	139.38	0.00	7,911.36
19	Planter - 12R 22"	45,000.00	12	6,232.80	5,236.76	128.08	0.00	5,364.84
19	Service Truck	41,000.00	20	3,000.00	3,720.03	110.00	0.00	3,830.03
19	Sprayer - 30'	4,100.00	10	725.05	523.92	12.06	0.00	535.98
19	Tractor - 160hp	135,000.00	20	17,322.05	12,062.30	380.81	0.00	12,443.10
19	Tractor - 185hp	152,000.00	20	19,503.35	13,581.25	428.76	0.00	14,010.01
19	Tractor - 200hp	162,000.00	20	20,786.46	14,474.76	456.97	0.00	14,931.72
19	Tractor 2 -200hp	162,000.00	20	20,786.46	14,474.76	456.97	0.00	14,931.72
19	Truck 1SB 10-Wheeler	97,000.00	20	6,000.00	8,828.57	257.50	0.00	9,086.07
19	Truck 2SB 10-Wheeler	97,000.00	20	6,000.00	8,828.57	257.50	0.00	9,086.07
19	Truck 3SB 10-Wheeler	97,000.00	20	6,000.00	8,828.57	257.50	0.00	9,086.07
19	Truck 4SB 10-Wheeler	97,000.00	20	6,000.00	8,828.57	257.50	0.00	9,086.07
19	Truck 5SB 10-Wheeler	97,000.00	20	6,000.00	8,828.57	257.50	0.00	9,086.07
19	Basin Tillage Tool 12-Row 22"	43,000.00	15	4,128.28	4,479.42	117.82	0.00	4,597.24
19	Beet Defoliator 6-Row	41,000.00	5	13,355.23	7,598.71	135.89	0.00	7,734.60
19	Beet Harvester 6-Row	94,000.00	12	13,019.62	10,939.00	267.55	0.00	11,206.55
19	Roller Harrow 24'	55,000.00	15	5,280.35	5,729.49	150.70	0.00	5,880.19
19	Truck 6SB 10-Wheeler	97,000.00	20	6,000.00	8,828.57	257.50	0.00	9,086.07
19	Pickup 3 - 3/4 ton	42,000.00	12	7,500.00	4,792.18	123.75	0.00	4,915.93
19	Fuel Truck	51,000.00	20	3,000.00	4,645.70	135.00	0.00	4,780.70
19	Markout Bar 12-Row 22" SB	24,600.00	12	3,407.26	2,862.76	70.02	0.00	2,932.78
	TOTAL	1,730,000.00	-	203,722.07	175,208.17	4,834.31	0.00	180,042.47
	90% of New Cost*	1,557,000.00	-	183,349.86	157,687.35	4,350.87	0.00	162,038.23

*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
INVESTMENT								
TOTAL INVESTMENT	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00

ANNUAL BUSINESS OVERHEAD COSTS

Description	Units/ Farm	Unit	Price/ Unit	Total Cost
Co-op Stock	550	acre	35	19,250.00
General Overhead	550	acre	22	12,100.00
Land Rent	550	acre	350	192,500.00
Management Fee	550	acre	78	42,900.00

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TABLE 6. RANGING ANALYSIS - ROUNDUP READY SUGARBEETS

COSTS PER ACRE AND PER TON AT VARYING YIELDS TO PRODUCE ROUNDUP READY SUGARBEETS

	YIELD(TON)						
	33.00	34.00	35.00	36.00	37.00	38.00	39.00
OPERATING COSTS/ACRE:							
Preharvest	703.46	703.46	703.46	703.46	703.46	703.46	703.46
Harvest	170.77	174.05	177.33	190.71	183.89	187.17	190.45
Harvest	12.99	12.99	12.99	12.99	12.99	12.99	12.99
Interest on Operating Capital @ 7.00%	33.13	33.13	33.13	33.13	33.13	33.13	33.13
TOTAL OPERATING COSTS/ACRE	920.35	923.63	926.91	940.29	933.46	936.74	940.02
TOTAL OPERATING COSTS/TON	27.89	27.17	26.48	26.12	25.23	24.65	24.10
CASH OVERHEAD COSTS/ACRE	490.25	490.25	490.25	490.25	490.25	490.25	490.25
TOTAL CASH COSTS/ACRE	1,410.59	1,413.87	1,417.15	1,430.53	1,423.71	1,426.99	1,430.27
TOTAL CASH COSTS/TON	42.75	41.58	40.49	39.74	38.48	37.55	36.67
NON-CASH OVERHEAD COSTS/ACRE	189.78	189.78	189.78	189.78	189.78	189.78	189.78
TOTAL COSTS/ACRE	1,600.38	1,603.66	1,606.94	1,620.32	1,613.50	1,616.78	1,620.06
TOTAL COSTS/TON	48.50	47.17	45.91	45.01	43.61	42.55	41.54

Net Return Per Acre Above Operating Costs For Roundup Ready Sugarbeets

PRICE ($/ton)	YIELD (ton/acre)						
Sugarbeets	33.00	34.00	35.00	36.00	37.00	38.00	39.00
39.00	366.65	402.37	438.09	463.71	509.54	545.26	580.98
40.00	399.65	436.37	473.09	499.71	546.54	583.26	619.98
41.00	432.65	470.37	508.09	535.71	583.54	621.26	658.98
42.00	465.65	504.37	543.09	571.71	620.54	659.26	697.98
43.00	498.65	538.37	578.09	607.71	657.54	697.26	736.98
44.00	531.65	572.37	613.09	643.71	694.54	735.26	775.98
45.00	564.65	606.37	648.09	679.71	731.54	773.26	814.98

Net Return Per Acre Above Cash Costs For Roundup Ready Sugarbeets

PRICE ($/ton)	YIELD (ton/acre)						
Sugarbeets	33.00	34.00	35.00	36.00	37.00	38.00	39.00
39.00	-123.59	-87.87	-52.15	-26.53	19.29	55.01	90.73
40.00	-90.59	-53.87	-17.15	9.47	56.29	93.01	129.73
41.00	-57.59	-19.87	17.85	45.47	93.29	131.01	168.73
42.00	-24.59	14.13	52.85	81.47	130.29	169.01	207.73
43.00	8.41	48.13	87.85	117.47	167.29	207.01	246.73
44.00	41.41	82.13	122.85	153.47	204.29	245.01	285.73
45.00	74.41	116.13	157.85	189.47	241.29	283.01	324.73

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TABLE 6. RANGING ANALYSIS CONTINUED

Net Return Per Acre Above Total Costs For Roundup Ready Sugarbeets

PRICE ($/ton)	YIELD (ton/acre)						
Sugarbeets	33.00	34.00	35.00	36.00	37.00	38.00	39.00
39.00	-313.38	-277.66	-241.94	-216.32	-170.50	-134.78	-99.06
40.00	-280.38	-243.66	-206.94	-180.32	-133.50	-96.78	-60.06
41.00	-247.38	-209.66	-171.94	-144.32	-96.50	-58.78	-21.06
42.00	-214.38	-175.66	-136.94	-108.32	-59.50	-20.78	17.94
43.00	-181.38	-141.66	-101.94	-72.32	-22.50	17.22	56.94
44.00	-148.38	-107.66	-66.94	-36.32	14.50	55.22	95.94
45.00	-115.38	-73.66	-31.94	-0.32	51.50	93.22	134.94