

Southcentral Idaho: Magic Valley**Sugarbeets**

Paul Patterson

**Magic Valley****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 2015 Idaho Power Schedule 24 Agricultural Irrigation Service rates. Power costs per acre-inch for water pumped from different depths and for different irrigation systems is found in the annual Crop Input Cost Summary

<http://www.uidaho.edu/cals/idaho-agbiz/crop-enterprise-budgets>

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	\$9.25	15%	\$10.65
Truck Drivers	\$12.50	15%	\$14.40
Equipment Operators	\$14.80	25%	\$18.50
Irrigation Labor			
Set Move: HL & WL	\$10.10	30%	\$13.15
Continuous Move: CP & L	\$14.80	25%	\$18.50

Set Move includes: handlines and wheelines

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 5.75 percent. Interest on intermediate term capital, primarily equipment, is calculated using a nominal rate of 5.5 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, sometime referred to as a sensitivity analysis. Table 6 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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Disclaimer

The practices and chemicals specified in the publication are not recommendations. Always read and follow the directions printed on the pesticide label. Due to constantly changing pesticide laws and labels, some pesticides may have been cancelled or had certain uses prohibited. The use of trade names for various products simplifies presentation of this material and should not be considered an endorsement, nor is any criticism implied of similar products not mentioned.

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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	36.00	ton	42.00	1,512.00	
TOTAL GROSS RETURNS	36.00	ton		1,512.00	
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:				175.05	
Dry Nitrogen	115.00	lb	0.55	63.25	
Dry P2O5	45.00	lb	0.53	23.85	
K2O	65.00	lb	0.44	28.60	
Sulfur	55.00	lb	0.27	14.85	
Liquid Nitrogen	10.00	lb	0.73	7.30	
Liquid P2O5	35.00	lb	0.72	25.20	
Micronutrients - Sugarbeets	1.00	acre	12.00	12.00	
Pesticide:				50.90	
Poncho Beta Seed Treatment	0.48	unit	48.50	23.28	
Roundup Power Max 4.5	54.00	fl oz	0.21	11.34	
Ammonium Sulfate	2.40	lb	0.70	1.68	
Tilt	4.00	fl oz	2.00	8.00	
Sulfur 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:				129.95	
Irrigation Power - CP	35.00	ac-in	1.90	66.50	
Water Assessment	1.00	acre	45.60	45.60	
Irrigation Repairs - CP	35.00	ac-in	0.51	17.85	
Other:				86.40	
Crop Insurance	1.00	acre	45.00	45.00	
Sugarbeet Hauling Charge`	36.00	ton	1.15	41.40	
Labor				155.75	
Equipment Operator Labor	3.42	hrs	18.50	63.19	
Truck Driver Labor	2.88	hrs	14.40	41.47	
Irrigation Labor: CP	1.40	hrs	18.50	25.90	
General Farm Labor	1.74	hrs	10.65	18.53	
Irrigation Labor: Chem-Fert	0.36	hrs	18.50	6.66	
Machinery				116.79	
Fuel-Gas	3.33	gal	2.50	8.32	
Fuel-Diesel	18.02	gal	2.30	41.44	
Fuel-Road Diesel	4.41	gal	2.85	12.56	
Lube				9.35	
Machinery Repair				45.11	
Interest on Operating Capital @ 5.75%				28.43	
TOTAL OPERATING COSTS/ACRE				913.14	
TOTAL OPERATING COSTS/TON				25.37	
NET RETURNS ABOVE OPERATING COSTS				598.86	

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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				30.00	
General Overhead				24.00	
Land Rent				350.00	
Management Fee				75.00	
Property Taxes				0.00	
Property Insurance				5.13	
Investment Repairs				0.00	
TOTAL CASH OVERHEAD COSTS/ACRE				484.13	
TOTAL CASH OVERHEAD COSTS/TON				13.45	
TOTAL CASH COSTS/ACRE				1,397.27	
TOTAL CASH COSTS/TON				38.81	
NET RETURNS ABOVE CASH COSTS				114.73	
NON-CASH OVERHEAD COSTS (Capital Recovery)					
Equipment				168.37	
TOTAL NON-CASH OVERHEAD COSTS/ACRE				168.37	
TOTAL NON-CASH OVERHEAD COSTS/TON				4.68	
TOTAL COST/ACRE				1,565.64	
TOTAL COST/TON				43.49	
NET RETURNS ABOVE TOTAL COST				-53.64	

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TABLE 2. COSTS PER ACRE TO PRODUCE ROUNDUP READY SUGARBEETS

Operation	Operation	Cash and Labor Costs per Acre					Total Cost	Your Cost
	Time (Hrs/A)	Labor Cost	Fuel	Lube &Repairs	Material Cost	Custom/ Rent		
Preharvest:								
Irrigation	0.00	25.90	0.00	0.00	66.50	0.00	92.40	
Applying Fertilizer	0.00	0.00	0.00	0.00	130.55	7.75	138.30	
Tillage	0.51	13.87	12.49	9.90	0.00	0.00	36.26	
Mark Rows & Apply Fertilizer	0.09	3.41	2.34	1.40	44.50	0.00	51.65	
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	45.60	0.00	45.60	
Irrigation Repairs	0.00	0.00	0.00	0.00	17.85	0.00	17.85	
Planting	0.16	5.76	3.29	4.25	170.40	0.00	183.71	
Applying Herbicides	0.14	4.93	2.82	1.40	13.02	0.00	22.17	
Consultant & Soil Testing	0.00	0.00	0.00	0.00	0.00	15.00	15.00	
BasinTillage/Cultivate	0.12	4.10	2.93	2.23	0.00	0.00	9.26	
Chemigation-Fertigation	0.00	6.66	0.00	0.00	14.60	0.00	21.26	
General Pickup Use	1.00	22.20	8.32	3.28	0.00	0.00	33.80	
Service Truck Use	0.04	0.93	0.30	0.12	0.00	0.00	1.34	
Fuel Truck Use	0.04	0.93	0.30	0.14	0.00	0.00	1.36	
TOTAL PREHARVEST COSTS	2.11	88.68	32.79	22.71	548.02	22.75	714.96	
Harvest:								
Top Beets	0.37	13.10	8.65	7.60	0.00	0.00	29.35	
Lift Beets	0.36	12.49	8.92	12.09	0.00	0.00	33.50	
Crop Hauling	2.00	34.56	9.98	10.05	0.00	0.00	54.58	
Hauling Assessment	0.00	0.00	0.00	0.00	41.40	0.00	41.40	
TOTAL HARVEST COSTS	2.73	60.15	27.54	29.74	41.40	0.00	158.84	
Harvest :								
Crop Hauling	0.40	6.91	2.00	2.01	0.00	0.00	10.92	
TOTAL HARVEST COSTS	0.40	6.91	2.00	2.01	0.00	0.00	10.92	
Interest on Operating Capital at 5.75%							28.43	
TOTAL OPERATING COSTS/ACRE	5.25	155.75	62.33	54.46	589.42	22.75	913.14	

TABLE 2. CONTINUED

Operation	Operation	Cash and Labor Costs per Acre					Total Cost	Your Cost
	Time (Hrs/A)	Labor Cost	Fuel	Lube & Repairs	Material Cost	Custom/ Rent		
CASH OVERHEAD:								
Co-op Stock							30.00	
General Overhead							24.00	
Land Rent							350.00	
Management Fee							75.00	
Property Taxes							0.00	
Property Insurance							5.13	
Investment Repairs							0.00	
TOTAL CASH OVERHEAD COSTS/ACRE							484.13	
TOTAL CASH COSTS/ACRE							1,397.27	
NON-CASH OVERHEAD:		Per Producing Acre	Annual Cost Capital Recovery					
Equipment		1,840.16	168.37				168.37	
TOTAL NON-CASH OVERHEAD COSTS		1,840.16	168.37				168.37	
TOTAL COSTS/ACRE							1,565.64	

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

	SEP 14	OCT 14	NOV 14	DEC 14	JAN 15	FEB 15	MAR 15	APR 15	MAY 15	JUN 15	JUL 15	AUG 15	SEP 15	OCT 15	Total
Preharvest:															
Irrigation	5.28							2.64	7.92	10.56	21.12	23.76	18.48	2.64	92.40
Applying Fertilizer	138.30														138.30
Tillage	28.57							7.69							36.26
Mark Rows & Apply Fertilizer								51.65							51.65
Crop Insurance								45.00							45.00
Irrigation Water Assessment								45.60							45.60
Irrigation Repairs								17.85							17.85
Planting								183.71							183.71
Applying Herbicides									10.03	12.13					22.17
Consultant & Soil Testing										15.00					15.00
Basin Tillage/Cultivate										9.26					9.26
Chemigation-Fertigation												21.26			21.26
General Pickup Use	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	33.80
Service Truck Use	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	1.34
Fuel Truck Use	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	1.36
TOTAL PREHARVEST COSTS	174.76	2.61	2.61	2.61	2.61	2.61	2.61	356.74	20.56	49.56	23.73	47.63	21.09	5.25	714.96
Harvest:															
Top Beets														29.35	29.35
Lift Beets														33.50	33.50
Crop Hauling														54.58	54.58
Hauling Assessment														41.40	41.40
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	158.84	158.84
Harvest :															
Crop Hauling														10.92	10.92
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	10.92	10.92
Interest on Operating Capital @5.75%	0.84	0.85	0.86	0.87	0.89	0.90	0.91	2.62	2.72	2.96	3.07	3.30	3.40	4.24	28.43
TOTAL OPERATING COSTS/ACRE	175.60	3.46	3.47	3.48	3.49	3.51	3.52	359.36	23.28	52.52	26.80	50.93	24.49	179.24	913.14
CASH OVERHEAD															
Co-op Stock					30.00										30.00
General Overhead	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	24.00
Land Rent							350.00								350.00
Management Fee	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	75.00
Property Taxes															0.00
Property Insurance								5.13							5.13
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	7.07	7.07	7.07	7.07	37.07	7.07	357.07	12.20	7.07	7.07	7.07	7.07	7.07	7.07	484.13
TOTAL CASH COSTS/ACRE	182.67	10.53	10.54	10.55	40.57	10.58	360.59	371.56	30.35	59.59	33.87	58.00	31.56	186.31	1,397.27

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TABLE 4. HOURLY EQUIPMENT COSTS

Yr	Description	Roundup Ready Sugarbeets	Total	Cash Overhead			Operating			Total Costs/Hr.
		Hours Used	Hours Used	Capital Recovery	Insur- ance	Taxes	Lube& Repairs	Fuel	Total Oper.	
15	Moldboard Plow 4b	178	180	7.14	0.18	0.00	4.63	0.00	4.63	11.95
15	Pickup 1 - 3/4 ton	220	750	8.57	0.16	0.00	3.28	8.32	11.60	20.33
15	Pickup 2 - 3/4 ton	220	750	8.57	0.16	0.00	3.28	8.32	11.60	20.33
15	Planter - 12R 22"	91	125	34.08	0.90	0.00	17.57	0.00	17.57	52.56
15	Service Truck	23	80	36.69	1.21	0.00	2.87	7.13	9.99	47.89
15	Sprayer - 30'	78	150	2.93	0.07	0.00	1.65	0.00	1.65	4.65
15	Tractor - 160hp	185	350	26.95	0.95	0.00	7.49	18.17	25.66	53.56
15	Tractor - 185hp	342	400	26.64	0.94	0.00	9.31	21.00	30.30	57.88
15	Tractor - 200hp	128	500	22.61	0.80	0.00	11.57	22.70	34.27	57.67
15	Tractor 2 -200hp	412	500	22.61	0.80	0.00	11.57	22.70	34.27	57.67
15	Truck 1SB 10-Wheeler	220	300	23.33	0.76	0.00	5.02	4.99	10.01	34.10
15	Truck 2SB 10-Wheeler	220	300	23.33	0.76	0.00	5.02	4.99	10.01	34.10
15	Truck 3SB 10-Wheeler	220	300	23.33	0.76	0.00	5.02	4.99	10.01	34.10
15	Truck 4SB 10-Wheeler	220	300	23.33	0.76	0.00	5.02	4.99	10.01	34.10
15	Truck 5SB 10-Wheeler	220	300	23.33	0.76	0.00	5.02	4.99	10.01	34.10
15	Basin Tillage Tool 12-Row 22"	64	75	48.05	1.38	0.00	6.31	0.00	6.31	55.74
15	Beet Defoliator 6-Row	206	210	30.14	0.57	0.00	10.06	0.00	10.06	40.77
15	Beet Harvester 6-Row	196	200	44.54	1.18	0.00	21.13	0.00	21.13	66.85
15	Roller Harrow 24'	105	125	37.07	1.07	0.00	12.18	0.00	12.18	50.31
15	Truck 6SB 10-Wheeler	220	300	23.33	0.76	0.00	5.02	4.99	10.01	34.10
15	Pickup 3 - 3/4 ton	110	325	11.91	0.34	0.00	3.28	8.32	11.60	23.85
15	Fuel Truck	23	80	46.10	1.49	0.00	3.32	7.13	10.44	58.04
15	Markout Bar 12-Row 22" SB	52	60	38.73	1.02	0.00	2.18	0.00	2.18	41.94

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

ANNUAL EQUIPMENT COSTS

Yr	Description	Price	Yrs Life	Salvage Value	Capital Recovery	Cash Overhead		Total
						Insur- ance	Taxes	
15	Moldboard Plow 4b	12,000.00	10	2,122.10	1,427.19	35.31	0.00	1,462.50
15	Pickup 1 - 3/4 ton	41,000.00	5	13,750.00	7,137.56	136.88	0.00	7,274.43
15	Pickup 2 - 3/4 ton	41,000.00	5	13,750.00	7,137.56	136.88	0.00	7,274.43
15	Planter - 12R 22"	44,000.00	12	6,094.29	4,733.36	125.24	0.00	4,858.59
15	Service Truck	40,000.00	20	3,000.00	3,261.14	107.50	0.00	3,368.64
15	Sprayer - 30'	4,100.00	10	725.05	487.62	12.06	0.00	499.69
15	Tractor - 160hp	131,000.00	20	16,808.81	10,479.93	369.52	0.00	10,849.45
15	Tractor - 185hp	148,000.00	20	18,990.10	11,839.92	417.48	0.00	12,257.39
15	Tractor - 200hp	157,000.00	20	20,144.91	12,559.91	442.86	0.00	13,002.77
15	Tractor 2 -200hp	157,000.00	20	20,144.91	12,559.91	442.86	0.00	13,002.77
15	Truck 1SB 10-Wheeler	95,000.00	20	6,000.00	7,777.46	252.50	0.00	8,029.96
15	Truck 2SB 10-Wheeler	95,000.00	20	6,000.00	7,777.46	252.50	0.00	8,029.96
15	Truck 3SB 10-Wheeler	95,000.00	20	6,000.00	7,777.46	252.50	0.00	8,029.96
15	Truck 4SB 10-Wheeler	95,000.00	20	6,000.00	7,777.46	252.50	0.00	8,029.96
15	Truck 5SB 10-Wheeler	95,000.00	20	6,000.00	7,777.46	252.50	0.00	8,029.96
15	Basin Tillage Tool 12-Row 22"	42,000.00	15	4,032.27	4,004.33	115.08	0.00	4,119.41
15	Beet Defoliator 6-Row	40,000.00	5	13,029.49	7,032.48	132.57	0.00	7,165.05
15	Beet Harvester 6-Row	92,000.00	12	12,742.61	9,897.02	261.86	0.00	10,158.87
15	Roller Harrow 24'	54,000.00	15	5,184.35	5,148.43	147.96	0.00	5,296.39
15	Truck 6SB 10-Wheeler	95,000.00	20	6,000.00	7,777.46	252.50	0.00	8,029.96
15	Pickup 3 - 3/4 ton	41,000.00	12	7,500.00	4,299.48	121.25	0.00	4,420.73
15	Fuel Truck	50,000.00	20	3,000.00	4,097.93	132.50	0.00	4,230.43
15	Markout Bar 12-Row 22" SB	24,000.00	12	3,324.16	2,581.83	68.31	0.00	2,650.14
TOTAL		1,688,100.00	-	200,343.04	155,350.35	4,721.11	0.00	160,071.46
90% of New Cost*		1,519,290.00	-	180,308.73	139,815.32	4,249.00	0.00	144,064.32

*Used to reflect a mix of new and used equipment

ANNUAL INVESTMENT COSTS

Description	Price	Yrs Life	Salvage Value	Capital Recovery	Cash Overhead			Total
					Insur- ance	Taxes	Repairs	
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	30.00	16,500.00
General Overhead	550	acre	24.00	13,200.00
Land Rent	550	acre	350.00	192,500.00
Management Fee	550	acre	75.00	41,250.00

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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	714.96	714.96	714.96	714.96	714.96	714.96	714.96
Harvest	141.90	144.66	147.42	158.84	152.95	155.71	158.47
Harvest	10.92	10.92	10.92	10.92	10.92	10.92	10.92
Interest on Operating Capital @ 5.75%	28.43	28.43	28.43	28.43	28.43	28.43	28.43
TOTAL OPERATING COSTS/ACRE	896.21	898.97	901.73	913.14	907.26	910.02	912.78
TOTAL OPERATING COSTS/TON	27.16	26.44	25.76	25.37	24.52	23.95	23.40
CASH OVERHEAD COSTS/ACRE	484.13	484.13	484.13	484.13	484.13	484.13	484.13
TOTAL CASH COSTS/ACRE	1,380.33	1,383.10	1,385.86	1,397.27	1,391.38	1,394.14	1,396.91
TOTAL CASH COSTS/TON	41.83	40.68	39.60	38.81	37.60	36.69	35.82
NON-CASH OVERHEAD COSTS/ACRE	168.37	168.37	168.37	168.37	168.37	168.37	168.37
TOTAL COSTS/ACRE	1,548.70	1,551.46	1,554.23	1,565.64	1,559.75	1,562.51	1,565.27
TOTAL COSTS/TON	46.93	45.63	44.41	43.49	42.16	41.12	40.14

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	390.79	427.03	463.27	490.86	535.74	571.98	608.22
40.00	423.79	461.03	498.27	526.86	572.74	609.98	647.22
41.00	456.79	495.03	533.27	562.86	609.74	647.98	686.22
42.00	489.79	529.03	568.27	598.86	646.74	685.98	725.22
43.00	522.79	563.03	603.27	634.86	683.74	723.98	764.22
44.00	555.79	597.03	638.27	670.86	720.74	761.98	803.22
45.00	588.79	631.03	673.27	706.86	757.74	799.98	842.22

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	-93.33	-57.10	-20.86	6.73	51.62	87.86	124.09
40.00	-60.33	-23.10	14.14	42.73	88.62	125.86	163.09
41.00	-27.33	10.90	49.14	78.73	125.62	163.86	202.09
42.00	5.67	44.90	84.14	114.73	162.62	201.86	241.09
43.00	38.67	78.90	119.14	150.73	199.62	239.86	280.09
44.00	71.67	112.90	154.14	186.73	236.62	277.86	319.09
45.00	104.67	146.90	189.14	222.73	273.62	315.86	358.09

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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	-261.70	-225.46	-189.23	-161.64	-116.75	-80.51	-44.27
40.00	-228.70	-191.46	-154.23	-125.64	-79.75	-42.51	-5.27
41.00	-195.70	-157.46	-119.23	-89.64	-42.75	-4.51	33.73
42.00	-162.70	-123.46	-84.23	-53.64	-5.75	33.49	72.73
43.00	-129.70	-89.46	-49.23	-17.64	31.25	71.49	111.73
44.00	-96.70	-55.46	-14.23	18.36	68.25	109.49	150.73
45.00	-63.70	-21.46	20.77	54.36	105.25	147.49	189.73