

**Eastern Idaho: Bingham and Power Counties****Sugarbeets**

Paul E. Patterson

**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 the data collected annually by the University of Idaho from agricultural supply companies. The selling price for sugarbeets is the projected price for the current year. The cost estimate shown here is typical for growing Roundup Ready sugarbeets under irrigation in eastern Idaho. Production practices are based on data from farmers in Bingham and Power counties, crop consultants, and extension personnel in eastern Idaho. These aren't University of Idaho recommendations. 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 2,400-acre irrigated farm with 600 acres in sugarbeets, 600 acres in potatoes and 1,200 acres in grain. In the four year rotation, corn may substitute for grain. Alfalfa hay may be grown in longer rotations.

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 are found in the Crop Input Cost Summary located at

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

**Production Practices**

After straw from the preceding grain crop is removed, the ground is irrigated and moldboard plowed in the fall. In the spring, ground is roller harrowed twice before 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 .50 units per acre includes a base rate of

.48 units and a 4 percent reseeding factor. The technology fee is not charged on re-plants, however. Beets are cultivated once during the growing season with a basin tillage tool. Beets are mechanically topped in mid-October before being harvested by a 6-row lifter/loader. Beets are hauled to a local piling station (beet dump) in the farmer's seven 10-wheeler trucks, assuming a 15-mile roundtrip.

Most fertilizer is custom applied pre-plant in the fall with additional nitrogen fertilizer applied through the irrigation system during the growing season. Weeds are controlled using a combination of tillage, cultivation and Roundup herbicide. Roundup is applied twice, 22 ounces in May and 32 ounces in July. A third application may be needed in some situations. Ammonium sulfate is applied as a surfactant. A seed treatment is used for insect control. No additional insecticide is applied during the growing season. One fungicide application is made through the irrigation system in August. Additional fungicide or sulfur dust applications may be needed in some years based on disease pressure and environmental conditions. Sugarbeets receive 33 inches of water during the growing season, 1.0 inch in April, 4.0 inches in May, 6.0 inches in June, 8.0 inches in July, 9.0 inches in August, and 5.0 inches in September. An additional 2.0 inches of water applied to the grain stubble the preceding fall is also credited to the 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 cost (capital recovery) 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 study 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 ownership costs (depreciation, interest, and insurance) of the irrigation system. Because the charge for water, irrigation system repairs and irrigation power costs are listed separately, the land rent may appear low because the land owner in many circumstances pays some or even all these expenses.

## 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

Paul Patterson is a retired University of Idaho Extension agricultural economist.

## 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	43.00	1,548.00	
TOTAL GROSS RETURNS	36.00	ton		1,548.00	
OPERATING COSTS					
<b>Seed:</b>				<b>147.12</b>	
Roundup Ready Beet Seed: Raw	0.50	lb	156.00	78.00	
Roundup Technology Fee - SB	0.48		144.00	69.12	
<b>Fertilizer:</b>				<b>179.20</b>	
Dry Nitrogen - Pre-plant	20.00	lb	0.55	11.00	
Dry P2O5	100.00	lb	0.53	53.00	
K2O	40.00	lb	0.44	17.60	
Micronutrients - Sugarbeets	1.00	acre	10.00	10.00	
Liquid Nitrogen	120.00	lb	0.73	87.60	
<b>Pesticides/Chemicals:</b>				<b>44.30</b>	
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	
<b>Custom:</b>				<b>23.75</b>	
Custom Fertilize: 400 - 800 lbs	1.00	acre	7.75	7.75	
Consultants/Soil Testing - SB	1.00	acre	16.00	16.00	
<b>Irrigation:</b>				<b>119.35</b>	
Irrigation Power - Center Pivot	35.00	ac-in	1.90	66.50	
Irrigation Water Assessment - S	1.00	acre	35.00	35.00	
Irrigation Repairs - CP	35.00	ac-in	0.51	17.85	
<b>Other:</b>				<b>149.40</b>	
Crop Insurance	1.00	acre	45.00	45.00	
Sugarbeet Hauling Charge	36.00	ton	2.90	104.40	
<b>Labor</b>				<b>147.31</b>	
Equipment Operator Labor	3.63	hrs	18.50	67.18	
Truck Driver Labor	2.64	hrs	14.40	38.02	
Irrigation Labor - CP	1.40	hrs	18.50	25.90	
General Farm Labor	0.55	hrs	10.65	5.86	
Irrigation Labor: Chem-Fert	0.56	hrs	18.50	10.36	
<b>Machinery</b>				<b>118.82</b>	
Fuel-Gas	3.36	gal	2.50	8.39	
Fuel-Diesel	17.84	gal	2.35	41.92	
Fuel-Road Diesel	5.13	gal	2.85	14.63	
Lube				9.74	
Machinery Repair				44.14	
Interest on Operating Capital @ 5.75%				25.38	
TOTAL OPERATING COSTS/ACRE				954.63	
TOTAL OPERATING COSTS/TON				26.52	
NET RETURNS ABOVE OPERATING COSTS				593.37	

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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				24.00	
Land Rent				350.00	
Management Fee				75.00	
Property Taxes				0.00	
Property Insurance				4.89	
Investment Repairs				0.00	
TOTAL CASH OVERHEAD COSTS/ACRE				488.89	
TOTAL CASH OVERHEAD COSTS/TON				13.58	
TOTAL CASH COSTS/ACRE				1,443.52	
TOTAL CASH COSTS/TON				40.10	
NET RETURNS ABOVE CASH COSTS				104.48	
NON-CASH OVERHEAD COSTS (Capital Recovery)					
Equipment				161.16	
TOTAL NON-CASH OVERHEAD COSTS/ACRE				161.16	
TOTAL NON-CASH OVERHEAD COSTS/TON				4.48	
TOTAL COST/ACRE				1,604.69	
TOTAL COST/TON				44.57	
NET RETURNS ABOVE TOTAL COST				-56.69	

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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	91.60	7.75	99.35	
Tillage	0.41	9.03	11.59	8.69	0.00	0.00	29.30	
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	35.00	0.00	35.00	
Irrigation Repairs	0.00	0.00	0.00	0.00	17.85	0.00	17.85	
Planting	0.19	6.40	3.93	5.02	170.40	0.00	185.74	
Applying Herbicides	0.07	1.61	1.48	0.82	13.02	0.00	16.93	
Consultant	0.00	0.00	0.00	0.00	0.00	16.00	16.00	
Chemigation-Fertigation	0.00	10.36	0.00	0.00	95.60	0.00	105.96	
Basin Tillage/Cultivate	0.16	3.47	3.99	3.31	0.00	0.00	10.77	
Pickup Use	1.00	22.20	8.32	3.28	0.00	0.00	33.80	
4-Wheeler Use	0.10	2.22	0.06	0.06	0.00	0.00	2.34	
Service Truck Use	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fuel Truck Use	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
TOTAL PREHARVEST COSTS								
Harvest:								
Top Beets	0.37	8.31	9.56	8.67	0.00	0.00	26.54	
Lift Beets	0.36	11.66	11.38	10.88	0.00	0.00	33.92	
Crop Hauling	2.57	46.16	14.63	13.17	0.00	0.00	73.95	
Hauling Assessment	0.00	0.00	0.00	0.00	104.40	0.00	104.40	
TOTAL HARVEST COSTS								
Interest on Operating Capital at 5.75%							25.38	
TOTAL OPERATING COSTS/ACRE								
	5.23	147.31	64.94	53.88	639.37	23.75	954.63	

	Operation	Cash and Labor Costs per Acre							
Operation	Time (Hrs/A)	Labor Cost	Fuel	Lube &Repairs	Material Cost	Custom/ Rent	Total Cost	Your Cost	
CASH OVERHEAD:									
Co-op Stock							35.00		
General Overhead							24.00		
Land Rent							350.00		
Management Fee							75.00		
Property Taxes							0.00		
Property Insurance							4.89		
Investment Repairs							0.00		
TOTAL CASH OVERHEAD COSTS/ACRE							488.89		
TOTAL CASH COSTS/ACRE							1,443.52		
NON-CASH OVERHEAD:		Per Producing Acre		Annual Cost Capital Recovery					
Equipment		1,756.37		161.16			161.16		
TOTAL NON-CASH OVERHEAD COSTS		1,756.37		161.16			161.16		
TOTAL COSTS/ACRE							1,604.69		

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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	10.56	15.84	21.12	23.76	13.20		92.40
Applying Fertilizer	99.35														99.35
Tillage	14.47							14.83							29.30
Crop Insurance								45.00							45.00
Irrigation Water Assessment								35.00							35.00
Irrigation Repairs								17.85							17.85
Planting								185.74							185.74
Applying Herbicides									7.41	9.51					16.93
Consultant										16.00					16.00
Chemigation-Fertigation										48.24	57.72				105.96
Basin Tillage/Cultivate											10.77				10.77
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
4-Wheeler Use	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	2.34
Service Truck Use															0.00
Fuel Truck Use															0.00
TOTAL PREHARVEST COSTS	121.69	2.58	2.58	2.58	2.58	2.58	2.58	303.64	20.56	92.18	92.19	26.34	15.78	2.58	690.44
Harvest:															
Top Beets														26.54	26.54
Lift Beets														33.92	33.92
Crop Hauling														73.95	73.95
Hauling Assessment														104.40	104.40
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	238.81	238.81
Interest on Operating Capital @5.75%	0.58	0.60	0.61	0.62	0.63	0.64	0.66	2.11	2.21	2.65	3.09	3.22	3.30	4.45	25.38
TOTAL OPERATING COSTS/ACRE	122.27	3.18	3.19	3.20	3.21	3.23	3.24	305.75	22.77	94.83	95.28	29.56	19.08	245.85	954.63
CASH OVERHEAD															
Co-op Stock								35.00							35.00
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								4.89							4.89
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	7.07	7.07	357.07	46.96	7.07	7.07	7.07	7.07	7.07	7.07	488.89
TOTAL CASH COSTS/ACRE	129.34	10.25	10.26	10.27	10.29	10.30	360.31	352.72	29.84	101.90	102.35	36.63	26.15	252.92	1,443.52

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TABLE 4. HOURLY EQUIPMENT COSTS

ROUNDUP READY SUGARBEETS			Total	Cash Overhead			Operating			Total
Yr	Description	Hours Used	Hours Used	Capital Recovery	Insur- ance	Taxes	Lube& Repairs	Fuel	Total Oper.	Costs/Hr.
15	4-wheeler	60	90	6.80	0.19	0.00	0.57	0.63	1.19	8.18
15	Moldboard Plow 5b	129	150	8.58	0.25	0.00	6.64	0.00	6.64	15.47
15	Pickup 1 - 3/4 ton	240	800	8.03	0.15	0.00	3.28	8.32	11.60	19.79
15	Pickup 2 - 3/4 ton	240	800	8.03	0.15	0.00	3.28	8.32	11.60	19.79
15	Roller-harrow -24'	115	175	29.87	0.79	0.00	13.49	0.00	13.49	44.15
15	Tractor - 160hp	175	350	24.56	0.91	0.00	8.44	18.57	27.01	52.48
15	Tractor - 200hp	245	500	22.61	0.80	0.00	11.64	23.19	34.84	58.24
15	Tractor - 250hp	362	500	30.96	1.09	0.00	9.14	28.98	38.11	70.16
15	Tractor 2 - 200hp	247	500	22.61	0.80	0.00	11.64	23.19	34.84	58.24
15	Truck 1SB 10-Wheeler	220	300	23.33	0.76	0.00	5.13	5.70	10.83	34.92
15	Truck 2SB 10-Wheeler	220	300	23.33	0.76	0.00	5.13	5.70	10.83	34.92
15	Truck 3SB 10-Wheeler	220	300	23.33	0.76	0.00	5.13	5.70	10.83	34.92
15	Truck 4SB 10-Wheeler	220	300	23.33	0.76	0.00	5.13	5.70	10.83	34.92
15	Truck 5SB 10-Wheeler	220	300	23.33	0.76	0.00	5.13	5.70	10.83	34.92
15	Truck 6SB 10-Wheeler	220	300	23.33	0.76	0.00	5.13	5.70	10.83	34.92
15	Planter 12-Row SB	115	120	35.50	0.94	0.00	16.80	0.00	16.80	53.24
15	Sprayer - 50' 200 gal.	44	100	4.29	0.12	0.00	1.97	0.00	1.97	6.39
15	Basin Tillage Tool - 22' SB	94	95	37.94	1.09	0.00	8.38	0.00	8.38	47.41
15	Sugarbeet Defoliator 6-Row	225	225	28.13	0.53	0.00	10.34	0.00	10.34	39.00
15	Sugarbeet Harvester 6-Row	214	215	45.80	1.13	0.00	20.42	0.00	20.42	67.35
15	Pickup 3 - 3/4ton	120	375	11.38	0.30	0.00	3.28	8.32	11.60	23.28
15	Truck 7SB 10-Wheeler	220	300	23.33	0.76	0.00	5.13	5.70	10.83	34.92



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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	4-wheeler	6,000.00	10	1,500.00	679.50	18.75	0.00	698.25
15	Moldboard Plow 5b	15,000.00	15	1,440.10	1,430.12	41.10	0.00	1,471.22
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	Roller-harrow -24'	54,000.00	12	7,479.36	5,809.12	153.70	0.00	5,962.82
15	Tractor - 160hp	131,000.00	25	11,078.38	9,549.39	355.20	0.00	9,904.59
15	Tractor - 200hp	157,000.00	20	20,144.91	12,559.91	442.86	0.00	13,002.77
15	Tractor - 250hp	215,000.00	20	27,586.97	17,199.88	606.47	0.00	17,806.35
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	Truck 6SB 10-Wheeler	95,000.00	20	6,000.00	7,777.46	252.50	0.00	8,029.96
15	Planter 12-Row SB	44,000.00	12	6,094.29	4,733.36	125.24	0.00	4,858.59
15	Sprayer - 50' 200 gal.	5,000.00	15	480.03	476.71	13.70	0.00	490.41
15	Basin Tillage Tool - 22' SB	42,000.00	15	4,032.27	4,004.33	115.08	0.00	4,119.41
15	Sugarbeet Defoliator 6-Row	40,000.00	5	13,029.49	7,032.48	132.57	0.00	7,165.05
15	Sugarbeet Harvester 6-Row	92,000.00	10	16,269.41	10,941.83	270.67	0.00	11,212.50
15	Pickup 3 - 3/4ton	41,000.00	10	9,000.00	4,740.37	125.00	0.00	4,865.37
15	Truck 7SB 10-Wheeler	95,000.00	20	6,000.00	7,777.46	252.50	0.00	8,029.96
TOTAL		1,746,000.00	-	207,780.11	160,434.25	4,884.45	0.00	165,318.70
90% of New Cost*		1,571,400.00	-	187,002.10	144,390.82	4,396.01	0.00	148,786.83

\*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								

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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	689.99	690.59	691.19	690.44	692.39	692.99	693.59
Harvest	230.12	233.02	235.91	238.81	241.69	244.59	247.48
Interest on Operating Capital @ 5.75%	25.38	25.38	25.38	25.38	25.38	25.38	25.38
TOTAL OPERATING COSTS/ACRE	945.49	948.99	952.48	954.63	959.47	962.96	966.45
TOTAL OPERATING COSTS/TON	28.65	27.91	27.21	26.52	25.93	25.34	24.78
CASH OVERHEAD COSTS/ACRE	488.89	488.89	488.89	488.89	488.89	488.89	488.89
TOTAL CASH COSTS/ACRE	1,434.38	1,437.88	1,441.37	1,443.52	1,448.36	1,451.85	1,455.35
TOTAL CASH COSTS/TON	43.47	42.29	41.18	40.10	39.14	38.21	37.32
NON-CASH OVERHEAD COSTS/ACRE	161.16	161.16	161.16	161.16	161.16	161.16	161.16
TOTAL COSTS/ACRE	1,595.55	1,599.04	1,602.53	1,604.69	1,609.52	1,613.01	1,616.51
TOTAL COSTS/TON	48.35	47.03	45.79	44.57	43.50	42.45	41.45

## 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
40.00	374.51	411.01	447.52	485.37	520.53	557.04	593.55
41.00	407.51	445.01	482.52	521.37	557.53	595.04	632.55
42.00	440.51	479.01	517.52	557.37	594.53	633.04	671.55
43.00	473.51	513.01	552.52	593.37	631.53	671.04	710.55
44.00	506.51	547.01	587.52	629.37	668.53	709.04	749.55
45.00	539.51	581.01	622.52	665.37	705.53	747.04	788.55
46.00	572.51	615.01	657.52	701.37	742.53	785.04	827.55

## 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
40.00	-114.38	-77.88	-41.37	-3.52	31.64	68.15	104.65
41.00	-81.38	-43.88	-6.37	32.48	68.64	106.15	143.65
42.00	-48.38	-9.88	28.63	68.48	105.64	144.15	182.65
43.00	-15.38	24.12	63.63	104.48	142.64	182.15	221.65
44.00	17.62	58.12	98.63	140.48	179.64	220.15	260.65
45.00	50.62	92.12	133.63	176.48	216.64	258.15	299.65
46.00	83.62	126.12	168.63	212.48	253.64	296.15	338.65

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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
40.00	-275.55	-239.04	-202.53	-164.69	-129.52	-93.01	-56.51
41.00	-242.55	-205.04	-167.53	-128.69	-92.52	-55.01	-17.51
42.00	-209.55	-171.04	-132.53	-92.69	-55.52	-17.01	21.49
43.00	-176.55	-137.04	-97.53	-56.69	-18.52	20.99	60.49
44.00	-143.55	-103.04	-62.53	-20.69	18.48	58.99	99.49
45.00	-110.55	-69.04	-27.53	15.31	55.48	96.99	138.49
46.00	-77.55	-35.04	7.47	51.31	92.48	134.99	177.49