

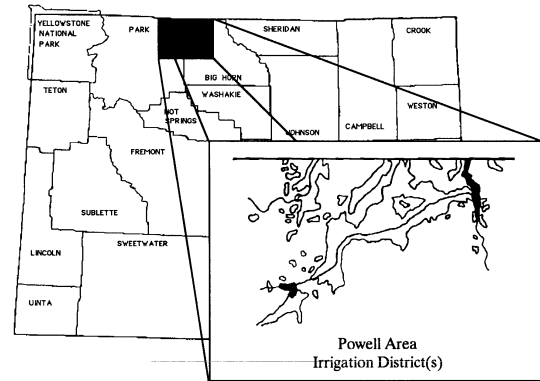
# Crop Enterprise Budget

## Sugar Beets, Thick Planted, Powell Area

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The enterprise budget presented in this report estimates typical costs and returns for sugar beet production in the Powell area of Wyoming. It should only be used as a guide; it is not representative of any particular farm. The major assumptions used in this budget are presented below.

### LAND

The budget is based on a 600 acre farm, with 240 acres of sugar beets each year. Other enterprises included on this farm are: malting barley, 230 acres; alfalfa establishment, 10 acres; alfalfa hay, 30 acres; and dry beans, 90 acres. The farm operator owns 200 acres and leases 400 acres. Owned land is valued at \$900 per acre and leased land is rented on a crop share basis. A one-third share of gross revenue is paid to the land owner. In turn, the land owner pays for one-third of the fertilizer and crop insurance for the crop. The land owner is also responsible for the costs associated with land, water and chemical for weed control on ditches and roads.

### LABOR

Labor on this farm is provided by the operator and two full-time employees. All labor, including operator labor, is valued at \$5.50 per hour. However, operator labor is a non-cash cost. Some part-time labor may be used on the farm for labor intensive operations like harvest.

### CAPITAL

The operator provides 75% of the long term capital and 20% of the operating capital for this enterprise. Twenty-five percent of the long term capital is borrowed at an interest rate of 9.58% APR (Annual Percentage Rate). Eighty percent of the

operating capital is borrowed at an interest rate of 9.92% APR. The interest rates used here are for short term planning. Real interest rates (interest rates adjusted for expected inflation) should be used for accurate long-term planning.

### PLANTING METHOD

When gathering the data for this enterprise budget, we found that many producers are adopting a new planting strategy. Many are stand-planting beets rather than the traditional method of thick planting and hand thinning. In stand plantings, the beets are band sprayed for weeds with Betamix and hand weeded once. Thick-planted beets require one hand thinning operation and two hand weedings. Table 1 shows a breakdown of the cost and return differences between these two planting techniques. This budget assumes the beets are thick-planted.

### MACHINERY, EQUIPMENT, AND BUILDINGS

A complete list of the machinery, equipment, and buildings used in this enterprise and the associated values are provided in Table 2. All resources are assumed to be half depreciated. Estimated operating and ownership costs are given in Table 3. Table 3 lists only the resources used in this enterprise. Other resources used on the farm are not included. However, the reader should note that the resources listed in Tables 2 and 3 may also be used in other enterprises on the farm.

### OPERATIONS

Operations related to production of the sugar beet crop are listed in chronological order in the enterprise budget. The beet ground is plowed in the fall. Planting starts in early April and irrigation

## Sugar Beets

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begins as soon as water is available (around April 15). Although three insecticides—Temik, Furadan, and Counter—are usually used in rotation to reduce resistance problems, the budget assumes use of Temik only.

Beet harvest begins in late September-early October. Sugar beets are delivered to local receiving stations and transported to the processing facility later in the year. The sugar company arranges for this later shipping and assesses the beet producer for the transportation costs. Some beet growers sell or graze beet tops for livestock feed. This budget assumes the beets are all defoliated, since this appears to be the preferred practice. The budgeted sugar beet yield is 19.5 tons per acre.

### ENTERPRISE BUDGET

Economic costs and returns of sugar beet production are summarized by operation in the enterprise budget. Costs are broken down by stage of production. General overhead has been calculated

at 5% of all cash costs, while operator management is calculated at 10%.

Costs and returns for the crop share-lease arrangement are also summarized in the budget. Costs paid in whole or in part by the land owner are listed in the third column from the right. The second column from the right describes the tenant's share of the appropriate cost and return items. The far right column has been provided to calculate changes from this base budget for your operation.

### SUMMARY

Gross income for the sugar beet enterprise is estimated at \$765.96 per acre. Total variable costs are estimated at \$584.89 per acre, with total fixed costs at \$229.49 per acre. The total of all costs for sugar beets is estimated at \$814.38 per acre, leaving a net projected return of (\$48.42) per acre. The net projected returns for the share-lease arrangement are (\$17.71) per acre for the landowner and (\$30.71) per acre for the tenant.

## Sugar Beets

### Economic Costs and Returns Sugar Beets - Powell Area 240 Acre Enterprise

RETURNS SECTION -----			Owner-	Land-						
			Operator	owner	Tenant					
			100%	20%	80%					
GROSS INCOME Description	Quantity	Unit	\$/Unit	Total	Total	Total				
=====										
SUGAR BEETS - THICK PLANTED	19.50	ton	39.28	\$765.96	\$153.19	\$612.77				
=====										
Total GROSS Income				\$765.96	\$153.19	\$612.77				
VARIABLE COSTS SECTION -----										
			----- M a t e r i a l s -----							
VARIABLE COST Description	Dollars per Acre		# Units		Materials	Owner-	Land-	Tenant		
	LABOR	MACHINERY	Per Acre	Type	Total Cost	Operator	owner			
=====										
<b>**ANNUAL**</b>										
METAL SHOP						2.14	----	2.14		
MACHINE SHED						0.28	----	0.28		
TRAILER HOUSE						3.17	----	3.17		
FENCES						0.03	----	0.03		
LABOR HOUSE						1.74	----	1.74		
1/2 TON PICKUP	2.40	1.57				3.97	----	3.97		
1/2 TON - 4 X 4 PICKUP	2.40	1.60				4.00	----	4.00		
3/4 TON PICKUP	2.40	1.65				4.05	----	4.05		
MINI PICKUP	2.40	1.03				3.43	----	3.43		
LOADER WORK	0.20	0.23				0.43	----	0.43		
GENERAL OVERHEAD						23.45	----	23.45		
OPERATOR MANAGEMENT						46.90	----	46.90		
Total ANNUAL						\$93.59	\$0.00	\$93.59		
<b>**PREPLANT-FALL**</b>										
PLOW	Operation	2.02	5.69			7.71	----	7.71		
ROLLER HARROW	Operation	1.01	1.90			2.91	----	2.91		
Total PREPLANT-FALL						\$10.62	\$0.00	\$10.62		
<b>**PREPLANT-SPRING**</b>										
SPREAD FERTILIZER	Operation	0.59	0.32	11-52-0	0.096 ton	291.00	78.48	79.39	15.70	63.69
				34-0-0	0.219 ton	197.50				
				0-0-60	0.042 ton	173.50				
ROLLER HARROW	Operation	0.76	1.62				2.38	----	2.38	
LEVEL	Operation	1.01	2.42				3.43	----	3.43	
INCORPORATE CHEM	Operation	1.73	3.75	NORTRON	0.156 gal	173.20	33.80	39.28	----	39.28
				RONEET	0.125 gal	54.25				
HAUL SPRAY WATER	Operation	0.14	0.18				0.32	----	0.32	
LEVEL	Operation	1.01	2.42				3.43	----	3.43	
Total PREPLANT-SPRING						\$128.23	\$15.70	\$112.53		
<b>**PLANT BEETS**</b>										
CROP INSURANCE	BEETS						35.21	7.04	28.17	
BED GROUND	Operation	1.21	2.09	TEMIK 15G	8.000 lb	3.15	25.20	28.50	5.04	23.46
PLANT BEETS	Operation	1.42	2.04	BEEET SEED	1.870 lb	21.40	40.02	43.48	8.00	35.48
Total PLANT BEETS						\$107.19	\$20.08	\$87.11		
<b>**GROW BEETS**</b>										
OPEN DITCHES	Operation	0.13	0.12				0.25	----	0.25	
PULL ENDS	Operation	0.18	0.11				0.29	----	0.29	
IRRIGATE BEETS	Operation	6.06	0.00	CANVAS DAMS	1.000 acre	0.50	2.98	9.04	2.48	6.56
				CONCRETE DITCH		1.93				
				DIRT DITCH		0.22				
				GATED PIPE		0.33				
CLOSE DITCHES	Operation	0.13	0.12				0.25	----	0.25	
CULTIVATE 3.0A/H	Operation	2.12	3.42				5.54	----	5.54	
CULTIVATE 1.2A/H	Operation	0.59	0.44				1.03	----	1.03	
THIN BEETS	LABOR						40.00	----	40.00	
BEEET HOES							0.50	----	0.50	
CULTIVATE 4.0A/H	Operation	1.36	2.57				3.93	----	3.93	
CULTIVATE 1.5A/H	Operation	0.47	0.35				0.82	----	0.82	
WEED BEETS (1ST)	LABOR						25.00	----	25.00	
SPRAY DITCHES	Operation	0.08	0.02	CURTAIL	0.005 gal	35.38	0.18	0.28	0.18	0.10

## Sugar Beets

VARIABLE COSTS SECTION		----- M a t e r i a l s -----					Materials			
VARIABLE COST Description	Dollars per Acre		Description	# Units	Unit	\$/unit	Total Cost	Owner- Per Acre Operator	Land- owner	Tenant
	LABOR	MACHINERY		Per Acre	Type		Per Acre			
CORRUGATE	Operation	1.51	1.38					2.89	----	2.89
OPEN DITCHES	Operation	0.13	0.12					0.25	----	0.25
PULL ENDS	Operation	0.18	0.11					0.29	----	0.29
IRRIGATE BEETS	Operation	2.76	0.00	CONCRETE DITCH		1.93	2.48	5.24	2.48	2.76
				DIRT DITCH		0.22				
				GATED PIPE		0.33				
IRRIGATE BEETS	Operation	2.76	0.00	CONCRETE DITCH		1.93	2.48	5.24	2.48	2.76
				DIRT DITCH		0.22				
				GATED PIPE		0.33				
SPRAY DITCHES	Operation	0.08	0.02	CURTAIN	0.005 gal	27.38	0.14	0.24	0.14	0.10
IRRIGATE BEETS	Operation	2.76	0.00	CONCRETE DITCH		1.93	2.48	5.24	2.48	2.76
				DIRT DITCH		0.22				
				GATED PIPE		0.33				
WEED BEETS (2ND)LABOR								10.00	----	10.00
IRRIGATE BEETS	Operation	2.76	0.00	CONCRETE DITCH		1.93	2.48	5.24	2.48	2.76
				DIRT DITCH		0.22				
				GATED PIPE		0.33				
IRRIGATE BEETS	Operation	2.76	0.00	CONCRETE DITCH		1.93	2.48	5.24	2.48	2.76
				DIRT DITCH		0.22				
				GATED PIPE		0.33				
IRRIGATE BEETS	Operation	2.76	0.00	CONCRETE DITCH		1.93	2.48	5.24	2.48	2.76
				DIRT DITCH		0.22				
				GATED PIPE		0.33				
IRRIGATE BEETS	Operation	2.76	0.00	CONCRETE DITCH		1.93	2.48	5.24	2.48	2.76
				DIRT DITCH		0.22				
				GATED PIPE		0.33				
IRRIGATE BEETS	Operation	2.76	0.00	CONCRETE DITCH		1.93	2.48	5.24	2.48	2.76
				DIRT DITCH		0.22				
				GATED PIPE		0.33				
-----										
Total GROW BEETS								\$147.76	\$25.12	\$122.64
**HARVEST BEETS**										
CLOSE DITCHES	Operation	0.13	0.12					0.25	----	0.25
DEFOLIATE BEETS	Operation	4.72	8.23					12.95	----	12.95
PULL BEETS	Operation	4.03	14.00					18.03	----	18.03
HAUL BEETS 2TN#1	Operation	5.45	6.01					11.46	----	11.46
HAUL BEETS 2TN#2	Operation	5.45	6.15					11.60	----	11.60
HAUL BEETS TDM#1	Operation	5.45	6.05					11.50	----	11.50
HAUL BEETS TDM#2	Operation	5.45	6.05					11.50	----	11.50
-----										
Total HARVEST BEETS								\$77.29	\$0.00	\$77.29
Operating Interest								20.21	----	20.21
=====										
Total VARIABLE COST								\$584.89	\$60.90	\$523.99
-----										
GROSS INCOME minus VARIABLE COST								\$181.07	\$92.29	\$88.78

## Sugar Beets

FIXED COSTS SECTION -----				
FIXED COST Description	Unit	Owner- Operator	Land- owner	Tenant
=====	=====	=====	=====	=====
Machinery and Equipment:				
Taxes	Acre	4.29	----	4.29
Insurance	Acre	7.76	----	7.76
Interest	Acre	59.73	----	59.73
Depreciation	Acre	47.72	----	47.72
Buildings and Improvements:				
Taxes	Acre	1.17	1.17	----
Insurance	Acre	2.11	2.11	----
Interest	Acre	10.33	10.33	----
Depreciation	Acre	5.11	5.11	----
Irrigation:				
Taxes	Acre	0.47	0.47	----
Insurance	Acre	0.94	0.94	----
Interest	Acre	9.72	9.72	----
Depreciation	Acre	5.36	5.36	----
Land:				
Taxes	Acre	5.50	5.50	----
Interest	Acre	69.30	69.30	----
=====	=====	=====	=====	=====
Total FIXED Cost		\$229.49	\$110.00	\$119.49
<hr/>				
Total of ALL Cost		\$814.38	\$170.90	\$643.48
+++++				
NET PROJECTED RETURNS		(\$48.42)	(\$17.71)	(\$30.71)
+++++				

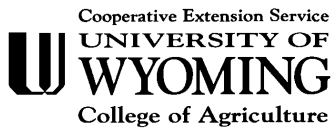
Table 1. Costs and Returns for Stand-Planted Beets Over or (Under) Thick-Planted Beets

	Owner- <u>Operator</u>	Land- <u>Owner</u>	<u>Tenant</u>
Beet seed	\$(11.56)	\$ (2.31)	\$ (9.25)
No Thin beets operation	(40.00)	----	(40.00)
Haul spray water operation	0.31	----	0.31
Spray beets (0.384 gal-Betamix/ac @ \$91.00/gal)	35.80	----	35.80
Beet hoes	(0.34)	----	(0.34)
No 2nd weed beets operation	(10.00)	----	(10.00)
Overhead and management	(3.96)	----	(3.96)
Operating interest	(0.88)	----	(0.88)
<u>Machinery and equipment</u>	1.90	----	1.90
Net Difference	\$ (28.73)	\$ (2.31)	\$ (26.42)
Projected net return by stand-planting beets:	\$ (19.69)	\$ (15.40)	\$ (4.29)

## Sugar Beets

**TABLE 2. Machinery, Equipment, and Building Value and Use Assumptions**

Resource Name	1990 List Price	List Price in Year Acquired	Current Market Value	Salvage Value	Useful Life Years	Useful Life Hr or Mi	Remaining Life Hr or Mi	Total Defined Annual Use
125 HP TRACTOR #1	\$62,822	\$44,958	\$22,774	\$11,240	12	4,488 hr	2,244 hr	374 hr
125 HP TRACTOR #2	62,822	44,958	22,774	11,240	12	5,364 hr	2,682 hr	447 hr
140 HP TRACTOR	68,008	50,505	26,416	12,627	12	4,956 hr	2,478 hr	413 hr
250 CC ATV	3,140	1,989	905	588	10	140 hr	70 hr	14 hr
80 HP TRACTOR	35,433	27,436	13,469	5,806	14	4,508 hr	2,254 hr	322 hr
ATV BOOM SPRAYER	2,300	1,932	879	674	8	112 hr	56 hr	14 hr
BEDDER 12-ROW	6,350	6,023	3,365	1,779	10	660 hr	330 hr	66 hr
BEET DEFOLIATOR 6-ROW	13,293	13,702	6,236	5,650	6	966 hr	483 hr	161 hr
BEET PULLER 4-ROW	39,995	37,782	11,734	13,185	8	1,288 hr	644 hr	161 hr
CORRUGATOR 6-ROW	3,271	2,587	1,177	764	10	830 hr	415 hr	83 hr
CULTIVATOR 12-RO	10,347	8,319	6,950	2,457	10	1,470 hr	735 hr	147 hr
CULTIVATOR 6-ROW	6,298	3,157	2,600	933	10	430 hr	215 hr	43 hr
DITCHER V-TYPE 3-POINT	3,550	2,758	1,195	690	12	216 hr	108 hr	18 hr
END PULLER 3-ROW	1,175	628	250	157	12	276 hr	138 hr	23 hr
FRONT LOADER 2-TON	7,323	5,333	2,950	1,575	10	200 hr	100 hr	20 hr
LEVELER 3-POINT 16 FT	9,160	6,732	5,326	1,683	12	1,152 hr	576 hr	96 hr
PLANTER 12-ROW	13,642	8,505	4,500	2,968	8	528 hr	264 hr	66 hr
PLOW 2-WAY 4-18'S	9,093	9,685	4,450	3,380	8	880 hr	440 hr	110 hr
REAR BLADE 8 FT	1,090	721	525	180	12	216 hr	108 hr	18 hr
ROLLER HARROW	15,132	14,415	6,350	5,944	6	1,062 hr	531 hr	177 hr
SPRAYER SADL TNK20 FT	2,125	1,785	812	623	8	760 hr	380 hr	95 hr
NURSE TANK 1000 GAL	1,019	1,019	464	301	10	1,160 hr	580 hr	116 hr
1/2 TON PICKUP 2WD	12,950	7,647	3,650	1,912	12	60,000 mi	30,000 mi	5,000 mi
1/2 TON PICKUP 4WD	17,400	10,151	8,725	2,538	12	60,000 mi	30,000 mi	5,000 mi
2-TON TRUCK #1	38,500	25,111	13,650	3,807	18	83,700 mi	41,850 mi	4,650 mi
2-TON TRUCK #2	38,500	25,111	13,650	3,807	18	81,000 mi	40,500 mi	4,500 mi
3/4 TON PICKUP 2WD	14,950	8,917	4,250	2,229	12	60,000 mi	30,000 mi	5,000 mi
MINI PICKUP	9,070	6,196	2,463	1,549	12	60,000 mi	30,000 mi	5,000 mi
TANDEM TRUCK #1	73,570	49,954	21,500	7,573	18	80,424 mi	40,212 mi	4,468 mi
TANDEM TRUCK #2	73,570	49,954	21,500	7,573	18	80,424 mi	40,212 mi	4,468 mi



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## Sugar Beets

TABLE 3. Machinery, Equipment, and Building Cost Calculations

		RESOURCE COST PER UNIT OF USE								ENTERPRISE			
		-----Variable-----				-----Fixed-----							
Machine/Vehicle	Unit	Fuel and Lube	Operation Labor & Inputs	Repair and Maint.	Hourly Lease	Deprec. and Interest	Taxes and Insurance	TOTAL COST	Resource Use per Acre	-----Costs per Acre-----			
									Variable	Fixed	TOTAL		
125 HP TRACTOR	#1	\$/Hr	\$5.56	\$0.00	\$3.05	\$0.00	\$6.93	\$0.91	\$16.45	1.0440	\$8.99	\$8.18	\$17.17
125 HP TRACTOR	#2	\$/Hr	5.56	0.00	3.33	0.00	5.80	0.76	15.45	1.0637	9.46	6.98	16.44
140 HP TRACTOR		\$/Hr	6.23	0.00	3.60	0.00	7.31	0.96	18.10	1.4763	14.51	12.21	26.72
250 CC ATV		\$/Hr	1.10	0.00	0.02	0.00	7.37	0.97	9.46	0.0222	0.02	0.19	0.21
80 HP TRACTOR		\$/Hr	3.56	0.00	1.85	0.00	4.57	0.63	10.61	0.5333	2.89	2.77	5.66
ATV BOOM SPRAYER		\$/Hr	0.00	0.00	0.70	0.00	8.45	0.94	10.09	0.0222	0.02	0.21	0.23
BEDDER	12-ROW	\$/Hr	0.00	0.00	0.96	0.00	6.75	0.77	8.48	0.2000	0.19	1.50	1.69
BEEF DEFOLIATOR	6-ROW	\$/Hr	0.00	0.00	3.51	0.00	5.40	0.58	9.49	0.6667	2.34	3.99	6.33
BEEF PULLER	4-ROW	\$/Hr	0.00	0.00	10.32	0.00	8.52	1.09	19.93	0.6667	6.88	6.41	13.29
CORRUGATOR 6-ROW		\$/Hr	0.00	0.00	0.52	0.00	1.81	0.21	2.54	0.2500	0.13	0.51	0.64
CULTIVATOR 12-RO		\$/Hr	0.00	0.00	2.96	0.00	6.47	0.71	10.14	0.5250	1.55	3.77	5.32
CULTIVATOR 6-ROW		\$/Hr	0.00	0.00	0.33	0.00	8.27	0.91	9.51	0.1500	0.05	1.38	1.43
DITCHER V-TYPE	3-POINT	\$/Hr	0.00	0.00	0.30	0.00	7.96	1.00	9.26	0.0360	0.01	0.32	0.33
END PULLER	3-ROW	\$/Hr	0.00	0.00	0.04	0.00	1.29	0.16	1.49	0.0500	0.00	0.07	0.07
FRONT LOADER	2-TON	\$/Hr	0.00	0.00	0.59	0.00	19.27	2.21	22.07	0.0333	0.02	0.72	0.74
LEVELER 3-POINT	16 FT	\$/Hr	0.00	0.00	2.70	0.00	6.94	0.83	10.47	0.3334	0.90	2.59	3.49
PLANTER	12-ROW	\$/Hr	0.00	0.00	2.73	0.00	9.55	1.02	13.30	0.2000	0.55	2.11	2.66
PLOW 2-WAY	4-18'S	\$/Hr	0.00	0.00	4.27	0.00	5.46	0.61	10.34	0.3333	1.42	2.02	3.44
REAR BLADE	8 FT	\$/Hr	0.00	0.00	0.08	0.00	3.63	0.44	4.15	0.0360	0.00	0.15	0.15
ROLLER HARROW		\$/Hr	0.00	0.00	2.60	0.00	4.91	0.54	8.05	0.4108	1.07	2.24	3.31
SPRAYER SADL TNK	20 FT	\$/Hr	0.00	0.00	1.38	0.00	1.15	0.13	2.66	0.2857	0.39	0.37	0.76
NURSE TANK	1000 GAL	\$/Hr	0.00	0.00	0.15	0.00	1.04	0.06	1.25	0.3200	0.05	0.35	0.40
1/2 TON PICKUP	2WD	\$/Mi	0.09	0.00	0.05	0.00	0.15	0.03	0.32	11.2000	1.57	2.02	3.59
1/2 TON PICKUP	4WD	\$/Mi	0.09	0.00	0.05	0.00	0.40	0.05	0.59	11.2000	1.57	5.04	6.61
2-TON TRUCK	#1	\$/Mi	0.22	0.00	0.19	0.00	0.54	0.06	1.01	15.1800	6.22	9.11	15.33
2-TON TRUCK	#2	\$/Mi	0.22	0.00	0.19	0.00	0.55	0.07	1.03	14.8600	6.09	9.21	15.30
3/4 TON PICKUP	2WD	\$/Mi	0.09	0.00	0.06	0.00	0.17	0.04	0.36	11.2000	1.68	2.35	4.03
MINI PICKUP		\$/Mi	0.06	0.00	0.03	0.00	0.10	0.02	0.21	11.2000	1.01	1.34	2.35
TANDEM TRUCK	#1	\$/Mi	0.16	0.00	0.25	0.00	0.86	0.09	1.36	14.8600	6.09	14.12	20.21
TANDEM TRUCK	#2	\$/Mi	0.16	0.00	0.25	0.00	0.86	0.09	1.36	14.8600	6.09	14.12	20.21