Enterprise Budget

Sugar Beets, Thick Planted, Powell Area

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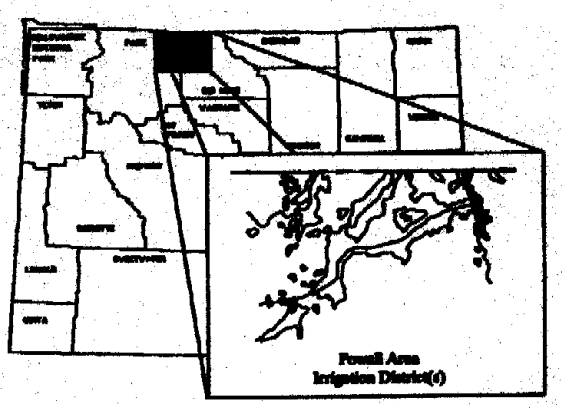

The enterprise budget presented in this report estimates typical costs and returns for sugar beet production in the Powell area of Wyoming. It should only be used as a guide; it is not representative of an actual farm. The major assumptions used in this budget are presented below.

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: alfalfa establishment, 10 acres; alfalfa hay, 30 acres; malting barley, 230 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-fifth share of gross revenue is paid to the landowner. In turn, the landowner pays for one-fifth of the fertilizer, insecticide, and beet seed for the crop. The landowner is also responsible for the costs associated with land, water, and chemicals 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 such as harvest.

CAPITAL

The operator provides 75 pecent of the long-term capital and 20 percent of the operating capital for this enterprise. Twenty-five percent of the long-term capital is borrowed at an interest rate of 10.8 percent APR (Annual Percentage Rate). Eighty percent of the operating capital is borrowed at an interest rate of 12.5 percent APR. The interest rates used here are for short-term planning. Real interest rates must be used for accurate long-term planning.

MACHINERY AND EQUIPMENT

A complete list of the machinery used for this enterprise and the associated machinery values are shown in Table 2. All machinery is assumed to be half depreciated. Estimated machinery costs are shown in Table 3. Table 3 lists only the machinery used for sugar beet production. Other machines used elsewhere on the farm are not included in the table. However, the machinery may listed also be used for other enterprises on the farm.

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 with Betamix for weeds 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.

OPERATIONS

Operations related to sugar beet production are listed in chronological order in the enterprise budget. The beet ground is plowed in the fall. Planting starts in early April and irrigation begins as soon as water is available (around April 15). Although three insecticides--Temik, Furadan, and Counter--are usually used in a 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 percent and operator management is calculated at 10 percent of all cash costs.

Costs and returns for the crop share-lease arrangement are also summarized in the budget. Costs paid in whole or in part by the landowner are listed in the landowner column. The tenant column 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 $780.00 per acre. Total variable costs are estimated at $501.14 per acre, with total fixed costs at $238.41 per acre. The total of all costs for sugar beets is estimated at $739.55 per acre, leaving a net projected return of $40.45 per acre. The net projected returns for the share-lease arrangement are ($9.60) per acre for the landowner and $50.05 per acre for the tenant.

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

	Owner-Operator	Land-owner	Tenant
Beet Seed	$(8.10)	$(1.62)	$(6.48)
NO Thin Beets	(40.00)	------	(40.00)
Haul Spray Water	0.32	------	0.32
Spray Beets (0.384 gal/ac @ $74.40/gal)	29.38	------	29.38
Beet Hoes	(0.34)	------	(0.34)
NO Weed Beets 2nd	(10.00)	------	(10.00)
Overhead and Management	(4.39)	------	(4.39)
Operating Interest	(1.19)	------	(1.19)
Machinery and Equipment	2.63	------	2.63
Buildings and Improvements	(0.60)	(0.60)	------
NET DIFFERENCE:	$(32.29)	$(2.22)	$(30.07)
Increase in projected net return by stand planting beets:	$32.29	$2.22	$30.07

Economic Costs and Returns
Sugar Beets, Thick Planted - Powell Area
240-Acre Enterprise

RETURNS SECTION

GROSS INCOME Description	Quantity	Unit	$/Unit	Owner-Operator 100% Total	Land-owner 20% Total	Tenant 80% Total	Your Return
SUGAR BEETS - THICK PLANTED	19.50	ton	40.00	780.00	156.00	624.00	
Total GROSS Income				$780.00	$156.00	$624.00	

VARIABLE COSTS SECTION

VARIABLE COST Description		Dollars Per Acre LABOR	MACHINERY	Materials Description	# Units Per Acre	Unit Type	$/unit	Materials Total Cost Per Acre	Owner-Operator	Land-owner	Tenant	Your Cost
ANNUAL												
METAL SHOP									2.16	----	2.16	
MACHINE SHED									0.30	----	0.30	
TRAILER HOUSE									3.19	----	3.19	
FENCES									0.05	----	0.05	
LABOR HOUSE									1.77	----	1.77	
1/2 TON PICKUP		2.40	1.58						3.98	----	3.98	
1/2 TON - 4 X 4 PICKUP		2.40	1.61						4.01	----	4.01	
3/4 TON PICKUP		2.40	1.66						4.06	----	4.06	
MINI PICKUP		2.40	1.04						3.44	----	3.44	
LOADER WORK		0.20	0.23						0.43	----	0.43	
GENERAL OVERHEAD									19.75	----	19.75	
OPERATOR MANAGEMENT									39.51	----	39.51	
Total ANNUAL									$82.65	$0.00	$82.65	
PREPLANT-FALL												
PLOW	Operation	2.02	5.74						7.76	----	7.76	
ROLLER HARROW	Operation	1.01	1.91						2.92	----	2.92	
Total PREPLANT-FALL									$10.68	$0.00	$10.68	
PREPLANT-SPRING												
SPREAD FERTLIZER	Operation	0.59	0.32	11-52-0	0.096	ton	272.00	73.97	74.68	14.79	60.09	
				34-0-0	0.219	ton	186.00					
				0-0-60	0.042	ton	169.50					
ROLLER HARROW	Operation	0.76	1.63						2.39	----	2.39	
LEVEL	Operation	1.01	2.44						3.45	----	3.45	
INCORPORATE CHEM	Operation	1.73	3.78	NORTRON	0.156	gal	51.75	14.26	19.77	----	19.77	
				RONEET	0.125	gal	49.46					
HAUL SPRAY WATER	Operation	0.14	0.18						0.32	----	0.32	
LEVEL	Operation	1.01	2.44						3.45	----	3.45	
Total PREPLANT-SPRING									$104.26	$14.79	$89.47	
PLANT BEETS												
BED GROUND	Operation	1.21	2.11	TEMIK 15G	8.000	lb	2.75	22.00	25.32	4.40	20.92	
PLANT BEETS	Operation	1.42	2.05	BEET SEED	1.870	lb	15.00	28.05	31.52	5.61	25.91	
Total PLANT BEETS									$56.84	$10.01	$46.83	
GROW BEETS												
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					

VARIABLE COSTS SECTION

VARIABLE COST Description		Dollars Per Acre LABOR	Dollars Per Acre MACHINERY	Materials Description	Materials # Units Per Acre	Materials Unit Type	Materials $/unit	Materials Total Cost Per Acre	Owner-Operator	Land-owner	Tenant	Your Cost
				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	3.45						5.57	----	5.57	
CULTIVATE 1.2A/H	Operation	0.59	0.44						1.03	----	1.03	
THIN BEETS	LABOR								40.00	----	40.00	
BEET HOES									0.50	----	0.50	
CULTIVATE 4.0A/H	Operation	1.36	2.59						3.95	----	3.95	
CULTIVATE 1.5A/H	Operation	0.47	0.36						0.83	----	0.83	
WEED BEETS (1ST)	LABOR								25.00	----	25.00	
SPRAY DITCHES	Operation	0.08	0.02	CURTAIL	0.005	gal	27.38	0.14	0.24	0.14	0.10	
CORRUGATE	Operation	1.51	1.39						2.90	----	2.90	
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	CURTAIL	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					
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									$147.79	$25.08	$122.71	
HARVEST BEETS												
CLOSE DITCHES	Operation	0.13	0.12						0.25	----	0.25	
DEFOLIATE BEETS	Operation	4.72	8.29						13.01	----	13.01	
PULL BEETS	Operation	4.03	14.08						18.11	----	18.11	
HAUL BEETS 2TN#1	Operation	5.45	6.06						11.51	----	11.51	
HAUL BEETS 2TN#2	Operation	5.45	6.20						11.65	----	11.65	
HAUL BEETS TON#1	Operation	5.45	6.09						11.54	----	11.54	

VARIABLE COSTS SECTION

VARIABLE COST Description	Dollars Per Acre LABOR	MACHINERY	Materials Description	# Units Per Acre	Unit Type	$/unit	Materials Total Cost Per Acre	Owner-Operator	Landowner	Tenant	Your Cost
HAUL BEETS TDM#2 Operation	5.45	6.09						11.54	----	11.54	
Total HARVEST BEETS								$77.61	$0.00	$77.61	
Operating Interest								21.31	----	21.31	
Total VARIABLE COST								$501.14	$49.88	$451.26	
GROSS INCOME minus VARIABLE COST								$278.86	$106.12	$172.74	

FIXED COSTS SECTION

FIXED COST Description	Unit	Owner-Operator	Landowner	Tenant	Your Cost
Machinery and Equipment:					
Taxes	Acre	4.29	----	4.29	
Insurance	Acre	7.76	----	7.76	
Interest	Acre	62.93	----	62.93	
Depreciation	Acre	47.72	----	47.72	
Buildings and Improvments:					
Taxes	Acre	1.17	1.17	----	
Insurance	Acre	2.11	2.11	----	
Interest	Acre	16.05	16.05	----	
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		$238.41	$115.72	$122.69	
Total of ALL Cost		$739.55	$165.60	$573.95	
NET PROJECTED RETURNS		$40.45	($9.60)	$50.05	

Table 2. Machinery Cost 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	28,416	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	5,850	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	823	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

Table 3. Machinery Cost Calculations

Machine/Vehicle		Unit	COSTS PER HOUR or MILE ----Variable---- Fuel & Lube	Repair & Maint.	------Fixed------ Depr. & Interest	Taxes & Insur.	TOTAL Cost per Hr or Mi	ENTERPRISE Hr or Mi per Acre	----Costs per Acre---- Variable	Fixed	TOTAL
125 HP TRACTOR	#1	$/Hr	$5.65	$3.05	$7.48	$0.91	$17.09	1.04	$9.08	$8.76	$17.84
125 HP TRACTOR	#2	$/Hr	5.65	3.33	6.26	0.76	16.00	1.06	9.55	7.47	17.02
140 HP TRACTOR		$/Hr	6.33	3.80	7.89	0.96	18.78	1.48	14.66	13.07	27.73
250 CC ATV		$/Hr	1.11	0.02	8.03	0.97	10.13	0.02	0.03	0.20	0.23
80 HP TRACTOR		$/Hr	3.61	1.85	4.93	0.63	11.02	0.53	2.91	2.97	5.88
ATV BOOM SPRAYER		$/Hr	0.00	0.70	9.03	0.94	10.67	0.02	0.02	0.22	0.24
BEDDER	12-ROW	$/Hr	0.00	0.96	7.15	0.77	8.88	0.20	0.19	1.58	1.77
BEET DEFOLIATOR	6-ROW	$/Hr	0.00	3.51	5.78	0.58	9.87	0.67	2.34	4.24	6.58
BEET PULLER	4-ROW	$/Hr	0.00	10.32	9.28	1.09	20.69	0.67	6.88	6.91	13.79
CULTIVATOR 12-ROW		$/Hr	0.00	2.96	6.82	0.71	10.49	0.53	1.55	3.95	5.50
CULTIVATOR 6-ROW		$/Hr	0.00	0.33	8.71	0.91	9.95	0.15	0.05	1.44	1.49
DITCHER V-TYPE	3-POINT	$/Hr	0.00	0.30	8.50	1.00	9.80	0.04	0.01	0.34	0.35
END PULLER	3-ROW	$/Hr	0.00	0.04	1.38	0.16	1.58	0.05	0.00	0.08	0.08
FRONT LOADER	2-TON	$/Hr	0.00	0.59	20.46	2.21	23.26	0.03	0.02	0.75	0.77
LEVELER 3-POINT	16 FT	$/Hr	0.00	2.70	7.33	0.83	10.86	0.33	0.90	2.72	3.62
PLANTER	12-ROW	$/Hr	0.00	2.73	10.14	1.02	13.89	0.20	0.55	2.23	2.78
PLOW 2-WAY	4-18'S	$/Hr	0.00	4.27	5.83	0.61	10.71	0.33	1.42	2.15	3.57
REAR BLADE	8 FT	$/Hr	0.00	0.08	3.84	0.44	4.36	0.04	0.00	0.15	0.15
ROLLER HARROW		$/Hr	0.00	2.80	5.27	0.54	8.41	0.41	1.07	2.39	3.46
SPRAYER SADL TNK	20 FT	$/Hr	0.00	1.38	1.23	0.13	2.74	0.29	0.39	0.39	0.78
NURSE TANK	1000 GAL	$/Hr	0.00	0.15	1.08	0.06	1.29	0.32	0.05	0.36	0.41
1/2 TON PICKUP	2WD	$/Mi	0.09	0.05	0.16	0.03	0.33	11.20	1.57	2.13	3.70
1/2 TON PICKUP	4WD	$/Mi	0.09	0.05	0.42	0.05	0.61	11.20	1.57	5.26	6.83
2-TON TRUCK	#1	$/Mi	0.22	0.19	0.57	0.06	1.04	15.18	6.22	9.56	15.78
2-TON TRUCK	#2	$/Mi	0.22	0.19	0.59	0.07	1.07	14.86	6.09	9.81	15.90
3/4 TON PICKUP	2WD	$/Mi	0.09	0.06	0.18	0.04	0.37	11.20	1.68	2.46	4.14
MINI PICKUP		$/Mi	0.06	0.03	0.10	0.02	0.21	11.20	1.01	1.34	2.35
TANDEM TRUCK	#1	$/Mi	0.16	0.25	0.91	0.09	1.41	14.86	6.09	14.86	20.95
TANDEM TRUCK	#2	$/Mi	0.16	0.25	0.91	0.09	1.41	14.86	6.09	14.86	20.95

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