

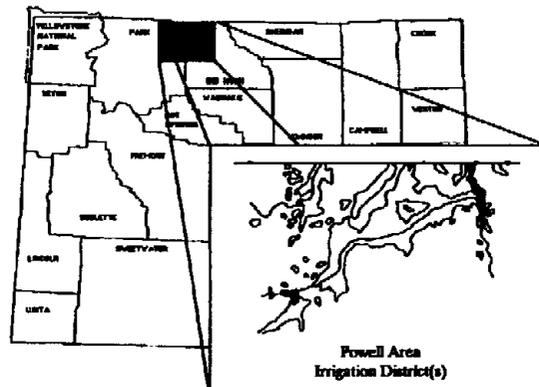
Enterprise Budget

Alfalfa Hay, Baled, Powell Area

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The enterprise budget presented in this report estimates typical costs and returns for alfalfa hay 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 30 acres of alfalfa hay each year. Other enterprises included on this farm are: alfalfa establishment, 10 acres; dry beans, 90 acres; malting barley, 230 acres; and sugar beets, 240 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-half share of gross revenue is paid to the landowner. In turn, the landowner pays for one-half of the fertilizer and insecticide used in the production of 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 percent 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 alfalfa hay. Other machines used elsewhere on the farm are not included in the table. However, the machinery listed may also be used for other enterprises on the farm.

ESTABLISHMENT COSTS

This enterprise budget estimates the cost of alfalfa hay production. The costs of establishing the alfalfa stand are estimated in an alfalfa establishment budget. These establishment costs are included in this enterprise budget as alfalfa stand charges, found in the fixed cost section.

Establishment costs are estimated assuming the stand is established with a nurse crop of malting barley at the rate of 10 acres each year. All costs of establishing a stand of alfalfa are broken down in Table 1.

OPERATIONS

Operations related to alfalfa hay production are listed in chronological order in the enterprise budget. Alfalfa is fertilized early in the spring and irrigated as soon as possible thereafter.

Alfalfa Hay, Baled

Typically, three cuttings are harvested: in mid June, late July, and late September.

The hay is cut and baled in small square bales using owned equipment. However, the bales are stacked by a custom operator. Only the final cutting is assumed to be raked to aid drying. The first two cuttings yield 2 tons per acre, while the third yields 1 ton per acre.

ENTERPRISE BUDGET

Economic costs and returns for alfalfa hay 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 alfalfa hay enterprise is estimated at \$350 per acre. Total variable costs are estimated at \$186.49 per acre, with total fixed costs at \$191.88 per acre. The total of all costs for alfalfa hay is estimated at \$378.37 per acre, leaving a net projected return of (\$28.37) per acre. The net projected returns for the share-lease arrangement are \$4.35 per acre for the landowner and (\$32.72) per acre for the tenant. As shown in Table 1, the cost of establishing the alfalfa stand totals \$13.42 per acre of growing alfalfa each year. These costs are spread over a three-year stand life for 30 acres of growing alfalfa.

Table 1. Alfalfa Establishment Costs Per Acre of Growing Alfalfa

	Owner- Operator	Land owner	Tenant
Alfalfa Seed	\$27.00	\$-----	\$27.00
2, 4-DB Spray (over 2, 4-D used on malt barley)	10.35	5.18	5.17
Irrigate Alfalfa #1	8.17	5.41	2.76
Bale Straw	7.39	-----	7.39
Custom Stack Straw	15.62	-----	15.62
Irrigate Alfalfa #2	8.17	5.41	2.76
Overhead and Management (over malt barley alone)	11.27	-----	11.27
Operating Interest (over malt barley alone)	1.74	-----	1.74
Machinery and Equipment (over malt barley alone)	5.88	-----	5.88
Irrigation (over malt barley alone)	7.17	7.17	-----
TOTAL ESTABLISHMENT COSTS (per acre of growing alfalfa)	\$102.76	\$23.17	\$79.59

$\$102.76/3 \text{ year stand life} = \$34.25/\text{year}$ 10 acres of establishment alfalfa per 30 acres of growing alfalfa
 $(10/30) = 33.33\%$ $\$34.25 * 33.33\% = \$11.42/\text{ac depreciation charge}$.

Depreciation per acre of growing alfalfa \$11.42
 Intermediate Interest + 2.00

TOTAL ESTABLISHMENT COST per acre of growing alfalfa \$13.42

Alfalfa Hay, Baled

**Economic Costs and Returns
Alfalfa Hay, Baled - Powell Area
30-Acre Enterprise**

RETURNS SECTION

GROSS INCOME Description	Quantity	Unit	\$/Unit	Owner-	Land-	Tenant	Your
				Operator	owner	50%	
				100%	50%	Total	Total
				Total	Total	Total	Total
ALFALFA HAY - BALED	5.00	ton	70.00	\$350.00	\$175.00	\$175.00	
Total GROSS Income				\$350.00	\$175.00	\$175.00	

VARIABLE COSTS SECTION

VARIABLE COST Description	Dollars Per Acre		----- M a t e r i a l s -----				Materials				
	LABOR	MACHINERY	Description	# Units Per Acre	Unit Type	\$/unit	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	
1/2 TON PICKUP	1.50	0.99						2.49	----	2.49	
1/2 TON - 4 X 4 PICKUP	1.50	1.01						2.51	----	2.51	
3/4 TON PICKUP	1.50	1.04						2.54	----	2.54	
MINI PICKUP	1.50	0.65						2.15	----	2.15	
LOADER WORK	0.20	0.23						0.43	----	0.43	
GENERAL OVERHEAD								7.61	----	7.61	
OPERATOR MANAGEMENT								15.22	----	15.22	
Total ANNUAL								\$38.65	\$0.00	\$38.65	
GROW 1ST CUT ALF											
SPREAD FERTILIZER Operation	0.59	0.32	11-52-0	0.057	ton	272.00	15.50	16.41	7.75	8.66	
CORRUGATE Operation	0.61	0.81						1.42	----	1.42	
HAUL SPRAY WATER Operation	0.14	0.18						0.32	----	0.32	
SPRAY ALFALFA Operation	1.01	0.65	CYGON 400	0.125	gal	32.20	4.03	5.69	2.02	3.67	
OPEN DITCHES Operation	0.13	0.12						0.25	----	0.25	
IRRIGATE ALFALFA Operation	6.06	0.00	CANVAS DAMS	1.000	acre	0.50	6.11	12.17	5.61	6.56	
			CONCRETE DITCH			4.35					
			DIRT DITCH			0.51					
			GATED PIPE			0.75					
IRRIGATE ALFALFA Operation	2.76	0.00	CONCRETE DITCH			4.35	5.61	8.37	5.61	2.76	
			DIRT DITCH			0.51					
			GATED PIPE			0.75					
SPRAY DITCHES Operation	0.08	0.02	CURTAIL	0.005	gal	27.38	0.14	0.24	0.14	0.10	
Total GROW 1ST CUT ALF								\$44.87	\$21.13	\$23.74	
HARVEST 1ST CUT											
CLOSE DITCHES Operation	0.13	0.12						0.25	----	0.25	
SWATH Operation	1.18	2.19						3.37	----	3.37	
BALE Operation	2.36	2.64	BALING TWINE	0.170	bale	23.30	3.96	8.96	----	8.96	
STACK BALES CUSTOM								12.50	----	12.50	
Total HARVEST 1ST CUT								\$25.08	\$0.00	\$25.08	
GROW 2ND CUT ALF											
OPEN DITCHES Operation	0.13	0.12						0.25	----	0.25	
IRRIGATE ALFALFA Operation	2.76	0.00	CONCRETE DITCH			4.35	5.61	8.37	5.61	2.76	
			DIRT DITCH			0.51					
			GATED PIPE			0.75					

Alfalfa Hay, Baled

VARIABLE COSTS SECTION

VARIABLE COST Description	Dollars Per Acre		M a t e r i a l s				Materials			Your Cost	
	LABOR	MACHINERY	Description	# Units Per Acre	Unit Type	\$/unit	Total Cost Per Acre	Owner-Operator	Land-owner		Tenant
IRRIGATE ALFALFA Operation	2.76	0.00	CONCRETE DITCH			4.35	5.61	8.37	5.61	2.76	
			DIRT DITCH			0.51					
			GATED PIPE			0.75					
SPRAY DITCHES Operation	0.08	0.02	CURTAIL	0.005	gal	27.38	0.14	0.24	0.14	0.10	
Total GROW 2ND CUT ALF								\$17.23	\$11.36	\$5.87	
HARVEST 2ND CUT											
CLOSE DITCHES Operation	0.13	0.12						0.25	----	0.25	
SWATH Operation	1.18	2.19						3.37	----	3.37	
BALE Operation	2.36	2.64	BALING TWINE	0.170	bale	23.30	3.96	8.96	----	8.96	
STACK BALES	CUSTOM							12.50	----	12.50	
Total HARVEST 2ND CUT								\$25.08	\$0.00	\$25.08	
GROW 3RD CUT ALF											
OPEN DITCHES Operation	0.13	0.12						0.25	----	0.25	
IRRIGATE ALFALFA Operation	2.76	0.00	CONCRETE DITCH			4.35	5.61	8.37	5.61	2.76	
			DIRT DITCH			0.51					
			GATED PIPE			0.75					
IRRIGATE ALFALFA Operation	2.76	0.00	CONCRETE DITCH			4.35	5.61	8.37	5.61	2.76	
			DIRT DITCH			0.51					
			GATED PIPE			0.75					
Total GROW 3RD CUT ALF								\$16.99	\$11.22	\$5.77	
HARVEST 3RD CUT											
CLOSE DITCHES Operation	0.13	0.12						0.25	----	0.25	
SWATH Operation	0.88	1.64						2.52	----	2.52	
RAKE HAY Operation	1.34	0.53						1.87	----	1.87	
BALE Operation	1.18	1.32	BALING TWINE	0.080	bale	23.30	1.86	4.36	----	4.36	
STACK BALES	CUSTOM							6.25	----	6.25	
Total HARVEST 3RD CUT								\$15.25	\$0.00	\$15.25	
Operating Interest									3.34	----	3.34
Total VARIABLE COST								\$186.49	\$43.71	\$142.78	
GROSS INCOME minus VARIABLE COST								\$163.51	\$131.29	\$32.22	

Alfalfa Hay, Baled

FIXED COSTS SECTION					
FIXED COST Description	Unit	Owner- Operator	Land- owner	Tenant	Your Cost
Machinery and Equipment:					
Taxes	Acre	2.20	----	2.20	
Insurance	Acre	4.74	----	4.74	
Long-Term Interest	Acre	34.44	----	34.44	
Depreciation	Acre	23.57	----	23.57	
Buildings and Improvements:					
Taxes	Acre	0.78	0.78	----	
Insurance	Acre	1.01	1.01	----	
Long-Term Interest	Acre	10.72	10.72	----	
Depreciation	Acre	3.91	3.91	----	
Irrigation:					
Taxes	Acre	0.63	0.63	----	
Insurance	Acre	1.27	1.27	----	
Long-Term Interest	Acre	13.14	13.14	----	
Depreciation	Acre	7.25	7.25	----	
Land:					
Taxes	Acre	5.50	5.50	----	
Long-Term Interest	Acre	69.30	69.30	----	
Alfalfa Stand:					
Long-Term Interest	Acre	2.00	2.00	----	
Depreciation	Acre	11.42	11.42	----	
Total FIXED Cost		\$191.88	\$126.94	\$64.94	
Total of ALL Cost		\$378.37	\$170.65	\$207.72	
NET PROJECTED RETURNS					
		(\$28.37)	\$4.35	(\$32.72)	

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
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	11	4,508 hr	2,254 hr	322 hr
SWATHER 15 FT	33,690	30,087	11,135	8,887	10	440 hr	220 hr	44 hr
ATV BOOM SPRAYER	2,300	1,932	879	674	8	112 hr	56 hr	14 hr
CORRUGATOR 9-ROW	2,520	1,918	873	567	10	510 hr	255 hr	51 hr
DITCHER V-TYPE 3-POINT	3,550	2,758	1,195	690	12	216 hr	108 hr	18 hr
FRONT LOADER 2-TON	7,323	5,333	2,950	1,575	10	200 hr	100 hr	20 hr
PTO TWINE BALER	14,474	11,742	4,811	3,468	10	270 hr	135 hr	27 hr
REAR BLADE 8 FT	1,090	721	525	180	12	216 hr	108 hr	18 hr
SIDE RAKE 8 FT	3,227	3,136	595	784	12	84 hr	42 hr	7 hr
SPRAYER 3-POINT 28 FT	1,750	1,470	495	513	8	40 hr	20 hr	5 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
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

Table 3. Machinery Cost Calculations

Machine/Vehicle	Unit	COSTS PER HOUR or MILE				TOTAL Cost per Hr or Mi	TOTAL Hr or Mi per Acre	ENTERPRISE Costs per Acre		
		Variable Fuel & Lube	Fixed Repair & Maint.	Depr. & Interest	Taxes & Insur.			Variable	Fixed	TOTAL
125 HP TRACTOR #1	\$/Hr	\$5.65	\$3.05	\$7.48	\$0.91	\$17.09	0.87	\$7.54	\$7.27	\$14.81
125 HP TRACTOR #2	\$/Hr	5.65	3.33	6.26	0.76	16.00	0.35	3.15	2.46	5.61
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	0.31	1.67	1.70	3.37
SWATHER 15 FT	\$/Hr	6.50	6.64	33.04	3.80	49.98	0.46	6.02	16.89	22.91
ATV BOOM SPRAYER	\$/Hr	0.00	0.70	9.03	0.94	10.67	0.02	0.02	0.22	0.24
DITCHER V-TYPE 3-POINT	\$/Hr	0.00	0.30	8.50	1.00	9.80	0.05	0.02	0.51	0.53
FRONT LOADER 2-TON	\$/Hr	0.00	0.59	20.46	2.21	23.26	0.03	0.02	0.76	0.78
PTO TWINE BALER	\$/Hr	0.00	1.70	24.14	2.67	28.51	0.83	1.42	22.34	23.76
REAR BLADE 8 FT	\$/Hr	0.00	0.08	3.84	0.44	4.36	0.05	0.00	0.23	0.23
SIDE RAKE 8 FT	\$/Hr	0.00	0.36	9.85	1.28	11.49	0.22	0.08	2.47	2.55
SPRAYER 3-POINT 28 FT	\$/Hr	0.00	0.35	13.01	1.49	14.85	0.14	0.05	2.07	2.12
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	7.00	0.98	1.33	2.31
1/2 TON PICKUP 4WD	\$/Mi	0.09	0.05	0.42	0.05	0.61	7.00	0.98	3.29	4.27
2-TON TRUCK #1	\$/Mi	0.22	0.19	0.57	0.06	1.04	0.32	0.13	0.20	0.33
3/4 TON PICKUP 2WD	\$/Mi	0.09	0.06	0.18	0.04	0.37	7.00	1.05	1.54	2.59
MINI PICKUP	\$/Mi	0.06	0.03	0.10	0.02	0.21	7.00	0.63	0.84	1.47

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