

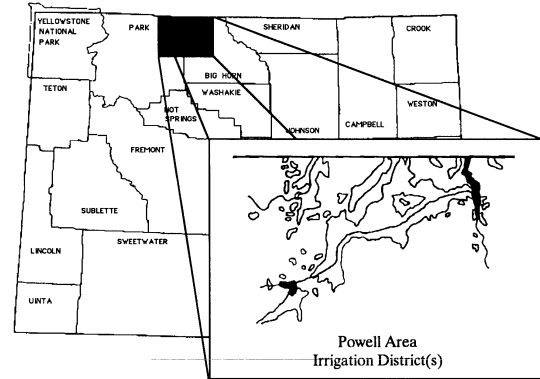
# Crop Enterprise Budget

## Malting Barley, Powell Area

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MP-70R

University of Wyoming - April, 1995



The enterprise budget presented in this report estimates typical costs and returns for malting barley 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 230 acres of malting barley each year. Other enterprises included on this farm are: alfalfa establishment, 10 acres; alfalfa hay, 30 acres; dry beans, 90 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-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.

### 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 1. All resources are assumed to be half depreciated. Estimated operating and ownership costs are given in Table 2. Table 2 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 1 and 2 may also be used in other enterprises on the farm.

### OPERATIONS

Operations related to production of the malting barley crop are listed in chronological order in the enterprise budget. Ground preparation begins in early spring to insure the crop will be ready for irrigation in late April. The crop is typically harvested in late July-early August. Harvesting is completed by first swathing the barley, and then threshing with a combine equipped with a pickup header.

Approximately 4000 bu. (44.5 acres) of the harvested barley is stored for later delivery to the local receiving stations. The balance of the crop is delivered at harvest. Thus, an operation is included for moving the barley into and out of storage.

## ENTERPRISE BUDGET

Economic costs and returns of malting barley 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 malting barley enterprise is estimated at \$265.05 per acre. Total variable costs are estimated at \$199.93 per acre, with total fixed costs at \$150.34 per acre. The total of all costs for malting barley is estimated at \$350.27 per acre, leaving a net projected return of (\$85.22) per acre. The net projected returns for the share-lease arrangement are (\$57.75) per acre for the landowner and (\$27.47) per acre for the tenant.

# Malting Barley

## Economic Costs and Returns Malting Barley - Powell Area 230 Acre Enterprise

RETURNS SECTION			Owner- Operator 100%	Land- owner 33%	Tenant 67%	
GROSS INCOME Description	Quantity	Unit	\$/Unit	Total	Total	Total
MALTING BARLEY	45.00	cwt	5.89	\$265.05	\$88.34	\$176.71
Total GROSS Income				\$265.05	\$88.34	\$176.71

VARIABLE COSTS SECTION										
		M a t e r i a l s				Materials				
VARIABLE COST Description	LABOR	MACHINERY	Description	# Units Per Acre	Unit Type	\$/unit	Total Cost Per Acre	Owner- Operator	Land- owner	Tenant
<b>**ANNUAL**</b>										
METAL SHOP								2.14	----	2.14
MACHINE SHED								0.28	----	0.28
TRAILER HOUSE								3.17	----	3.17
GRAIN BIN #1								0.13	----	0.13
GRAIN BIN #2								0.13	----	0.13
FENCES								0.03	----	0.03
1/2 TON PICKUP	1.20	0.78						1.98	----	1.98
1/2 TON - 4 X 4 PICKUP	1.20	0.82						2.02	----	2.02
3/4 TON PICKUP	1.20	0.80						2.00	----	2.00
MINI PICKUP	1.20	0.52						1.72	----	1.72
LOADER WORK	0.20	0.23						0.43	----	0.43
GENERAL OVERHEAD								7.99	----	7.99
OPERATOR MANAGEMENT								15.99	----	15.99
Total ANNUAL								\$38.01	\$0.00	\$38.01
<b>**PREPLANT-SPRING**</b>										
SPREAD FERTILIZER Operation	0.59	0.32	11-52-0	0.057	ton	291.00	38.90	39.81	12.97	26.84
			34-0-0	0.113	ton	197.50				
FIELD CULTIVATE Operation	1.01	1.59						2.60	----	2.60
ROLLER HARROW Operation	0.76	1.62						2.38	----	2.38
Total PREPLANT-SPRING								\$44.79	\$12.97	\$31.82
<b>**PLANT**</b>										
CROP INSURANCE BARLEY								20.22	6.74	13.48
HAUL BARLEY SEED Operation	0.11	0.10						0.21	----	0.21
PLANT BARLEY Operation	1.77	2.04	BARLEY SEED	0.950	cwt	12.00	11.40	15.21	----	15.21
Total PLANT								\$35.64	\$6.74	\$28.90
<b>**GROW BARLEY**</b>										
CORRUGATE Operation	1.21	1.61						2.82	----	2.82
OPEN DITCHES Operation	0.13	0.12						0.25	----	0.25
PULL ENDS Operation	0.18	0.11						0.29	----	0.29
IRRIGATE BARLEY Operation	6.06	0.00	CANVAS DAMS	1.000	acre	0.50	4.38	10.44	3.88	6.56
			CONCRETE DITCH			3.02				
			DIRT DITCH			0.35				
			GATED PIPE			0.51				
SPRAY BARLEY Operation	0.00	0.00	2,4-D	0.187	gal	13.10	6.20	6.20	----	6.20
			CUSTOM SPRAY	1.000	acre	3.75				
SPRAY DITCHES Operation	0.08	0.02	CURTAIL	0.005	gal	35.38	0.18	0.28	0.18	0.10
IRRIGATE BARLEY Operation	2.76	0.00	CONCRETE DITCH			3.02	3.88	6.64	3.88	2.76
			DIRT DITCH			0.35				
			GATED PIPE			0.51				
IRRIGATE BARLEY Operation	2.76	0.00	CONCRETE DITCH			3.02	3.88	6.64	3.88	2.76
			DIRT DITCH			0.35				
			GATED PIPE			0.51				
SPRAY DITCHES Operation	0.08	0.02	CURTAIL	0.005	gal	35.38	0.18	0.28	0.18	0.10
IRRIGATE BARLEY Operation	2.76	0.00	CONCRETE DITCH			3.02	3.88	6.64	3.88	2.76
			DIRT DITCH			0.35				
			GATED PIPE			0.51				

## Malting Barley

VARIABLE COSTS SECTION				----- M a t e r i a l s -----			Materials				
VARIABLE COST Description	Dollars per Acre		Description	# Units	Unit	Total Cost	Owner-	Land-	Tenant		
	LABOR	MACHINERY		Per Acre	Type	Per Acre	Operator	owner			
IRRIGATE BARLEY	Operation	2.76	0.00	CONCRETE DITCH		3.02	3.88	6.64	3.88	2.76	
				DIRT DITCH		0.35					
				GATED PIPE		0.51					
Total GROW BARLEY								\$47.12	\$19.76	\$27.36	
**HARVEST**											
CLOSE DITCHES	Operation	0.13	0.12					0.25	----	0.25	
SWATH	Operation	0.88						2.51	----	2.51	
THRESH W/ PICKUP	Operation	2.42	11.03					13.45	----	13.45	
HAUL BARLY 2TN#1	Operation	1.40	1.32					2.72	----	2.72	
HAUL BARLY 2TN#2	Operation	1.40	1.35					2.75	----	2.75	
HAUL BARLY TDM#1	Operation	1.40	1.33					2.73	----	2.73	
HAUL BARLY TDM#2	Operation	1.40	1.33					2.73	----	2.73	
Total HARVEST								\$27.14	\$0.00	\$27.14	
**POST-HARVEST**											
AUGER BARLEY	Operation	0.58	0.32					0.90	----	0.90	
Total POST-HARVEST								\$0.90	\$0.00	\$0.90	
Operating Interest									6.33	----	6.33
Total VARIABLE COST								\$199.93	\$39.47	\$160.46	
GROSS INCOME minus VARIABLE COST								\$65.12	\$48.87	\$16.25	

FIXED COSTS SECTION				
FIXED COST Description	Unit	Owner-	Land-	Tenant
		Operator	owner	
Machinery and Equipment:				
Taxes	Acre	1.67	----	1.67
Insurance	Acre	3.46	----	3.46
Long Term Interest	Acre	20.69	----	20.69
Depreciation	Acre	17.89	----	17.89
Buildings and Improvements:				
Taxes	Acre	0.97	0.97	----
Insurance	Acre	1.26	1.26	----
Long Term Interest	Acre	11.86	11.86	----
Depreciation	Acre	4.85	4.85	----
Irrigation:				
Taxes	Acre	0.37	0.37	----
Insurance	Acre	0.73	0.73	----
Long Term Interest	Acre	7.59	7.59	----
Depreciation	Acre	4.19	4.19	----
Land:				
Taxes	Acre	5.50	5.50	----
Long Term Interest	Acre	69.30	69.30	----
Total FIXED Cost		\$150.34	\$106.62	\$43.72
Total of ALL Cost		\$350.27	\$146.09	\$204.18
NET PROJECTED RETURNS		(\$85.22)	(\$57.75)	(\$27.47)

## Malting Barley

TABLE 1. 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
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
COMBINE 150 BU	95,012	62,515	29,104	9,477	18	2,016 hr	1,008 hr	112 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
END PULLER 3-ROW	1,175	628	250	157	12	276 hr	138 hr	23 hr
FIELD CULTIVATOR 18 FT	5,358	4,090	2,425	1,023	12	576 hr	288 hr	48 hr
FRONT LOADER 2-TON	7,323	5,333	2,950	1,575	10	200 hr	100 hr	20 hr
GRAIN DRILL 12 FT	8,516	8,377	2,995	2,474	10	600 hr	300 hr	60 hr
PTO GRAIN AUGER 40' X 6"	1,542	1,754	798	439	12	240 hr	120 hr	20 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
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

## Malting Barley

**TABLE 2. Machinery, Equipment, and Building Cost Calculations**

Machine/Vehicle	Unit	RESOURCE COST PER UNIT OF USE								ENTERPRISE			
		-----Variable-----				-----Fixed-----				Resource Use per Acre	-----Costs per Acre-----		TOTAL
		Fuel and Lube	Operation Labor & Inputs	Repair and Maint.	Hourly Lease	Deprec. and Interest	Taxes and Insurance	TOTAL COST	Variable		Fixed		
125 HP TRACTOR #1	\$/Hr	\$5.56	\$0.00	\$3.05	\$0.00	\$6.93	\$0.91	\$16.45	0.0333	\$0.29	\$0.26	\$0.55	
125 HP TRACTOR #2	\$/Hr	5.56	0.00	3.33	0.00	5.80	0.76	15.45	0.5039	4.48	3.31	7.79	
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	0.4406	2.38	2.29	4.67	
COMBINE 150 BU	\$/Hr	6.94	0.00	20.63	0.00	26.58	3.90	58.05	0.4000	11.03	12.19	23.22	
SWATHER 15 FT	\$/Hr	6.41	0.00	6.64	0.00	30.71	3.80	47.56	0.1250	1.63	4.31	5.94	
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	
CORRUGATOR 9-ROW	\$/Hr	0.00	0.00	0.24	0.00	2.19	0.26	2.69	0.2000	0.05	0.49	0.54	
DITCHER V-TYPE 3-POINT	\$/Hr	0.00	0.00	0.30	0.00	7.96	1.00	9.26	0.0180	0.01	0.16	0.17	
END PULLER 3-ROW	\$/Hr	0.00	0.00	0.04	0.00	1.29	0.16	1.49	0.0250	0.00	0.04	0.04	
FIELD CULTIVATOR 18 FT	\$/Hr	0.00	0.00	1.08	0.00	6.21	0.76	8.05	0.1429	0.15	1.00	1.15	
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	
GRAIN DRILL 12 FT	\$/Hr	0.00	0.00	3.11	0.00	6.04	0.75	9.90	0.2500	0.78	1.70	2.48	
PTO GRAIN AUGER 40' X 6"	\$/Hr	0.00	0.00	0.09	0.00	4.81	0.60	5.50	0.0823	0.01	0.45	0.46	
REAR BLADE 8 FT	\$/Hr	0.00	0.00	0.08	0.00	3.63	0.44	4.15	0.0180	0.00	0.07	0.07	
ROLLER HARROW	\$/Hr	0.00	0.00	2.60	0.00	4.91	0.54	8.05	0.1250	0.33	0.68	1.01	
1/2 TON PICKUP 2WD	\$/Mi	0.09	0.00	0.05	0.00	0.15	0.03	0.32	5.6000	0.78	1.01	1.79	
1/2 TON PICKUP 4WD	\$/Mi	0.09	0.00	0.05	0.00	0.40	0.05	0.59	5.6000	0.78	2.52	3.30	
2-TON TRUCK #1	\$/Mi	0.22	0.00	0.19	0.00	0.54	0.06	1.01	3.5200	1.44	2.11	3.55	
2-TON TRUCK #2	\$/Mi	0.22	0.00	0.19	0.00	0.55	0.07	1.03	3.2700	1.34	2.03	3.37	
3/4 TON PICKUP 2WD	\$/Mi	0.09	0.00	0.06	0.00	0.17	0.04	0.36	5.6000	0.84	1.18	2.02	
MINI PICKUP	\$/Mi	0.06	0.00	0.03	0.00	0.10	0.02	0.21	5.6000	0.50	0.67	1.17	
TANDEM TRUCK #1	\$/Mi	0.16	0.00	0.25	0.00	0.86	0.09	1.36	3.2700	1.34	3.11	4.45	
TANDEM TRUCK #2	\$/Mi	0.16	0.00	0.25	0.00	0.86	0.09	1.36	3.2700	1.34	3.11	4.45	

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