

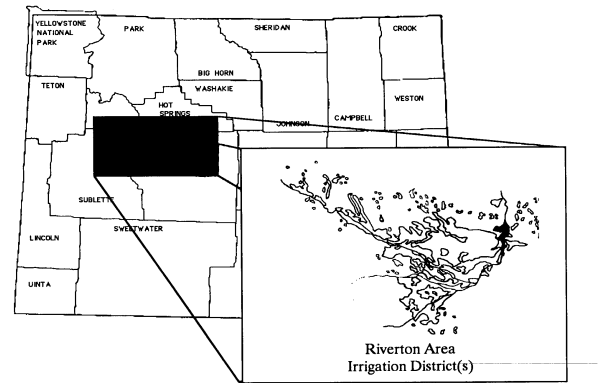
# Crop Enterprise Budget

## Dry Beans, Riverton Area

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This enterprise budget presents estimated typical costs and returns dry beans in the Riverton area of Wyoming. Data presented are not taken from an actual farm situation. A panel of Fremont County producers assisted in outlining the “representative” farm situation described by the budget. Thus, the budget provides a guide to determining costs and returns for specific operations. Production practices presented in the budget are not necessarily “best” management practices. The major assumptions used in this budget are presented below.

### LAND

The budget is based on a 480 acre farm, with 40 acres of dry beans grown each year. Other enterprises included on this farm are: alfalfa establishment, 40 acres; alfalfa hay, 200 acres; sugar beets, 120 acres; feed barley, 50 acres; and 273 head of cattle grazed on crop aftermath. The remaining 30 acres include roadways, fence lines, and farmsteads. All owned land is valued at \$800 per acre. Leased land is rented on a cash-lease basis for \$75 per acre. The land owner pays for irrigation water, taxes, insurance, long term interest, and depreciation for owned land and improvements.

### LABOR

Labor is provided by the operator and one full-time employee. All labor, including operator labor, is valued at \$5 per hour plus 7.65 percent to cover social security and federal withholding taxes. Labor charges for the owner/operator represent an opportunity cost for the time spent in this enterprise. Some part-time labor may be used on the farm for labor-intensive operations such as harvest.

### CAPITAL

The operator provides 50 percent of the long-term capital and 50 percent of the operating capital for this enterprise. Fifty percent of the long-term capital is borrowed at an interest rate of 8.0 percent APR (Annual Percentage Rate). Fifty percent of the operating capital is borrowed at an interest rate of 8.5 percent 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 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 1 and 3 may also be used in other enterprises on the farm.

Each irrigated acre on the farm is assumed to be irrigated by a fraction of the total irrigation system. The irrigation water provided by each irrigation system is broken down as follows: 18 percent concrete ditch and 82 percent gated pipe (50 percent aluminum and 50 percent plastic). This method was employed because crops will normally be rotated onto all farmed land over time. Table 2 presents an estimate of the cost per acre-inch for providing irrigation water for each type of irrigation.

## OPERATIONS

Operations related to dry beans are listed in chronological order in the enterprise budget. Ground preparation begins in early May, including custom fertilization. Beans are usually planted early in the following month, with irrigation starting soon thereafter. A total of 32 acre-inches of water is applied per acre of dry beans. This is applied in four separate irrigations.

The bean crop is insured against weather damage/loss shortly after planting. In addition, two cultivations are budgeted for the growing season. Harvest is scheduled for early September. The beans are first cut and rodweeded and then threshed and hauled to storage. Yield is projected at 22 cwt per acre.

## ENTERPRISE BUDGET

Economic costs and returns for dry beans are summarized by operation in the enterprise budget. Costs are broken down by stage of production. General overhead and operator management have been calculated at 5 percent and 10 percent of all cash costs, respectively.

Costs and returns for the cash lease arrangement are also summarized in the budget. Costs paid/received by the tenant, including the cash land rent are listed in the tenant column. Items paid/received by the landowner, including the cash land rent income are included in the landowner column. The far right column has been provided to calculate changes from this base budget for your operation.

## SUMMARY

Gross income for the dry bean enterprise is estimated at \$398.64 per acre. Total variable costs are estimated at \$188.26 per acre, with total fixed costs at \$150.56 per acre. The total of all costs for dry beans is estimated at \$338.82 per acre, leaving a net projected return of \$59.82 per acre. The net projected returns for the lease arrangement are \$3.81 per acre for the landowner and \$44.76 per acre for the tenant.

# Dry Beans

## Enterprise Budget Economic Costs and Returns per Acre Dry Beans - Riverton Area 40 Acre Enterprise

RETURNS SECTION -----							
GROSS INCOME Description	Quantity	Unit	\$/Unit	Owner-	--- Crop-Share ---		Your
				Operator	Land-	Tenant	
				100%	owner	100%	
				Total	Total	Total	Return
=====	=====	=====	=====	=====	=====	=====	=====
DRY BEANS	22.00	CWT	18.12	\$398.64	\$0.00	\$398.64	
CASH LAND RENT	1.00	ACRE	75.00	----	75.00	0.00	
=====	=====	=====	=====	=====	=====	=====	=====
Total GROSS Income				\$398.64	\$75.00	\$398.64	

VARIABLE COSTS SECTION -----										
VARIABLE COST Description	Dollars per Acre		----- M a t e r i a l s -----				Materials	--- Crop-Share ---		
	LABOR	MACHINERY	Description	# Units	Unit	\$/unit	Total Cost	Owner-	Land-	Your
				Per Acre	Type		Per Acre	Operator	owner	Tenant
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
**ANNUAL**										
METAL SHOP								2.30	----	2.30
LOAFING SHED								0.30	----	0.30
4-WHEELER	3.72	6.58						10.30	----	10.30
1/2 TON PICKUP - 2WD	5.38	1.77						7.15	----	7.15
1/2 TON PICKUP - 4WD	5.38	1.77						7.15	----	7.15
CASH LAND RENT							75.00	----	----	75.00
GENERAL OVERHEAD								6.98	----	10.73
OPERATOR MANAGEMENT								13.97	----	21.47
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Total ANNUAL								\$48.15	\$0.00	\$134.40
**PRE-PLANT SPRING**										
PLOW Operation	1.97	3.95						5.92	----	5.92
ROLLER HARROW Operation	0.85	1.65						2.50	----	2.50
LEVEL Operation	1.18	2.25						3.43	----	3.43
LEVEL Operation	1.18	2.25						3.43	----	3.43
CUSTOM FERTILIZE 50-50-0							20.78	20.78	----	20.78
ROLLER HARROW Operation	0.85	1.65						2.50	----	2.50
SPRAY BEANS Operation	0.39	0.50	SONALAN	0.13	Gal	32.75	4.09	4.98	----	4.98
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Total PRE-PLANT SPRING								\$43.54	\$0.00	\$43.54
**PLANT**										
HAUL SEED Operation	0.27	0.17						0.44	----	0.44
PLANT BEANS Operation	0.99	1.09	BEAN SEED	0.70	Cwt	53.00	37.10	39.18	----	39.18
CROP INSURANCE BEANS							15.44	15.44	----	15.44
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Total PLANT								\$55.06	\$0.00	\$55.06
**GROW**										
LAY GATED PIPE Operation	0.46	0.25						0.71	----	0.71
CONCRETE DITCH	0.32		Purchased Water				0.44	0.76	0.44	0.32
GATED PIPE	0.80		Purchased Water				2.07	2.87	2.07	0.80
CULTIVATE 6-ROW Operation	1.18	1.41						2.59	----	2.59
CULTIVATE 6-ROW Operation	1.18	1.41						2.59	----	2.59
CONCRETE DITCH	0.32		Purchased Water				0.44	0.76	0.44	0.32
GATED PIPE	0.80		Purchased Water				2.07	2.87	2.07	0.80
CONCRETE DITCH	0.32		Purchased Water				0.44	0.76	0.44	0.32
GATED PIPE	0.80		Purchased Water				2.07	2.87	2.07	0.80
CONCRETE DITCH	0.32		Purchased Water				0.44	0.76	0.44	0.32
GATED PIPE	0.80		Purchased Water				2.07	2.87	2.07	0.80
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Total GROW								\$20.41	\$10.04	\$10.37

## Dry Beans

VARIABLE COSTS SECTION -----											
			----- M a t e r i a l s -----				Materials		--- Crop-Share ---		
VARIABLE COST Description	Dollars per Acre		Description	# Units	Unit		Total Cost	Owner-	Land-	Tenant	Your
	LABOR	MACHINERY		Per Acre	Type	\$/unit	Per Acre	Operator	owner		Cost
=====											
**HARVEST**											
PIKUP GATED PIPE Operation	0.46	0.25						0.71	----	0.71	
CUT AND RODWEED Operation	1.48	2.17						3.65	----	3.65	
THRESH BEANS Operation	3.95	5.30						9.25	----	9.25	
HAUL BEANS 2 TON Operation	2.69	1.75						4.44	----	4.44	
-----											
Total HARVEST								\$18.05	\$0.00	\$18.05	
-----											
OPERATING INTEREST							3.05	3.05	----	3.05	
=====											
Total VARIABLE COST								\$188.26	\$10.04	\$264.47	
-----											
GROSS INCOME minus VARIABLE COST								\$210.38	\$64.96	\$134.17	
-----											
FIXED COSTS SECTION -----											
		--- Crop-Share ---									
FIXED COST Description	Unit	Owner-	Land-	Tenant	Your						
		Operator	owner		Cost						
=====											
Machinery and Equipment:											
Taxes	Acre	4.58	----	4.58							
Insurance	Acre	5.21	----	5.21							
Long Term Interest	Acre	33.35	----	33.35							
Depreciation	Acre	46.27	----	46.27							
Buildings and Improvements:											
Taxes	Acre	0.52	0.52	----							
Insurance	Acre	0.24	0.24	----							
Long Term Interest	Acre	4.98	4.98	----							
Depreciation	Acre	4.30	4.30	----							
Irrigation:											
Taxes	Acre	0.34	0.34	----							
Insurance	Acre	0.16	0.16	----							
Long Term Interest	Acre	2.91	2.91	----							
Depreciation	Acre	4.41	4.41	----							
Land:											
Taxes	Acre	4.31	4.31	----							
Long Term Interest	Acre	38.98	38.98	----							
=====											
Total FIXED Cost		\$150.56	\$61.15	\$89.41							
-----											
Total of ALL Cost		\$338.82	\$71.19	\$353.88							
=====											
*****											
NET PROJECTED RETURNS		\$59.82	\$3.81	\$44.76							
*****											

## Dry Beans

TABLE 1. Machinery, Equipment, and Building Value and Use Assumptions

Resource Name	Current List Price	Current Market Value	Salvage Value	Total Defined Annual Use	Useful Life	Remaining Life
=====	=====	=====	=====	=====	=====	=====
100 HP TRACTOR 2WD	\$43,409	\$29,279	\$15,149	986 Hours	7,888 Hours	3,944 Hours
140 HP TRACTOR 2WD	\$55,430	\$31,271	\$7,112	223 Hours	4,460 Hours	2,230 Hours
4-WHEELER 2WD	\$1,729	\$1,127	\$526	1,000 Hours	5,000 Hours	2,500 Hours
COMBINE 80 BU	\$3,986	\$1,996	\$6	27 Hours	1,350 Hours	675 Hours
BEAN CUTTER 6-ROW	\$3,577	\$2,105	\$633	10 Hours	100 Hours	50 Hours
CULTIVATOR 6-RO 30 INCH	\$5,601	\$2,946	\$292	16 Hours	320 Hours	160 Hours
LAND PLANE 12X45 FT	\$8,414	\$4,426	\$439	64 Hours	1,280 Hours	640 Hours
PIPE TRAILER	\$1,213	\$616	\$19	78 Hours	2,340 Hours	1,170 Hours
PLANTER 6-ROW 30 INCH	\$7,124	\$4,055	\$987	7 Hours	84 Hours	42 Hours
PLOW 2-WAY 4-18'S	\$6,143	\$3,232	\$320	54 Hours	1,080 Hours	540 Hours
RODWEEDER 12 FT	\$2,318	\$1,364	\$410	10 Hours	100 Hours	50 Hours
ROLLER HARROW 15 FT	\$7,733	\$4,068	\$403	93 Hours	1,860 Hours	930 Hours
SPRAYER 3-POINT 30 FT	\$2,461	\$1,341	\$221	6 Hours	90 Hours	45 Hours
1/2 TON PICKUP 4WD	\$12,437	\$7,810	\$3,184	10,000 Miles	75,000 Miles	37,500 Miles
2 TON TRUCK	\$10,974	\$6,452	\$1,931	4,730 Miles	50,000 Miles	25,000 Miles
3/4 TON PICKUP 4WD	\$15,315	\$9,618	\$3,921	10,000 Miles	75,000 Miles	37,500 Miles
CONCRETE DITCH	\$2,812	\$1,666	\$520	3,913 Ac-In	39,750 Ac-In	19,875 Ac-In
GATED PIPE	\$51,140	\$27,759	\$5,237	18,180 Ac-In	272,700 Ac-In	136,350 Ac-In
FENCES 3.0 MILES		\$7,207	\$721		30 Years	15 Years
LOAFING SHED 16 x 40		\$5,000	\$500		30 Years	15 Years
METAL SHOP 40 x 80		\$20,000	\$2,000		30 Years	15 Years

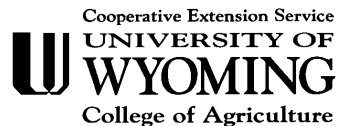
TABLE 2. Irrigation System Costs per Acre-Inch Delivered

	Concrete Ditch	Gated Pipe
Variable Costs		
Repair and Maintenance (Off-Farm).....	\$ - -	\$0.04
Owner Operation Labor.....	0.23	0.08
Purchased Water.....	0.31	0.31
Fixed Costs		
Taxes.....	- - -	0.01
Interest on Investment.....	0.03	0.10
Depreciation.....	0.06	0.15
Insurance.....	- - -	0.01
Total Cost per Acre-Inch of Irrigation Water Delivered.....	\$0.63	\$0.70

## Dry Beans

**TABLE 3. Machinery, Equipment, and Building Cost Calculations**

			-----Variable-----				-----Fixed-----		----- ENTERPRISE -----				
			Fuel	Operation	Repair		Deprec.	Taxes		Resource	Resource		
			Lube	Labor &	Maint.	Hourly	and	and	TOTAL	Use	Costs per Acre-----		
Machine/Vehicle	Unit			Inputs		Lease	Interest	Insurance	COST	per Acre	Variable	Fixed	TOTAL
100 HP TRACTOR	2WD	\$/Hour	\$4.76	\$0.00	\$3.85	\$0.00	\$4.11	\$0.35	\$13.07	1.2515	\$10.78	\$5.58	\$16.36
140 HP TRACTOR	2WD	\$/Hour	6.66	0.00	2.60	0.00	15.23	1.64	26.13	0.7333	6.79	12.37	19.16
4-WHEELER	2WD	\$/Hour	2.27	0.00	1.28	0.00	0.19	0.01	3.75	2.9100	10.33	0.58	10.91
COMBINE	80 BU	\$/Hour	7.51	0.00	0.44	0.00	5.91	0.87	14.73	0.6668	5.30	4.52	9.82
BEAN CUTTER	6-ROW	\$/Hour	0.00	0.00	0.20	0.00	25.68	2.47	28.35	0.2500	0.05	7.04	7.09
CULTIVATOR 6-RO	30 INCH	\$/Hour	0.00	0.00	0.41	0.00	22.06	2.16	24.63	0.4000	0.16	9.69	9.85
LAND PLANE	12X45 FT	\$/Hour	0.00	0.00	2.53	0.00	8.29	0.81	11.63	0.4000	1.01	3.64	4.65
PIPE TRAILER		\$/Hour	0.00	0.00	0.59	0.00	0.80	0.09	1.48	0.0823	0.05	0.07	0.12
PLANTER 6-ROW	30 INCH	\$/Hour	0.00	0.00	0.35	0.00	82.59	6.79	89.73	0.1668	0.06	14.90	14.96
PLOW 2-WAY	4-18'S	\$/Hour	0.00	0.00	3.02	0.00	7.17	0.70	10.89	0.3333	1.01	2.62	3.63
RODWEEDER	12 FT	\$/Hour	0.00	0.00	0.06	0.00	16.64	1.60	18.30	0.2500	0.02	4.56	4.58
ROLLER HARROW	15 FT	\$/Hour	0.00	0.00	1.60	0.00	5.24	0.51	7.35	0.2858	0.46	1.64	2.10
SPRAYER 3-POINT	30 FT	\$/Hour	0.00	0.00	0.53	0.00	30.14	2.62	33.29	0.0668	0.04	2.19	2.23
1/2 TON PICKUP	4WD	\$/Mile	0.07	0.00	0.00	0.00	0.24	0.05	0.36	25.0000	1.75	7.25	9.00
2 TON TRUCK		\$/Mile	0.23	0.00	0.00	0.00	0.35	0.09	0.67	8.2500	1.90	3.63	5.53
3/4 TON PICKUP	4WD	\$/Mile	0.07	0.00	0.00	0.00	0.30	0.06	0.43	25.0000	1.75	9.00	10.75
CONCRETE DITCH		\$/Ac-In	0.00	0.54	0.00	0.00	0.09	0.00	0.63	5.7200	3.09	0.51	3.60
GATED PIPE		\$/Ac-In	0.00	0.39	0.04	0.00	0.25	0.02	0.70	26.5200	11.40	7.16	18.56
FENCES	3.0 MILES	\$/Year	0.00	0.00	0.00	0.00	1,199.24	84.44	1,283.68	0.0020	0.00	2.57	2.57
LOAFING SHED	16 X 40	\$/Year	0.00	0.00	153.80	0.00	688.00	58.58	900.38	0.0020	0.31	1.49	1.80
METAL SHOP	40 X 80	\$/Year	1,000.00	0.00	153.80	0.00	2,752.00	234.33	4,140.13	0.0020	2.31	5.97	8.28



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