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Section I

Irrigated Pasture/Mountain Meadows

Chapter 10

Budget

Rod Sharp

Introduction

This section presents projected costs and returns for raising grass and grass/legume hay in western Colorado. Producers, agricultural lenders, and others should find the budget information helpful when identifying enterprise strengths and weaknesses, adjusting production practices to increase profit, determining financing requirements, making marketing decisions, and resolving numerous other business management problems.

The enterprise data do not represent a particular farm. Instead they represent costs and returns under the specific assumptions adopted for the study.

A blank column is provided on the right-hand side of selected budget tables and may

be used to estimate costs and returns for individual growers. If you need help, consult your local Extension agent and field personnel from private firms for recommendations on field operations and operating inputs.

Sources of Information

These budgets are considered to be representative of a well-managed farm. The quantities and types of inputs, including seed and fertilizers, are based on widely recommended practices. Local farm suppliers provided price information on materials and other services commonly used by producers. Machinery costs are based on current replacement prices and rates of annual use considered to be typical.



Table 1. Estimated Production Costs and Returns for Grass Hay in Western Colorado, 2009.

	Unit	Price or Cost/Unit	Quantity	Value or Cost per Acre	Value or Cost/Unit Production	Your Farm
GROSS RECEIPTS FROM PRODUCTION:						
Grass Hay	TONS	132.00	2.18	287.76	132.00	
TOTAL RECEIPTS				287.76	132.00	
DIRECT COSTS						
Operating Pre-harvest						
FERTILIZER	DOLS	51.70	1.00	51.70	23.72	
FERTILIZER APPLICATION	DOLS	7.00	1.00	7.00	3.21	
MACHINE FUEL AND LUBE	DOLS	4.00	1.00	4.00	1.83	
MACHINE REPAIRS	DOLS	2.00	1.00	2.00	0.92	
INTEREST EXPENSE ¹	DOLS			2.26	1.04	
Total Pre-harvest				66.96	30.72	
Operating Harvest						
FUEL	DOLS			2.12	0.97	
REPAIR & MAINTENANCE	DOLS			7.71	3.54	
LABOR	DOLS			16.00	7.34	
BALING ²	DOLS			46.71	21.43	
HAULING/STACKING ³	DOLS			26.16	12.00	
Total Harvest				98.70	45.28	
Total Operating Costs				165.67	75.99	
Property and Ownership Costs						
MACHINERY OWNERSHIP COSTS	DOLS			15.12	6.94	
GENERAL FARM OVERHEAD	DOLS			10.00	4.59	
REAL ESTATE TAXES	DOLS			10.00	4.59	
Total Property and Ownership Costs				35.12	16.11	
TOTAL DIRECT COSTS				200.79	92.10	
NET RECEIPTS BEFORE FACTOR PAYMENTS				86.97	39.90	
FACTOR PAYMENTS						
LAND @ 4.00%	DOLS			52.00	23.85	
RETURN TO MANAGEMENT AND RISK				34.97	16.04	

¹ Interest on Operating Capital is calculated on ½ of pre-harvest operating costs at 7%

² Baling = \$0.75/Bale (70 lb Bale)

³ Hauling/Stacking = \$12/ton

BREAKEVEN ANALYSIS- PER ACRE RETURNS OVER TOTAL DIRECT COSTS (\$/ACRE)

ALTERNATIVE PRICES

		(\$/TON)				
		-25%	-10%		+10%	+25%
ALTERNATIVE YIELDS	TONS	\$99.00	\$118.80	\$132.00	\$145.20	\$165.00
-25%	1.6	-\$38.92	-\$ 6.55	\$ 15.03	\$ 36.61	\$ 68.99
-10%	1.9	-\$ 6.55	\$ 32.30	\$ 58.20	\$ 84.09	\$122.94
	2.2	\$15.03	\$ 58.20	\$ 86.97	\$115.75	\$158.91
+10%	2.4	\$36.61	\$ 84.09	\$115.75	\$147.40	\$194.88
+25%	2.7	\$68.99	\$122.94	\$158.91	\$194.88	\$248.84

Table 2. Estimated Production Costs and Returns for Grass/Legume Hay in Western Colorado, 2009.

	Unit	Price or Cost/Unit	Quantity	Value or Cost per Acre	Value or Cost/Unit Production	Your Farm
GROSS RECEIPTS FROM PRODUCTION:						
Grass Hay	TONS	136.00	2.60	353.60		
TOTAL RECEIPTS				353.60	136.00	
DIRECT COSTS						
Operating Pre-harvest						
FERTILIZER	DOLS	51.70	1.00	51.70	19.88	
FERTILIZER APPLICATION	DOLS	7.00	1.00	7.00	2.69	
MACHINE FUEL AND LUBE	DOLS	4.00	1.00	4.00	1.54	
MACHINE REPAIRS	DOLS	2.00	1.00	2.00	0.77	
INTEREST EXPENSE ¹	DOLS			2.26	0.87	
Total Pre-harvest	DOLS			66.96	25.76	
Operating Harvest						
FUEL	DOLS			2.12	0.82	
REPAIR & MAINTENANCE	DOLS			7.71	2.97	
LABOR	DOLS			16.00	6.15	
BALING ²	DOLS			55.71	21.43	
HAULING/STACKING ³	DOLS			31.20	12.00	
Total Harvest				112.74	43.36	
Total Operating Costs				179.71	69.12	
Property and Ownership Costs						
MACHINERY OWNERSHIP COSTS	DOLS			15.12	5.82	
GENERAL FARM OVERHEAD	DOLS			10.00	3.85	
REAL ESTATE TAXES	DOLS			10.00	3.85	
Total Property and Ownership Costs				35.12	13.51	
TOTAL DIRECT COSTS				214.83	82.63	
NET RECEIPTS BEFORE FACTOR PAYMENTS				138.77	53.37	
FACTOR PAYMENTS						
LAND @ 4.00%	DOLS			52.00	20.00	
RETURN TO MANAGEMENT AND RISK				86.77	33.37	

¹Interest on Operating Capital is calculated on 1/2 of pre-harvest operating costs at 7%

²Baling = \$0.75/Bale (70 lb Bale)

³Hauling/Stacking = \$12/ton

BREAKEVEN ANALYSIS- PER ACRE RETURNS OVER TOTAL DIRECT COSTS (\$/ACRE)

ALTERNATIVE PRICES

		(\$/TON)				
		-25%	-10%		+10%	+25%
ALTERNATIVE YIELDS	TONS	\$102.00	\$122.40	\$136.00	\$149.60	\$170.00
-25%	1.6	-\$ 15.93	\$ 23.85	\$ 50.37	\$ 76.89	\$116.67
-10%	1.9	\$ 23.85	\$ 71.59	\$103.41	\$135.24	\$182.97
	2.2	\$ 50.37	\$103.41	\$138.77	\$174.13	\$227.17
+10%	2.4	\$ 76.89	\$135.24	\$174.13	\$213.03	\$271.37
+25%	2.7	\$116.67	\$182.97	\$227.17	\$271.37	\$337.67