

Mountain View Farms
J. Parsons, D. Hoag , K. Olson

Mountain View Farms is representative of dryland grain farming operations in the high rainfall areas of Southeastern Idaho. Production practices, costs of production, market prices, weather patterns, and other information used here are based on data from the region in order to provide a realistic setting. The probabilities of risk events and impacts were also calculated using actual data, however slight modifications were sometimes made to maintain the workability and realism of the game.

Mountain View Farms operates 2,000 acres, with 500 acres of contract barley, 300 acres of open market feed barley and 1,200 acres of spring wheat. Normal annual yield is 26 cwt. per acre for malt barley, 17 cwt. per acre for feed barley, and 50 bushels per acre for wheat. Operating costs, including tillage, planting, pesticides, fertilization and harvest are \$196.35 per acre harvested for malt barley, \$123.99 for feed barley and \$225.39 for wheat. When you begin the simulation, there is no grain in inventory. This will also be the case at the end of the simulation as all grains will be sold before calculating your final bank balance. The initial cash market price for malt barley is \$12.00 per cwt.; feed barley is \$9.25 per cwt.; and wheat is \$7.60 per bushel.

Mountain View Farms also runs 100 mother beef cows with annual production costs of \$460 per cow. Calving typically occurs in March-April and weaned calves are sold in October. The Mountain View Farms historically has a 92 percent weaning percentage and replace 15 percent of their cows. This leaves 77 calves (100%-8%-15%) to sell, weighing 540 pounds (for steers and heifers, alike). Cull cows weighing 1,100 pounds are sold at the end of each year for \$52.00 per hundredweight or \$572 per head. The simulation begins with an initial market price for weaned calves at \$110 per hundredweight.

Mountain View Farms expects to sell 60,000 bushels of wheat, 13,000 cwt. of malt barley, 5,100 cwt. of feed barley, 77 weaned calves, and 15 cull cows on an annual basis. Including an annual government payment of \$52,900, this will generate \$766,393 in revenues each year. Mountain View Farms will have \$270,468 in operating expenses for producing 1200 acres of wheat, \$98,175 for producing 500 acres of malt barley, and \$37,197 for producing 300 acres of feed barley. They will also have \$46,000 in operating expenses for the cow herd. Mountain View Farms expects to generate \$314,553 of net cash returns each year to pay ownership costs and provide returns to land, management, and risk.

Malt Barley Production	
Total Crop Land	500 acres
Normal Annual Yield	26 cwt./acre
Production Costs	\$196.35 per acre
Initial Market Price	\$12.00 per cwt.

Feed Barley Production	
Total Crop Land	300 acres
Normal Annual Yield	17 cwt./acre
Production Costs	\$123.99 per acre
Initial Market Price	\$9.25 per cwt.

Wheat Production	
Total Crop Land	1200 acres
Normal Annual Yield	50 bushels/acre
Production Costs	\$225.39 per acre
Initial Market Price	\$7.60 per bushel

Beef Cattle Production	
Quantity	100 head
Production costs per unit	\$460 per cow
Weaning Percentage	92%
Average Net Sale Weight	540 pounds per weaned calf
Initial Market Price	\$110.00 per hundredweight
Replacement percentage	15%
Sale price per cull unit	\$572.00 per cow

Expected Annual Net Farm Income

Expected Revenues

Weaned Calves	77 head = \$45,738
Cull Cows	15 head = \$8,580
Malt Barley	13,000 cwt. = \$156,000
Feed Barley	5,100 cwt. = \$47,175
Wheat	60,000 bushels = \$456,000
Government Payment	\$52,900

Expected Expenses

Wheat	1200 acres = \$270,468
Malt Barley	500 acres = \$98,175
Feed Barley	300 acres = \$37,197
Cows	100 cows = \$46,000

Annual total: \$766,393 Annual total: \$451,840

Gross Returns = \$314,553 per year

DECISIONS

Year 1		
Period 1	Risk and Probability of Occurrence	Impact
Jan. 1 to Mar. 31	<p><u>Winter Conditions</u> Severe Winter (20%) Normal Winter (60%) Mild Winter (20%) <u>Global Crop Production Reports</u> High Wheat and Corn Numbers (10%) Normal Wheat, High Corn Numbers (30%) Normal Wheat and Corn Numbers (50%) Low Wheat and Corn Numbers (10%)</p>	<ul style="list-style-type: none"> In severe winters, weaning percentages decrease due to increased death losses. In a normal winter, prices move in a seasonal pattern. In mild winters, weaning percentages increase due to decreased death losses. <p style="text-align: center;">.....</p> <ul style="list-style-type: none"> High global production numbers will decrease crop prices and increase livestock prices. Low global production numbers will increase crop prices and decrease livestock prices.
Risk Management Strategy Decisions		
<p>Decision 1: Buy Barley Insurance You can choose among six different insurance options for your barley crop including the opportunity to purchase the Option B endorsement for your malt barley crop.</p> <p>Decision 2: Buy Wheat Insurance You can choose among seven different insurance options for your wheat crop.</p>		
Period 2	Risk and Probability of Occurrence	Impact
Apr. 1 to Jun. 30	<p><u>Risk of Late Freeze</u> Late Freeze (12%) No Late Freeze (88%) <u>Barley Condition Report</u> Poor Crop Conditions (17%) Average Crop Conditions (66%) Excellent Crop Conditions (17%)</p>	<ul style="list-style-type: none"> A late freeze is a local weather condition that can severely impact your yield and have a moderate impact on prices. <p style="text-align: center;">.....</p> <ul style="list-style-type: none"> The crop condition report is a national report. Poor crop conditions will increase crop prices and decrease livestock prices. Excellent crop conditions will decrease crop prices and increase livestock prices.
Risk Management Strategy Decisions		
<p>Decision 1: Forward Price Wheat Forward price any quantity of wheat you would like for harvest delivery at the current contract price. Any forward priced wheat must be delivered at harvest. If you forward contract more than you produce, you will purchase what you need at current prices to fulfill the contract.</p> <p>Decision 2: Forward Price Feed Barley Forward price any quantity of feed barley you would like for harvest delivery at the current contract price.</p> <p>Decision 3: Forward Price Calves Forward price any number of head you would like for October delivery at the current contract price. All non-contracted calves will be sold in October on the cash market.</p>		

Period 3	Risk and Probability of Occurrence	Impact
Jul. 1 to Sep. 30	<u>Risk of Late Hail</u> Severe Hail (6%) Scattered Hail damage (17%) No Hail (77%) <u>National Export News</u> Good Export Numbers (15%) Mixed Export Numbers (30%) Average Export Numbers (40%) Poor Export Numbers (15%)	<ul style="list-style-type: none"> Hail is a local weather condition that can severely impact crop yield with a very mild affect on prices. Better than expected export numbers can have a positive influence on prices. Poor export numbers will have a negative influence on prices. Price seasonality trends downward.
Risk Management Strategy Decisions		
Decision 1: Forward Price Wheat Forward price any quantity of wheat you would like for harvest delivery at the current contract price. Decision 2: Forward Price Feed Barley Forward price any quantity of feed barley you would like for harvest delivery at the current contract price. Decision 3: Forward Price Calves Forward price any number of head you would like for October delivery at the current contract price.		
Period 4	Risk and Probability of Occurrence	Impact
Oct. 1 to Dec. 31	<u>U.S. Planted Wheat Acres Report</u> > 75 million acres (25%) 70-75 million acres (50%) < 70 million acres (25%) <u>U.S. Corn Production</u> Record High (20%) Above Average (55%) Average (20%) Below Average (5%)	<ul style="list-style-type: none"> A high number of acres planted to wheat will decrease prices for wheat in anticipation of increases in future supply. Crop prices increase due to normal market price seasonality. A low number of acres planted to wheat will increase prices for wheat in anticipation of decreases in future supply. Crop prices decrease and livestock prices increase when production of a competitive feed alternative (corn) increases. Seasonal effects occur when corn production is as expected. Crop prices increase and livestock prices decrease if corn production falls below expected levels.
Risk Management Strategy Decisions		
Decision 1: Sell Wheat You can sell wheat in inventory at the current cash price. Decision 2: Sell Barley You can sell barley in inventory at the current cash price. Decision 3: Cross Hedge Barley You can cross hedge barley in inventory by using the corn market.		
Year 2		
Period 5	Risk and Probability of Occurrence	Impact
Jan. 1 to Mar. 31	Same as Year 1. Risk Management Strategy Decisions Decision 1: Buy Barley Insurance Decision 2: Buy Wheat Insurance	Same as Year 1.
Period 6	Risk and Probability of Occurrence	Impact
Apr. 1 to Jun. 30	<u>Precipitation Risk</u> Good Precipitation (12%) Average Precipitation (69%) Poor Precipitation (15%) Too Much Precipitation (4%) <u>Barley Condition Report</u> Poor Crop Conditions (17%) Average Crop Conditions (66%) Excellent Crop Conditions (17%)	<ul style="list-style-type: none"> Good precipitation will have a positive impact on crop yields and a negative impact on prices. Poor precipitation will have a negative impact on crop yields and a positive impact on prices. Too much precipitation causes diseases and crop losses. Same as Year 1.

Period 6	Risk Management Strategy Decisions	
Apr. 1 to Jun. 30	Decision 1: Forward Price Wheat Decision 2: Forward Price Feed Barley Decision 3: Forward Price Calves	
Period 7	Risk and Probability of Occurrence	Impact
Jul. 1 to Sep. 30	Same as Year 1.	Same as Year 1.
	Risk Management Strategy Decisions	
	Decision 1: Forward Price Wheat Decision 2: Forward Price Feed Barley Decision 3: Forward Price Calves	
Period 8	Risk and Probability of Occurrence	Impact
Oct. 1 to Dec. 31	Same as Year 1.	Same as Year 1.
	Risk Management Strategy Decisions	
	Decision 1: Sell Wheat Decision 2: Sell Barley Decision 3: Cross Hedge Barley	
Game End	Barley, wheat, and calf inventories are automatically adjusted to zero by selling (or buying) at the ending cash price.	



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