Oasis Ranch

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The **Oasis Ranch** is representative of a cow/calf operation located in southeastern Colorado's Otero County. Production practices, costs of production, market prices, weather patterns, and other information are based on data from the region in order to provide a realistic setting. The probabilities of risk events were also calculated using actual data where available. However, slight modifications and simplifications were sometimes made to maintain the workability and realism of the scenario.

The ranch runs 800 mother beef cows with annual non feed production costs of $238 per cow. Calving typically starts in early March. Calves are weaned in October. Oasis Ranch has historically had a 92 percent weaning percentage and replaces 15 percent of their mother cow herd each year. The ranch also loses an average of ten cows (1.25%) each year due to death loss. Since they raise their own replacements, this leaves 606 calves (75.75% x 800) at an average weight of 550 pounds (steers and heifers) to market each fall as weaned calves. The initial market price for weaned calves is $110.00 per cwt.

Beef Cattle Production

Quantity	800 head
Production costs per unit	$238 per cow
Weaning Percentage	92%
Average Net Sale Weight	550 pounds per weaned calf
Initial Market Price	$110.00 per hundredweight
Replacement percentage	15%
Sale weight per cull unit	1,050 pounds per cow
Net Sale Price	$46.00 per hundredweight
Replacement Heifer Inventory	130 head

Cull cows are sold at the same time as calves are weaned. The cull cows weigh an average of 1,050 pounds and sell for a price of $46.00 per hundredweight. Initially, 130 heifer calves are in inventory as replacements. Non feed costs associated with the replacement heifers and the net cost of replacing 25% of the bulls each year are included in the per cow production costs.

Oasis Ranch has public grazing rights on federal lands that provide 4,780 animal unit months (AUMs) of grazing under normal conditions. Eleven thousand acres of privately deeded land provide approximately 3,630 additional AUMs. The ranch feeds hay an average of three months per year with a total consumption of 1,032 tons per year at an initial cost of $106 per ton.

Weaned calf and cull cow sales would generate $424,590 in annual revenue. Expected expenses would total $383,288 leaving the ranch with an expected annual return to family labor & management of $41,302.

Expected Annual Net Ranch Income

Expected Revenues			Expected Expenses		
Weaned Calves	606 head =	$366,630	Cows	800 head =	$190,400
Cull Cows	120 head =	$57,960	Hay	1032 tons = $109,392	
			Grazing	8410 AUMs = $83,496	
Annual total:		$424,590	Annual total:		$383,288

DECISIONS

YEAR 1

Period 1	Risk and Probability of Occurrence	Impact
Oct. 1 To Mar. 31	Winter SPI Near Normal conditions (55%) Moderately Dry conditions (23%) Severely Dry conditions (15%) Extremely Dry conditions (7%) ********** **Research Button:** SPI info	• During a normal winter, hay prices decrease and calf prices increase due to seasonal trends. • Severely or Extremely dry winter conditions will have a negative impact on range conditions and a positive impact on hay prices compounded by the fact we are dry on Oct. 1. • Dry conditions negatively impact calf prices.
	Risk Management Strategy Decisions	
	Decision 1: Rainfall Insurance Purchase Decide if you want to purchase rainfall insurance for your private range acres. If so, decide how many acres you want to insure in each time period (up to 11,000 acres total) and at what coverage levels.	
Period 2	**Risk and Probability of Occurrence**	**Impact**
Apr. 1 To Jul. 31	April/May SPI Near Normal conditions (70%) Moderately Dry conditions (15%) Severely Dry conditions (12%) Extremely Dry conditions (3%) ********** June/July SPI Near Normal conditions (73%) Moderately Dry conditions (15%) Severely Dry conditions (9%) Extremely Dry conditions (3%)	• During a normal spring, hay prices and calf prices decrease due to seasonal trends. • Dry spring conditions will have a negative impact on forage and range production. Hay prices increases and calf prices decrease due to the smaller feed supply. ********** • During a normal summer, hay prices and calf prices decrease slightly due to seasonal trends. • Dry conditions have a negative impact on forage and range production. The smaller feed supply will positively impact hay prices and negatively impact calf prices.
	Risk Management Strategy Decisions	
	Decision 1: Acquire Additional Grazing As a hedge against poor grazing conditions, you can secure additional private grazing acres at this time. This is a yes/no decision based upon a regional opportunity to rent 800 AUMs. If you say yes, you are committed to pay for them whether or not you end up using them. Decision 2: Buy Hay You can buy in some hay now as a hedge against poor summer grazing conditions.	
Period 3	**Risk and Probability of Occurrence**	**Impact**
Aug. 1 to Sep. 30	August SPI Near Normal conditions (67%) Moderately Dry conditions (20%) Severely Dry conditions (10%) Extremely Dry conditions (3%) ********** September SPI Near Normal conditions (63%) Moderately Dry conditions (25%) Severely Dry conditions (10%) Extremely Dry conditions (2%)	• During a normal late summer, hay prices usually hold steady and calf prices decrease due to seasonal trends. • Dry late summer conditions will have a negative impact on forage and range production. Hay prices increases and calf prices decrease more than normal due to the smaller feed supply. ********** • During a normal early fall, hay prices increase and calf prices decrease due to seasonal trends. • Dry conditions have a negative impact on forage and range production. The smaller feed supply will positively impact hay prices and negatively impact calf prices.

Period 3	Risk Management Strategy Decisions
Aug. 1 to Sep. 30	Decision 1: Acquire Fall Grazing Resource You have another opportunity to add to your grazing resources through a private agreement for 800 AUMs. It will cost a lot more now than it did last period because local grazing is pretty well used up and now you have to truck them to distance pastures or pay a premium for what's left. Decision 2: Buy Hay You can buy hay at current cash prices to increase your available feed resources.

YEAR 2

Period 4	Risk and Probability of Occurrence	Impact
Oct. 1 To Mar. 31	Winter SPI Near Normal conditions (55%) Moderately Dry conditions (23%) Severely Dry conditions (15%) Extremely Dry conditions (7%)	Same as year 1.
	Risk Management Strategy Decisions	
	Decision 1: Rainfall Insurance Purchase Decide if you want to purchase rainfall insurance for your private range acres. If so, decide how many acres you want to insure in each time period (up to 11,000 acres total) and at what coverage levels. Decision 2: Buy Hay You can buy hay at current cash prices to increase your available feed resources. Decision 3: Cull Cows You can adjust your herd size by deciding how many cows to cull.	

Period 5	Risk and Probability of Occurrence	Impact
Apr. 1 To Jul. 31	Same as year 1.	Same as year 1.
	Risk Management Strategy Decisions	
	Decision 1: Acquire Additional Grazing As a hedge against poor grazing conditions, you can secure additional private grazing acres at this time. This is a yes/no decision based upon a regional opportunity to rent 800 AUMs. If you say yes, you are committed to pay for them whether or not you end up using them. Decision 2: Buy Hay You can buy in some hay now as a hedge against poor summer grazing conditions. Decision 3: Sell or buy cow-calf pairs You can adjust your herd size and stocking rate by selling or buying cow-calf pairs.	

Period 6	Risk and Probability of Occurrence	Impact
Aug. 1 to Sep. 30	Same as year 1.	Same as year 1.
	Risk Management Strategy Decisions	
	Same as year 1.	
	Game End	

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