

**Abstract:**

Wildlife is becoming the principal, as opposed to supplemental, enterprise in many South Texas ranches. The trend away from livestock may be detrimental, as most operations will likely need both to survive. This study illustrates the financial implications of management strategies to optimize wildlife habitat and profitability of ranching/hunting operations.

**Introduction:**

Over the past 25 years, wildlife management involving deer and bird hunting has largely resulted from the growth in hunting enthusiasts living in major metropolitan areas acquiring ownership or leasing ranches for hunting purposes. And, over the past decade, many land owners and cattle producers have reduced or eliminated their cattle herds to concentrate more and more on hunting recreation or lease opportunities. But, completely eliminating the livestock enterprise could be going one step too far. Range management experts emphasize there is a need to maintain grazing at adequate livestock stocking rates to help manage proper forage and brush conditions for wildlife. Mechanical and/or chemical brush control can also be used to manage and enhance native wildlife habitat. If done properly, livestock grazing can be an income producing habitat management strategy.

**Data:**

A 2,000-acre model South Texas ranch was used to illustrate the financial impacts of various management strategies. Four scenarios were assumed: 1) hunting plus a 200 head cow-calf operation (1 animal unit to 10 acre stocking rate), 2) hunting plus a 100 head cow-calf operation (1 animal unit to 20 acre stocking rate), 3) hunting only with no cattle, and 4) hunting with stocker leasing income (250 head stockers grazed March-August).

**Methodology:**

10-year financial simulation of returns for a specific enterprise using stochastic commodity prices and yields. The analysis compares the financial performance of the ranch under the four selected management scenarios.

**Results:**

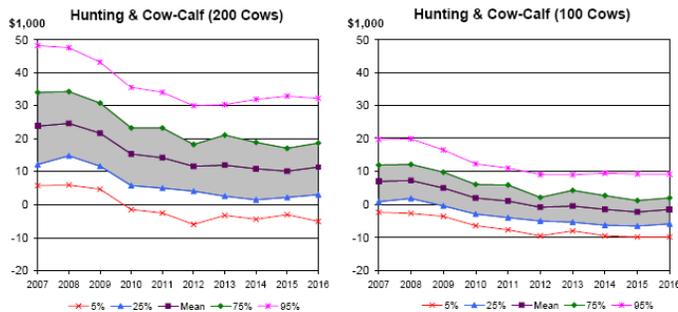
Wildlife management will continue to add to the bottom line of a South Texas ranch and be an integral part of overall operations. Nevertheless, results show that cattle enterprises will likely continue to contribute most significantly to financial well-being of the typical ranching business. The projected results of this study also depict that utilizing cattle to manage forage and brush conditions is a preferable alternative for ensuring business profitability and financial condition. The type of cattle operation and stocking rates will be dependent on location, forage and weather conditions and management preference or business limitations. For example, stocker operations may be attractive to some since the cattle are only on the ranch part of the year and can be gone during the hunting season. Ranch managers can still attain the objectives of excess grass removal, stimulation of forbs, and general habitat improvement. Stockers provide flexibility in that the ranch can easily be de-stocked in case of drought or fully stocked in case of excess forage.

**Table 1: Representative South Texas Ranch Assumptions**

Selected Parameter	Scenarios			
	1-Hunting & Cow-Calf (200 Cows) <sup>1</sup>	2-Hunting & Cow-Calf (100 Cows) <sup>2</sup>	3-Hunting Only	4-Hunting & Stockers
Operator Off-Farm Income	\$24,000/year	Same	Same	Same
Spouse Off-Farm Income	\$35,000/year	Same	Same	Same
Family Living Expense	\$30,000/year	Same	Same	Same
Ownership Tenure	100%	Same	Same	Same
Royalty Income	None	Same	Same	Same
Stocker Leasing Income/Year (Mar-Aug)	N/A	N/A	N/A	\$8/hd./mo.
Hunting Income/Acre/Year	\$7	\$7	\$10	\$10
Deer Stands, Feeders, Feed, etc.	Hunters Provide	Same	Same	Same
Herbicide Costs/Acre	\$1.50	\$3	\$4	\$1.50
Herd Size	200 cows, 8 bulls	100 cows, 4 bulls	N/A	250 head
Calf Weaning Rate	85%	Same	N/A	N/A
Cow Herd Replacement	Bred cows	Same	N/A	N/A
Salt/Mineral blocks/Year	\$15/cow	Same	N/A	\$10.50/head
Hay Fed/Cow/Year	1.5 tons	1.0 tons	N/A	N/A
Protein Cubes Fed/Cow/Year	150 lbs.	100 lbs.	N/A	N/A
Cow Culling Rate/Year	7.50%	Same	N/A	N/A
Steer Weaning Weights	525 lbs.	Same	N/A	N/A
Heifer Weaning Weights	475 lbs.	Same	N/A	N/A
Steer Prices	\$1.20/lb. in 2007	Same	N/A	N/A
Heifer Prices	\$1.10/lb. in 2007	Same	N/A	N/A
Cull Cow Prices	\$.50/lb. in 2007	Same	N/A	N/A
Cull Bull Prices	\$.60/lb. in 2007	Same	N/A	N/A
Bred Cow Prices	\$1,100/head	Same	N/A	N/A
Replacement Bull Prices	\$2,000/head	Same	N/A	N/A
Hay Prices	\$100/ton in 2007	Same	N/A	N/A
Range Cube Prices	\$.142/lb.	Same	N/A	N/A

<sup>1</sup> One animal unit to 10 acres stocking rate.  
<sup>2</sup> One animal unit to 20 acres stocking rate.

**Figure 1. Projected Variability in Net Cash Farm Income for the Hunting with Cow-Calf (200 Cows) and (100 Cows) Scenarios.**



Note: Percentages indicate the probability that Net Cash Farm Income is below the indicated level. The shaded area contains 50% of the projected outcomes.

**Table 2: Financial Projections - Selected Indicators**

Scenarios	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Avg.
<b>Total Cash Receipts (\$1,000)</b>											
1-Hunting & Cow-Calf (200 Cows) <sup>1</sup>	122	123	119	113	110	108	109	109	109	111	113
2-Hunting & Cow-Calf (100 Cows) <sup>2</sup>	68	69	67	64	63	62	63	63	63	64	65
3-Hunting Only	20	20	20	21	21	21	23	23	23	24	22
4-Hunting & Stockers	32	32	32	33	33	33	35	35	35	36	34
<b>Total Cash Costs (\$1,000)</b>											
1-Hunting & Cow-Calf (200 Cows) <sup>1</sup>	98	99	97	97	96	97	98	98	99	100	98
2-Hunting & Cow-Calf (100 Cows) <sup>2</sup>	61	62	62	62	62	63	63	64	65	66	63
3-Hunting Only	32	33	33	34	34	35	35	36	36	37	35
4-Hunting & Stockers	32	32	33	34	34	35	36	36	37	37	35
<b>Net Cash Farm Income (\$1,000)</b>											
1-Hunting & Cow-Calf (200 Cows) <sup>1</sup>	24	25	22	15	14	12	12	11	10	11	16
2-Hunting & Cow-Calf (100 Cows) <sup>2</sup>	7	7	5	2	1	-1	0	-1	-2	-1	-2
3-Hunting Only	-12	-13	-13	-12	-13	-13	-12	-13	-14	-13	-13
4-Hunting & Stockers	0	0	-1	0	-1	-2	-1	-1	-2	-1	-1
<b>Ending Cash Reserves (\$1,000)</b>											
1-Hunting & Cow-Calf (200 Cows) <sup>1</sup>	47	82	117	148	186	221	257	294	331	374	
2-Hunting & Cow-Calf (100 Cows) <sup>2</sup>	36	61	84	106	134	159	186	214	242	274	
3-Hunting Only	21	31	41	53	70	86	104	122	142	165	
4-Hunting & Stockers	31	50	69	89	116	140	167	194	222	254	
<b>Real Net Worth (\$1,000)</b>											
1-Hunting & Cow-Calf (200 Cows) <sup>1</sup>	2,057	2,219	2,283	2,337	2,373	2,414	2,457	2,493	2,525	2,555	
2-Hunting & Cow-Calf (100 Cows) <sup>2</sup>	1,967	2,118	2,175	2,222	2,258	2,295	2,333	2,365	2,392	2,416	
3-Hunting Only	1,864	2,001	2,051	2,091	2,127	2,158	2,193	2,222	2,246	2,265	
4-Hunting & Stockers	1,874	2,019	2,077	2,126	2,168	2,207	2,248	2,283	2,312	2,337	

<sup>1</sup>One animal unit to 10 acres stocking rate.  
<sup>2</sup>One animal unit to 20 acres stocking rate.