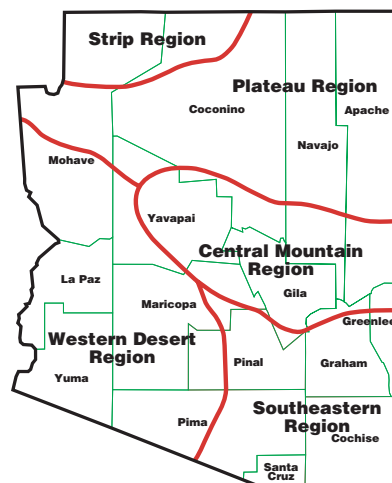




# **Cost and Return Estimates for Cow/Calf Ranches in Five Regions of Arizona**



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**December 2000**

**This study was funded in part by the Cardon Chair of Agribusiness Economics and Policy in the Department of Agricultural and Resource Economics, The University of Arizona.**

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# **Acknowledgments**

The authors would like to acknowledge the following individuals and all of the Arizona ranchers for their input and assistance with this study:

## **Arizona Cooperative Extension Personnel**

Dean Fish, County Director Santa Cruz County

Kim McReynolds, Area Natural Resource Agent (Cochise, Graham, Greenlee)

Michael Schneider, County Director Greenlee County

Robin Grumbles, County Director Mohave County

Dr. Jim Sprinkle, Area Livestock Agent (Coconino, Gila, Yavapai)

# Introduction

The dependency of Arizona ranchers on federal lands has been well documented. Mayes and Archer (1982) estimated that public and state grazing lands outside of the Indian reservations account for 85% of the total grazing land in Arizona. The partnership between private ranchers, state lands, and the federal government comes with many complex factors that influence the cost of doing business both in terms of variable costs and fixed costs. Not only are the regulations, fees, and enforcement of regulations a challenge for managing mixed land ownership, but additional costs from vandalism, theft, and daily disruptions of operations add to the normal operating expenses (Ruyle et al., 2000). Ownership and maintenance of range improvements, such as wells, spring development, and dirt tanks, etc., is also complicated by the rangeland ownership mix. This study is designed to examine the cost of ranching in various areas in Arizona and how different production costs can be throughout the state.

## Objectives

This study looks at the cost and return estimates for typical cow/calf operations in each of the five ranching regions of Arizona (see page 9). Each region was developed based on the typical land ownership pattern associated with an average cow/calf operation within the region. Once the typical ownership patterns were defined and the boundaries were drawn, other characteristics were developed to describe each region. Land ownership is defined by the percentage of federal (BLM & USFS)<sup>1</sup>, state, and private lands grazed by the ranch operation in any given year. This report is intended to serve as a guide to estimate actual costs and is not representative of any particular ranch. For a more in-depth analysis of the rangeland and carrying capacity within any ranching region, go to the following web site:

<http://ag.arizona.edu/agnic/range.html>

## Ranching Regions of Arizona

Each ranching region represented in this study is defined at the beginning of each budget. Included in the descriptions are a map of the identifying geographic boundaries of the region, each region's land ownership pattern, a brief summary of the vegetation and climate characteristics typically found within the region, and a list of the land resource references found within each region.

<sup>1</sup>Bureau of Land Management (BLM) and United States Forest Service (USFS).

# Regional Budget Description

This and the section on Ranch Investments describe the development and structure of the budgets for each region. The budgets contain two pages. The first page, Ranch Budget, lists the main budget information. The second page, Ranch Investments, contains the descriptions of the assets owned by the representative ranch. Six distinct sections comprise the Ranch Budget: 1) Herd Descriptors; 2) Revenues; 3) Variable Costs including feed costs, other variable costs, interest on variable costs, and returns above variable costs; 4) Ownership Costs including cash overhead costs and non-cash overhead costs; 5) Returns above cash and total costs; and 6) Breakeven Analysis. All cost and return estimates were calculated using a high range and a low range for both the total cost and return basis and for the per cow basis. Each area of the budget will be discussed in further detail.

## Herd Descriptions

This section defines the average herd size, calving percentage, culling rate, bull to cow ratio, and number of replacement heifers retained for each ranching region. The numbers were derived from meetings held in each region with local ranchers and University of Arizona Extension personnel. The numbers are perceived averages and should be used as a guide; they are not meant to represent a particular ranch.

## Revenues

Livestock selling prices are averages derived from “Cattle-Fax Feeder Cattle Cash Prices” (CMIS, 1998) report for Arizona covering the past 19 years. To moderate the yearly price swings, high and low ranges were developed around the mean price for each group. The high and low prices represent +/- one standard deviation around the mean price. The livestock weights were obtained from the same ranching groups mentioned in the Herd Descriptor section.

## Variable Costs

Variable costs represent expenses that vary with annual production levels of the ranching operation. For this publication, variable costs are presented under four sub categories.

- a) Feed costs,
- b) Other variable costs,
- c) Interest on variable costs, and
- d) Returns above variable costs.

- a) Feed costs include hay, grazing, salt and mineral, protein supplement, and other. All feed costs except grazing are calculated on the total amount of product consumed per year. Grazing costs are presented on an Animal Unit Yearlong (AUY)<sup>2</sup> basis for public grazing permits for BLM, state, USFS, and private (both owned and leased) rates. Grazing fees are charged for the percentage of time the total number of animals are grazing on each type of permit.
- b) Other variable costs include such items as marketing, hauling, fence repair, hired labor, operating costs on equipment, veterinary supplies and medicine, machinery, and vehicles. Interest on variable cost is the opportunity cost of the capital used in the production process at 10.5% for 8 months.

### **Ownership Costs**

Ownership costs or fixed costs are those costs which do not change with annual production levels. Ownership costs are presented in two categories: cash and non-cash. The cash ownership costs are overhead costs, taxes, insurance, and total Animal Unit (AU) costs of the grazing permits tied to the ranch. The non-cash ownership costs are calculated using the capital recovery method<sup>3</sup> and a detailed list of all assets is presented on the Ranch Investments page. An interest charge on average investment was used and represents the opportunity cost<sup>4</sup> for retaining the livestock. The high value represents 100% owner equity at current replacement value while the low value represents a 65% ownership or a mix of new and old assets.

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<sup>2</sup>An animal unit (AU) is a 1,000-lb cow with calf, or equivalent. An AUY is the amount of forage consumed by one AU in one year.

<sup>3</sup>Annual capital recovery is the method of calculating depreciation and interest recommended by the National Task Force on Commodity Costs and Returns Measurement Methods (AAEA, 1998).

<sup>4</sup>Capital invested in livestock would earn interest or other revenue in alternative investment opportunities. Either the interest paid for the use of the capital or its opportunity costs, in the case that the investment is for savings, should be assigned as a cost for the use of the capital.

# Ranch Investments

The Ranch Investments page defines the typical assets associated with the yearly ranching operation. The table is divided into five sections:

- 1) Land Values,
- 2) Building and Improvements,
- 3) Machinery and Vehicles,
- 4) Purchased Livestock, and
- 5) Retained Livestock.

All asset values are current replacement values.

## Land Values

This section presents the total amount of privately owned land and the estimated number of AUs associated with ranching region herd size. The total number of privately owned lands associated with each area ranch was derived from the same producer panel previously mentioned. The values for both the private land and the ranch AUs represent average values obtained from the *Spring Agricultural Outlook Forum Proceedings* presented by The Arizona Chapter of the American Society of Farm Managers and Rural Appraisers for the year 2000. The total number of AUs was estimated at 1.35 times the total number of AUYS associated with each ranch (Torell et al., 1998). (This is 1.00 AU per cow and .35 AU per calf.)

## Building & Improvements

While building ownership and improvements constitute a large part of the capital investment in the Arizona ranching industry, the actual ownership of range assets depends on the location of the asset. Range assets purchased and installed under a cooperative agreement located on USFS or BLM lands are considered property of the United States and therefore are not part of the individual ranch asset portfolio. Only those assets purchased and installed by the ranch owner on private, state and BLM are considered a ranch asset in this study.

## Machinery & Equipment

The machinery and equipment mix found on each ranch was estimated from the rancher panels for each region. The machinery and equipment costs are taken from the *2000–2001 Arizona Farm Machinery Costs Extension Bulletin* except for horse tack and miscellaneous equipment. Horse tack and miscellaneous equipment costs were estimated from the rancher panels for each region and represent the estimated replacement value for all items.



### **Purchased Livestock**

Bulls and horses are the only livestock listed as purchased in this study. Cows and replacement heifers are raised on the ranch and considered retained livestock. The total number of horses represents the estimated average number of horses on each ranch and the price for an average ranch horse. The total number of bulls is calculated from the cow to bulls ratio listed at the top of the budget page. The price for bulls represents the average price for the replacement of a breeding age animal within each region.

### **Retained Livestock**

The total number of cows and replacement heifers are the same numbers as reported on the Ranch Budget page. The values listed reflect the average value for replacement animals reported within each region. A lower interest rate is used to reflect a low risk investment.

## Findings

The following discussion is centered on the comparisons between each of the ranching regions. The summaries are presented on a dollar per cow basis. The per cow basis was chosen over an AUY basis to focus on the actual decision units found on each of the area ranching operations. In all areas, the ranchers interviewed reported understocking of the actual carrying capacity. This understocking can be attributed to several factors including weather, management, federal and state policies, or any combination of these factors that restrict an individual ranch from utilizing all of its available AUYs.

**Table 1. Production Characteristics of Arizona Ranching Regions**

	Units	Strip	Plateau	Central Mountain	Western Desert	Southeastern Desert
Number of Cows	Head	300	400	300	370	350
Animal Units	AUY	405	540	405	500	525
Replacement Rate	%	10	10	15	10	20
Bull to Cow Ratio	Head	1:15	1:15	1:15	1:15	1:20
Calf Crop	%	72	80	65	72	80
Steer Wt	Lb	500	500	500	450	450
Heifer Wt	Lb	475	475	475	425	425
Cull Cow Wt	Lb	900	900	900	900	900
Cull Bull Wt	Lb	1150	1250	1200	1250	1300

Table 1 presents the common production characteristics for the five ranching regions. Generally, all of the areas have similar characteristics with the main differences occurring in the number of cows, animal units, calf crop percentage, and average calf weights. The Plateau Region reported the largest average herd size at 400 cows. The other regions ranged from 300 cows in the Strip and Central Mountain Regions to 370 and 350 cows in the Western Desert and Southeastern Desert respectively. As expected, the AUYs followed the same pattern as the cow herd size since the number of AUYs is calculated from the total number of cows found on each ranch. The calf crop percentage varied across the regions, ranging from a high of 80 percent in both the Plateau and Southeastern Desert Regions to a low of 65 percent in the Central Mountain Region. Steer calf weights were reported as relatively similar with only a 75-pound difference between the heaviest to the lightest. The Strip, Plateau, and Central Mountain Regions all reported average weights of 500 for steers and 475 for heifers, while the lightest average weights were reported in the Western Desert and Southeastern Desert Regions at 450 for steers and 425 for heifers. It should be noted that although the weights for the remaining areas are similar, the Central Mountain, Plateau and Strip areas generally come closer to being classified as cow/yearling operations and may take an extended period of time to obtain the reported weights. However, in this study we are looking only at the cow/calf operations and the weights are reported as such.

**Table 2. Net Returns for Each Arizona Ranching Region (High Rev/High Cost)**

All values in \$/cow					
	Strip	Plateau	Central Mountain	Western Desert	Southeastern Desert
Revenues	\$312.74	\$331.80	\$265.14	\$276.15	\$274.26
Feed Costs	\$132.91	\$72.50	\$35.49	\$41.31	\$55.78
Total Variable Costs	\$309.49	\$209.05	\$144.05	\$159.65	\$124.80
Cash Ownership	\$21.28	\$172.09	\$41.78	\$87.84	\$22.12
Total Ownership Costs	\$172.01	\$481.23	\$184.63	\$308.37	\$207.55
Returns Above Cash Costs	(\$18.03) <sup>a</sup>	(\$49.34)	\$79.31	\$28.66	\$127.34
Returns Above Total Costs	(\$168.76)	(\$358.48)	(\$63.54)	(\$191.87)	(\$58.09)

<sup>a</sup>Negative values are in parentheses.

Table 2 provides a side by side comparison of the total costs and revenues for each of the regions under the high revenue and high cost scenario. The two cost areas showing the greatest disparities are feed costs and ownership costs. Feed costs varied from a high of \$132.91 per cow in the Strip to a low of \$35.49 per cow in the Central Mountains. The total ownership costs showed a more dramatic divergence with a high of \$481.23 per cow in the Plateau Region and a low of \$172.70 per cow in the Strip Region. The differences between ownership costs and to some degree feed costs stem mainly from the ownership patterns found within each region. The Plateau Region contains the largest percentage of private land while the Strip and Central Mountain Regions have the smallest percentage of private land; they also have the lowest ownership costs. Under the high revenue/high cost scenario, all but the Plateau Region are able to cover all cash costs. However, when non-cash costs are added, all regions reported negative return above total costs.

**Table 3. Net Returns for Each Arizona Ranching Region (Low Rev/Low Cost)**

All values in \$/cow					
	Strip	Plateau	Central Mountain	Western Desert	Southeastern Desert
Revenues	\$223.62	\$236.86	\$190.29	\$197.41	\$196.85
Feed Costs	\$104.41	\$50.39	\$31.18	\$34.60	\$40.36
Total Variable Costs	\$234.67	\$151.58	\$113.75	\$124.57	\$77.79
Cash Ownership	\$13.83	\$111.86	\$27.16	\$57.09	\$14.38
Total Ownership Costs	\$111.04	\$313.13	\$119.88	\$200.27	\$136.23
Returns Above Cash Costs	(\$24.39) <sup>a</sup>	(\$26.58)	\$49.38	\$15.75	\$104.68
Returns Above Total Costs	(\$121.60)	(\$227.85)	(\$43.34)	(\$127.43)	(\$17.17)

<sup>a</sup>Negative values are in parentheses.

The same results are true for the low revenue/low cost scenario (table 3), with only the Plateau Region unable to cover total cash costs and all regions unable to cover total cash and non-cash costs. The budgets for each region give more detailed descriptions of all costs and returns for both the high revenue/high cost scenario and the low revenue/low cost scenario.

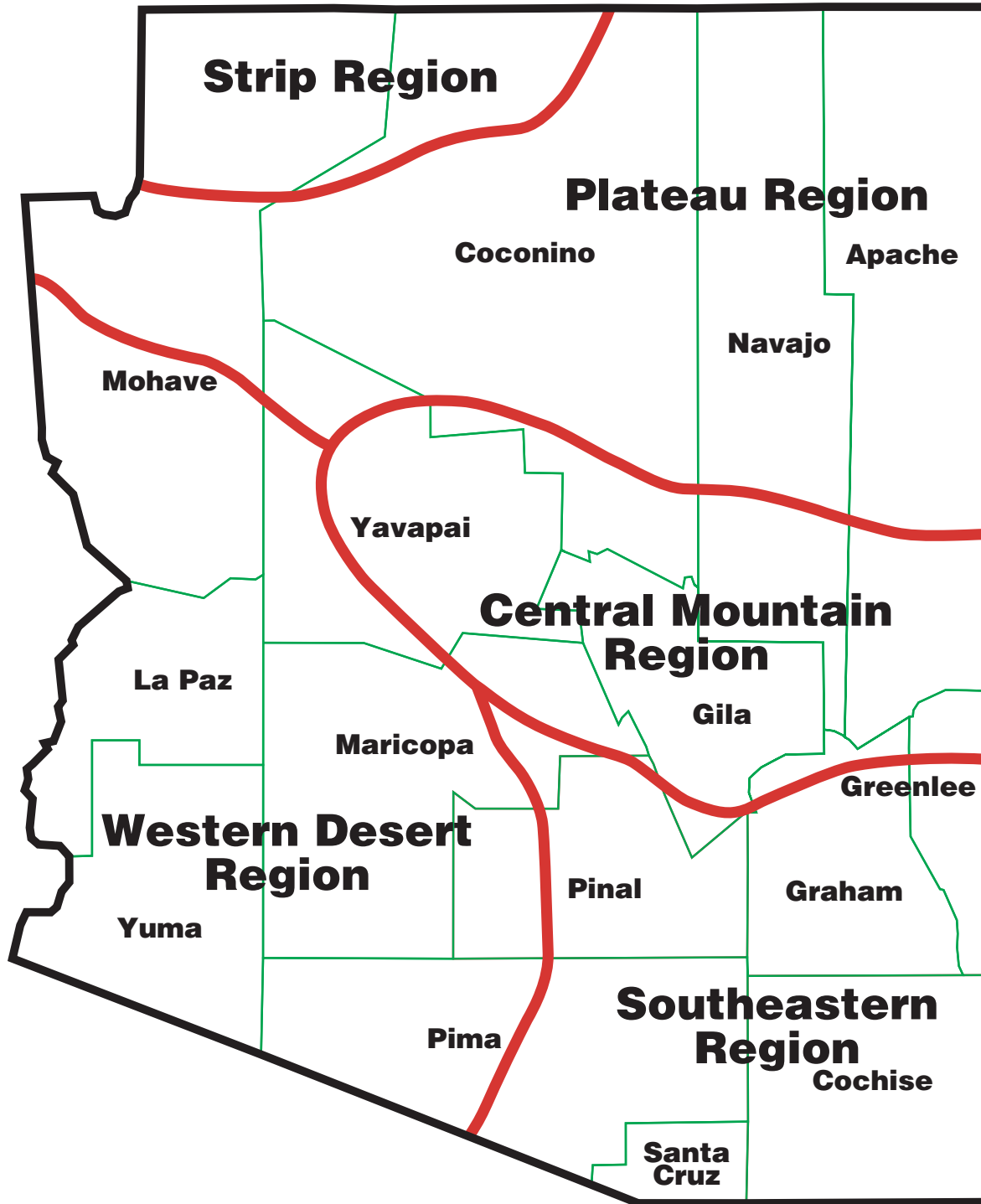
**Table 4. Net Returns for Each Arizona Ranching Region (High Rev/Low Cost)**

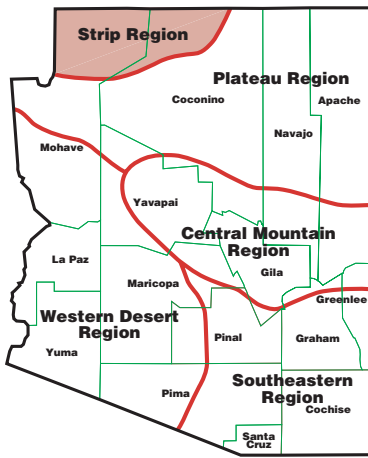
All values in \$/cow	Strip	Plateau	Central Mountain	Western Desert	Southeastern Desert
Revenues	\$312.74	\$331.80	\$265.14	\$276.15	\$274.26
Feed Costs	\$104.41	\$50.39	\$31.18	\$34.60	\$40.36
Total Variable Costs	\$234.67	\$151.58	\$113.75	\$124.57	\$77.79
Cash Ownership	\$13.83	\$111.86	\$27.16	\$57.09	\$14.38
Total Ownership Costs	\$111.04	\$313.13	\$119.88	\$200.27	\$136.23
Returns Above Cash Costs	\$64.73	\$68.36	\$124.23	\$94.49	\$182.09
Returns Above Total Costs	(\$32.48) <sup>a</sup>	(\$132.91)	\$31.51	(\$48.69)	\$60.24

<sup>a</sup>Negative values are in parentheses.

Table 4 presents a ranching operation characterized as high revenue/low cost. This scenario reflects how well each of the ranching regions performs by becoming a low cost producer. Under this scenario, all of the ranching regions are able to cover all cash expenses. After all cash and non-cash expenses are accounted for, only two regions are able to cover all expenses: the Central Mountain Region and the Southeastern Desert Region. From the analysis in tables 3 and 4, it is not enough to be just a low cost producer. Only the combination of high revenues and low costs allowed the regional ranches to return a profit.

# ARIZONA RANCHING REGIONS



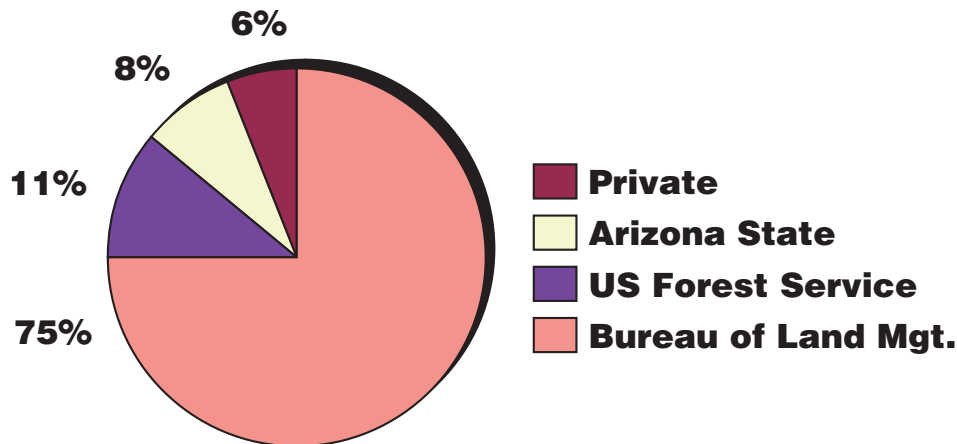


# STRIP REGION

The Strip Region includes that portion of Mojave and Coconino Counties north of the Colorado River. Elevation varies from about 1,000 feet along the Colorado River to over 9,000 feet on the

Kaibab Plateau. Rainfall averages about eight inches, with a low of four inches to a high of 30 on some of the high mountains. Approximately 45% of this precipitation falls from June through September. The remaining 55% falls from October through May. The highest mean monthly temperature is 89° F. while the lowest is 29° F. Vegetation varies from cactus to ponderosa pine. Mesquite, piñon, juniper, sagebrush, four wing saltbush, winterfat, grama grass, galleta, and numerous annuals are also found in the area. The land ownership mix common to this region consists of approximately 75% grazing occurring on Bureau of Land Management (BLM) land, 11% on United States Forest Service (FS) land, 8% on state land, and the remaining 6% on private land. Listed land resource units found within the region are Mohave Basin & Range, Colorado & Green River Plateaus, Arizona Interior Chaparral, and Arizona & New Mexico Mountains.

## STRIP REGION LAND OWNERSHIP



# Strip Region — Cow / Calf Budget

BREED HERD SIZE	300	BULL to COW	15	CALF CROP PERCENTAGE <sup>1</sup>	72%
CULL RATE	10%			REP HEIFERS KEPT	30

## REVENUES

	QUANTITY	WEIGHT	HIGH PRICE <sup>2</sup>	LOW PRICE	HIGH VALUE	LOW VALUE	VALUE PER COW		NEW VALUE
							HIGH	LOW	
Steer Calves	108	500	\$0.88	\$0.64	\$47,520	\$34,560	\$158.40	\$115.20	
Heifer Calves	78	475	\$0.80	\$0.55	\$29,640	\$20,378	\$98.80	\$67.93	
Cull Cows	37	900	\$0.48	\$0.35	\$15,984	\$11,655	\$53.28	\$38.85	
Cull Bulls	1	1150	\$0.59	\$0.43	\$679	\$495	\$2.26	\$1.65	
<b>TOTAL VALUE PRODUCED</b>					\$97,513	\$69,703	\$312.74	\$223.62	

## VARIABLE COSTS

1. FEED COSTS	UNITS	QUANTITY	HIGH PRICE	LOW PRICE	HIGH COST	LOW COST	VALUE PER COW		NEW VALUE
							HIGH	LOW	
Hay	TON	60.00	\$110	\$83	\$6,600	\$4,950	\$22.00	\$16.50	
BLM	AUY	75%	\$16.20	\$16.20	\$4,325	\$4,325	\$14.42	\$14.42	
State	AUY	8%	\$25.08	\$25.08	\$714	\$714	\$2.38	\$2.38	
USFS	AUY	11%	\$16.20	\$16.20	\$634	\$634	\$2.11	\$2.11	
Private (Owned)	AUY	6%	\$0.00	\$0.00	\$0	\$0	\$0.00	\$0.00	
Private (Leased Grazing)	AUY	0%	\$96.00	\$48.00	\$0	\$0	\$0.00	\$0.00	
Salt & Mineral	TON	120.00	\$230	\$173	\$27,600	\$20,700	\$92.00	\$69.00	
Protein Supplement	TON	0.00	\$0	\$0	\$0	\$0	\$0.00	\$0.00	
Other		0.00	\$0	\$0	\$0	\$0	\$0.00	\$0.00	
<b>SUBTOTAL FEED COSTS</b>					\$39,874	\$31,324	\$132.91	\$104.41	

## 2. OTHER VARIABLE COSTS

	HIGH PRICE	LOW PRICE	HIGH COST	LOW COST	VALUE PER COW		NEW VALUE
					HIGH	LOW	
Vet and Medicine			\$3,000	\$2,250	\$10.00	\$7.50	
Livestock Hauling			\$4,500	\$3,375	\$15.00	\$11.25	
Fence Repair			\$5,000	\$3,750	\$16.67	\$12.50	
Hired Labor			\$14,000	\$10,500	\$46.67	\$35.00	
Operating Costs—Equipment			\$3,500	\$2,625	\$11.67	\$8.75	
Operating Costs—Machinery			\$1,200	\$900	\$4.00	\$3.00	
Operating Costs—Vehicles			\$3,500	\$2,625	\$11.67	\$8.75	
Ranch Maintenance			\$600	\$450	\$2.00	\$1.50	
Marketing Costs <sup>3</sup>	\$25.00	\$15.00	\$5,600	\$3,360	\$18.67	\$11.20	
Other			\$6,000	\$4,500	\$20.00	\$15.00	
<b>SUBTOTAL OTHER VARIABLE COSTS</b>			\$46,900	\$34,335	\$156.33	\$114.45	

## 3. INTEREST ON VARIABLE COSTS

Sum of Variable Costs X Months Borrowed X Interest Rate per Month							
Annual Interest Rate			10.5%				
Number of Months Borrowed			8				
<b>INTEREST COSTS</b>			\$6,074	\$4,596	\$20.25	\$15.32	
<b>TOTAL VARIABLE COSTS</b>			\$92,848	\$70,255	\$309.49	\$234.18	
<b>RETURNS ABOVE VARIABLE COSTS</b>			\$974	(\$3,168)	\$3.25	(\$10.56)	

## OWNERSHIP COSTS

Annual Capital Recovery <sup>4</sup> (At Replacement Value): Represents 65% Asset Ownership <sup>5</sup> 35.0%							
1. CASH COSTS			HIGH	LOW	VALUE PER COW		NEW VALUE
Taxes & Insurance			\$3,883	\$2,524	\$12.94	\$8.41	
Overhead			\$2,500	\$1,625	\$8.33	\$5.42	
<b>Total Fixed Cash</b>			\$6,383	\$4,149	\$21.28	\$13.83	
2. NON CASH COSTS							
Purchased Livestock			\$6,327	\$4,113	\$21.09	\$13.71	
Machinery & Equipment			\$16,537	\$10,749	\$55.12	\$35.83	
Housing & Improvements			\$6,966	\$4,528	\$23.22	\$15.09	
Interest on Retained Livestock <sup>6</sup>			\$15,330	\$9,964	\$51.10	\$33.21	
Management & Operation Labor (6% of gross returns)			\$58	(\$190)	\$0.19	(\$0.63)	
<b>Total Fixed Non-Cash</b>			\$45,219	\$29,164	\$150.73	\$97.21	
<b>TOTAL FIXED COSTS Cash &amp; Non Cash</b>			\$51,602	\$33,313	\$172.01	\$111.04	
<b>TOTAL FIXED CASH COSTS AND VARIABLE COSTS</b>			\$99,232	\$74,404	\$330.77	\$248.01	
<b>TOTAL FIXED COSTS AND VARIABLE COSTS</b>			\$144,450	\$103,568	\$481.50	\$345.23	
<b>RETURNS ABOVE TOTAL CASH COSTS</b>			(\$5,409)	(\$7,317)	(\$18.03)	(\$24.39)	
<b>RETURNS ABOVE TOTAL COSTS</b>			(\$50,628)	(\$36,481)	(\$168.76)	(\$121.60)	

## BREAKEVEN CALCULATIONS

	HIGH PRICES				LOW PRICES			
	HIGH VARIABLE COSTS	HIGH TOTAL COSTS	LOW VARIABLE COSTS	LOW TOTAL COSTS	HIGH VARIABLE COSTS	HIGH TOTAL COSTS	LOW VARIABLE COSTS	LOW TOTAL COSTS
Required Avg. Calf Prices								
Cash Cost (cwt)	\$88.17	\$94.24	\$66.72	\$70.66	\$88.17	\$94.24	\$66.72	\$70.66
Required Avg. Calf Prices								
Total Costs (cwt)	\$88.17	\$137.18	\$66.72	\$98.36	\$88.17	\$137.18	\$66.72	\$98.36

1) Calf crop is defined as the actual number of calves sold divided by the total number of cows (assumption being all cows are exposed).

2) Prices represent a nineteen-year Arizona average price received +/- 1 Standard Deviation. Data from Cattle Fax report for Arizona feeder cattle cash prices.

3) Marketing prices include commissions, brand inspections, beef council, yardage, feed, and insurance.

4) Annual capital recovery is the method of calculating depreciation and interest recommended by the *Commodity Costs and Returns Estimation Handbook*.

5) The 35% reduction in asset values which represent a mix of new and used machinery.

6) Interest on average investment.

# Strip Region — Ranch Investments

Number	Land Values	Price per Unit	10-Year Avg. <sup>2</sup> Rate of Return	Purchase Price	Salvage/Cull Value	Useful Life	Livestock Share	Annual Taxes & Insurance	Annual Capital Recovery
75	Acres of private land	\$500	3.9%	\$37,500	\$37,500			\$864.00	
405	AU Values <sup>1</sup>	\$1,200	3.9%	\$486,000	\$486,000				
	<b>Sub Total</b>			<b>\$523,500</b>					
	<b>Buildings, Improvements</b>				<b>Salvage</b>				
1	Miles of pipeline	\$2,500	3.9%	\$2,500	\$250	25	100	\$22	\$152
1	Wells	\$12,300	3.9%	\$12,300	\$1,230	25	100	\$108	\$749
2	Miles of Fence	\$9,000	3.9%	\$18,000	\$1,800	20	100	\$158	\$1,252
0	Dirt Tanks	\$15,000	3.9%	\$0	\$0	10	100	\$0	\$0
2	Corrals/Working Facilities	\$26,000	3.9%	\$52,000	\$5,200	30	100	\$458	\$2,876
1	Barns & Shops	\$35,000	3.9%	\$35,000	\$3,500	30	100	\$308	\$1,936
	<b>Sub Total</b>			<b>\$119,800</b>				<b>\$1,918</b>	<b>\$6,966</b>
	<b>Machinery &amp; Vehicles</b>				<b>Salvage</b>				
1	1/2 ton pickup 4WDs	\$20,700	10.0%	\$20,700	\$4,140	7	50	\$91	\$1,908
1	3/4 ton pickup 4WDs	\$23,700	10.0%	\$23,700	\$4,740	7	75	\$156	\$3,276
1	Dozer/Tractors	\$10,000	10.0%	\$10,000	\$2,000	7	100	\$88	\$1,843
2	Gooseneck trailers	\$6,500	10.0%	\$13,000	\$2,600	7	100	\$114	\$2,396
1	Water trucks	\$28,000	10.0%	\$28,000	\$5,600	7	100	\$246	\$5,161
1	Horse tack	\$5,000	10.0%	\$5,000	\$1,000	10	100	\$44	\$751
1	Misc. equipment	\$8,000	10.0%	\$8,000	\$1,600	10	100	\$70	\$1,202
	<b>Sub Total</b>			<b>\$108,400</b>				<b>\$811</b>	<b>\$16,537</b>
	<b>Purchased Livestock</b>				<b>Cull</b>				
6	Horses	\$1,500	8.0%	\$9,000	\$3,420	10	100	\$79	\$1,105
20	Bulls	\$1,200	8.0%	\$24,000	\$9,120	4	100	\$211	\$5,222
	<b>Total AUYS</b>			<b>\$33,000</b>				<b>\$290</b>	<b>\$6,327</b>
	<b>Retained Livestock</b>				<b>Cull</b>			<b>Interest on Investment</b>	
300	Cows	\$750	8.0%	\$225,000	\$85,500			\$14,194	
30	Replacement Heifers	\$600	8.0%	\$18,000	\$6,840			\$1,136	
	<b>Total AUYS</b>			<b>\$243,000</b>	<b>\$92,340</b>			<b>\$15,330</b>	
	<b>Total</b>			<b>\$1,027,700</b>				<b>\$3,883</b>	<b>\$29,830</b>

1) AU Numbers represent 1.35 times the total numbers of cows. This number should not be compared to the AU number on the budget page.

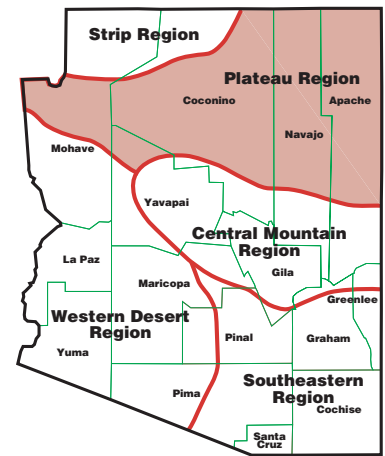
2) The interest rate of 3.9% used to calculate the capital recovery cost is the USDA-ERS's ten year average long-run rate of return to production assets for Arizona.

3) For intermediate assets an interest rate of 2% above prime is used.

4) The eight percent reflects a typical return on a low-risk investment (30 YR Treasury Bond)

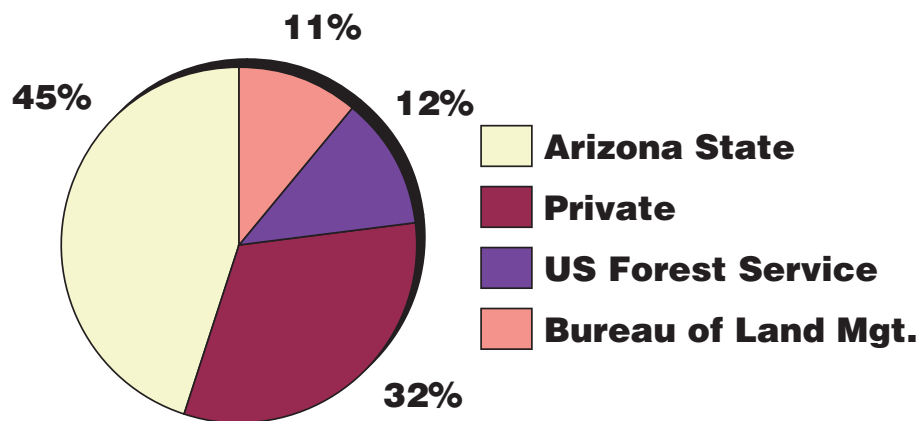


# PLATEAU REGION



The Plateau Region includes Apache and Navajo Counties north and east of the Sitgreaves and the Apache National Forests but excluding the Navajo Reservation. That portion of Coconino and Mohave Counties south of the Colorado River and north of the Sitgreaves, Coconino, and Kaibab National Forests is also in the Plateau area. Elevation varies from about 4,000 feet along the Little Colorado River to 12,670 feet on Humphreys Peak north of Flagstaff. Rainfall averages about 14 inches per year, with a low of six inches to a high of 30 on some of the higher mountains. Approximately 50% of this precipitation falls from June through September. The remaining 50% falls from October through May. The highest mean monthly temperature is 77° F. while the lowest is 29° F. Common vegetation found in this area ranges from Ponderosa pine, spruce, fir, piñon, juniper, four wing saltbush, winterfat, and sagebrush to several species of grama and wheatgrass, Indian ricegrass, and galleta. The land ownership mix common to this region consists of approximately 45% grazing occurring on state land, 32% on private land, 12% on United States Forest Service (FS) land, and the remaining 11% on Bureau of Land Management (BLM) land. Listed land resource units found within the region are Mohave Basin & Range, Colorado & Green River Plateaus, New Mexico & Arizona Plateaus & Mesas, Arizona Interior Chaparral, and Arizona & New Mexico Mountains.

## PLATEAU REGION LAND OWNERSHIP



# Plateau Region — Cow / Calf Budget

BREED HERD SIZE	400	BULL to COW	15	CALF CROP PERCENTAGE <sup>1</sup>	80%
CULL RATE	10%			REP HEIFERS KEPT	40

## REVENUES

	QUANTITY	WEIGHT	HIGH PRICE <sup>2</sup>	LOW PRICE	HIGH VALUE	LOW VALUE	VALUE PER COW HIGH	LOW	NEW VALUE
Steer Calves	160	500	\$0.88	\$0.64	\$70,400	\$51,200	\$176.00	\$128.00	
Heifer Calves	120	475	\$0.80	\$0.55	\$45,600	\$31,350	\$114.00	\$78.38	
Cull Cows	37	900	\$0.48	\$0.35	\$15,984	\$11,655	\$39.96	\$29.14	
Cull Bulls	1	1250	\$0.59	\$0.43	\$738	\$538	\$1.84	\$1.34	
<b>TOTAL VALUE PRODUCED</b>					<b>\$132,722</b>	<b>\$94,743</b>	<b>\$331.80</b>	<b>\$236.86</b>	

## VARIABLE COSTS

	UNITS	QUANTITY	HIGH PRICE	LOW PRICE	HIGH COST	LOW COST	VALUE PER COW HIGH	LOW	NEW VALUE
<b>1. FEED COSTS</b>									
Hay	TON	45.00	\$110	\$83	\$4,950	\$3,713	\$12.38	\$9.28	
BLM	AUY	11%	\$16.20	\$16.20	\$849	\$849	\$2.12	\$2.12	
State	AUY	45%	\$25.08	\$25.08	\$5,380	\$5,380	\$13.45	\$13.45	
USFS	AUY	12%	\$16.20	\$16.20	\$927	\$927	\$2.32	\$2.32	
Private (Owned)	AUY	22%	\$0.00	\$0.00	\$0	\$0	\$0.00	\$0.00	
Private (Leased Grazing)	AUY	10%	\$144.00	\$48.00	\$6,864	\$2,288	\$17.16	\$5.72	
Salt & Mineral	TON	11.00	\$230	\$125	\$2,530	\$1,375	\$6.33	\$3.44	
Protein Supplement	TON	30.00	\$250	\$188	\$7,500	\$5,625	\$18.75	\$14.06	
Other		0.00	\$0	\$0	\$0	\$0	\$0.00	\$0.00	
<b>SUBTOTAL FEED COSTS</b>					<b>\$29,000</b>	<b>\$20,156</b>	<b>\$72.50</b>	<b>\$50.39</b>	
<b>2. OTHER VARIABLE COSTS</b>									
Vet and Medicine					\$2,500	\$1,500	\$6.25	\$3.75	
Livestock Hauling					\$2,500	\$1,500	\$6.25	\$3.75	
Hired Labor					\$24,000	\$18,000	\$60.00	\$45.00	
Operating Costs—Equipment					\$2,500	\$1,875	\$6.25	\$4.69	
Operating Costs—Machinery					\$900	\$675	\$2.25	\$1.69	
Operating Costs—Vehicles					\$4,600	\$3,450	\$11.50	\$8.63	
Ranch Maintenance					\$1,200	\$900	\$3.00	\$2.25	
Marketing Costs <sup>3</sup>			\$25.00	\$20.00	\$7,950	\$6,360	\$19.88	\$15.90	
Other					\$3,000	\$2,250	\$7.50	\$5.63	
<b>SUBTOTAL OTHER VARIABLE COSTS</b>					<b>\$49,150</b>	<b>\$36,510</b>	<b>\$122.88</b>	<b>\$91.28</b>	
<b>3. INTEREST ON VARIABLE COSTS</b>									
Sum of Variable Costs X Months Borrowed X Interest Rate per Month									
Annual Interest Rate					10.5%				
Number of Months Borrowed					8				
<b>INTEREST COSTS</b>					\$5,470	\$3,967	\$13.68	\$9.92	
<b>TOTAL VARIABLE COSTS</b>					\$83,620	\$60,633	\$209.05	\$151.58	
<b>RETURNS ABOVE VARIABLE COSTS</b>					\$49,101	\$34,110	\$122.75	\$85.27	

## OWNERSHIP COSTS

Annual Capital Recovery <sup>4</sup> (At Replacement Value): Represents 65% Asset Ownership <sup>5</sup> 35.0%									
					HIGH	LOW	VALUE PER COW HIGH	LOW	NEW VALUE
<b>1. CASH COSTS</b>									
Taxes & Insurance					\$64,834	\$42,142	\$162.09	\$105.36	
Overhead					\$4,000	\$2,600	\$10.00	\$6.50	
<b>Total Fixed Cash</b>					<b>\$68,834</b>	<b>\$44,742</b>	<b>\$172.09</b>	<b>\$111.86</b>	
<b>2. NON CASH COSTS</b>									
Purchased Livestock					\$12,934	\$8,407	\$32.34	\$21.02	
Machinery & Equipment					\$16,237	\$10,554	\$40.59	\$26.38	
Housing & Improvements					\$71,103	\$46,217	\$177.76	\$115.54	
Interest on Retained Livestock <sup>6</sup>					\$20,440	\$13,286	\$51.10	\$33.21	
Management & Operation Labor (6% of gross returns)					\$2,946	\$2,047	\$7.37	\$5.12	
<b>Total Fixed Non-Cash</b>					<b>\$123,660</b>	<b>\$80,510</b>	<b>\$309.15</b>	<b>\$201.28</b>	
<b>TOTAL FIXED COSTS Cash &amp; Non Cash</b>					<b>\$192,494</b>	<b>\$125,252</b>	<b>\$481.23</b>	<b>\$313.13</b>	
<b>TOTAL FIXED CASH COSTS AND VARIABLE COSTS</b>					\$152,454	\$105,375	\$381.14	\$263.44	
<b>TOTAL FIXED COSTS AND VARIABLE COSTS</b>					<b>\$276,114</b>	<b>\$185,885</b>	<b>\$690.28</b>	<b>\$464.71</b>	
<b>RETURNS ABOVE TOTAL CASH COSTS</b>					(\$19,733)	(\$10,633)	(\$49.33)	(\$26.58)	
<b>RETURNS ABOVE TOTAL COSTS</b>					(\$143,392)	(\$91,143)	(\$358.48)	(\$227.86)	

## BREAKEVEN CALCULATIONS

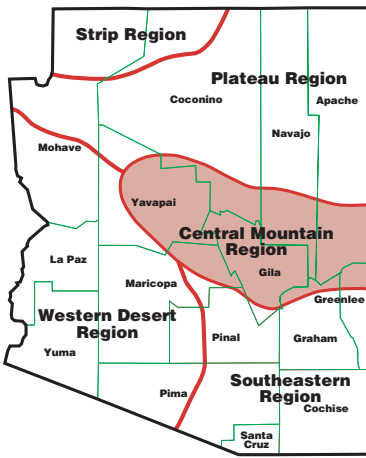
	HIGH PRICES				LOW PRICES			
	HIGH VARIABLE COSTS	HIGH TOTAL COSTS	LOW VARIABLE COSTS	LOW TOTAL COSTS	HIGH VARIABLE COSTS	HIGH TOTAL COSTS	LOW VARIABLE COSTS	LOW TOTAL COSTS
Required Avg. Calf Prices Cash Cost (cwt)	\$53.60	\$97.73	\$38.87	\$67.55	\$53.60	\$97.73	\$38.87	\$67.55
Required Avg. Calf Prices Total Costs (cwt)	\$53.60	\$177.00	\$38.87	\$119.16	\$53.60	\$177.00	\$38.87	\$119.16

- 1) Calf crop is defined as the actual number of calves sold divided by the total number of cows (assumption being all cows are exposed).
- 2) Prices represent a nineteen-year Arizona average price received +/- 1 Standard Deviation. Data from Cattle Fax report for Arizona feeder cattle cash prices.
- 3) Marketing prices include commissions, brand inspections, beef council, yardage, feed, and insurance.
- 4) Annual capital recovery is the method of calculating depreciation and interest recommended by the *Commodity Costs and Returns Estimation Handbook*.
- 5) The 35% reduction in asset values which represent a mix of new and used machinery.
- 6) Interest on average investment.

# Plateau Region — Ranch Investments

Number	Land Values	Price per Unit	10-Year Avg. <sup>2</sup> Rate of Return	Purchase Price	Salvage/Cull Value	Useful Life	Livestock Share	Annual Taxes & Insurance	Annual Capital Recovery
1500	Acres of private land	\$815	3.9%	\$1,222,500	\$1,222,500			\$28,166.40	
540	AU Values <sup>1</sup>	\$850	3.9%	\$459,000	\$459,000				
	<b>Sub Total</b>			<b>\$1,681,500</b>					
<b>Buildings, Improvements</b>									
10	Miles of pipeline	\$800	3.9%	\$8,000	\$800	25	100	\$70	\$487
2	Wells	\$12,300	3.9%	\$24,600	\$2,460	25	100	\$216	\$1,498
3	Windmills	\$20,000	3.9%	\$60,000	\$6,000	10	100	\$528	\$6,859
10	Dirt Tanks	\$30,000	3.9%	\$300,000	\$30,000	10	100	\$2,640	\$34,293
60	Miles of Fence	\$6,000	3.9%	\$360,000	\$36,000	20	100	\$3,168	\$25,034
3	Corrals/Working Facilities	\$7,000	3.9%	\$21,000	\$2,100	30	100	\$185	\$1,162
2	Barns & Shops	\$16,000	3.9%	\$32,000	\$3,200	30	100	\$282	\$1,770
	<b>Sub Total</b>			<b>\$805,600</b>				<b>\$35,256</b>	<b>\$71,103</b>
<b>Machinery &amp; Vehicles</b>									
1	1/2 ton pickup 4WD	\$20,700	10.0%	\$20,700	\$4,140	7	50	\$91	\$1,908
1	3/4 ton pickup 4WD	\$23,700	10.0%	\$23,700	\$4,740	7	75	\$156	\$3,276
1	Dozer/Tractor	\$10,000	10.0%	\$10,000	\$2,000	7	100	\$88	\$1,843
2	Gooseneck trailer	\$6,500	10.0%	\$13,000	\$2,600	7	100	\$114	\$2,396
1	Water truck	\$28,000	10.0%	\$28,000	\$5,600	7	100	\$246	\$5,161
1	Horse tack	\$5,000	10.0%	\$5,000	\$1,000	10	100	\$44	\$751
1	Misc. equipment	\$6,000	10.0%	\$6,000	\$1,200	10	100	\$53	\$901
	<b>Sub Total</b>			<b>\$106,400</b>				<b>\$793</b>	<b>\$16,237</b>
<b>Purchased Livestock</b>									
10	Horses	\$2,500	8.0%	\$25,000	\$9,500	10	100	\$220	\$3,070
27	Bulls	\$1,700	8.0%	\$45,333	\$17,227	4	100	\$399	\$9,864
46	<b>Total AUYS</b>			<b>\$70,333</b>				<b>\$619</b>	<b>\$12,934</b>
<b>Retained Livestock</b>									
400	Cows	\$750	8.0%	\$300,000	\$114,000				\$18,926
40	Replacement Heifers	\$600	8.0%	\$24,000	\$9,120				\$1,514
430	<b>Total AUYS</b>			<b>\$324,000</b>	<b>\$123,120</b>				<b>\$20,439.77</b>
	<b>Total</b>			<b>\$2,987,833</b>				<b>\$64,834</b>	<b>\$100,274</b>

1) AU Numbers represent 1.35 times the total numbers of cows. This number should not be compared to the AUYS number on the budget page.  
 2) The interest rate of 3.9% used to calculate the capital recovery cost is the USDA-ERS's ten year average long-run rate of return to production assets for Arizona.  
 3) For intermediate assets an interest rate of 2% above prime is used.  
 4) The eight percent reflects a typical return on a low-risk investment (30 YR Treasury Bond)

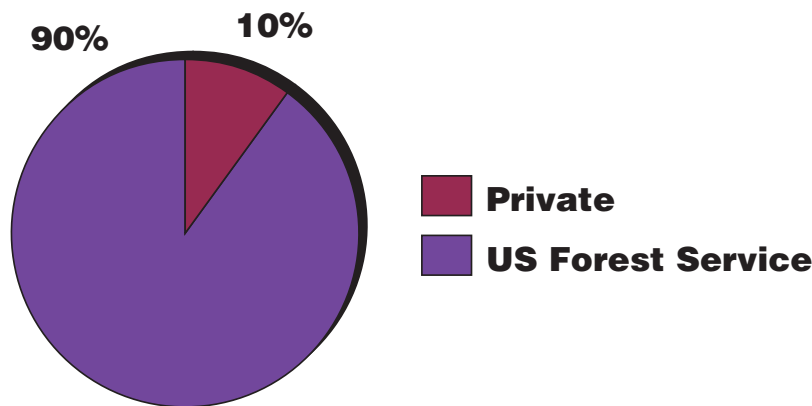


# CENTRAL MOUNTAIN REGION

The Central Mountain Region includes portions of Yavapai, Coconino, Gila, Maricopa, Apache, Navajo, Graham, and Greenlee Counties. Included in the area are Prescott, Kaibab, Coconino,

Sitgreaves, Tonto, and Apache National Forests. Elevation varies from about 2,000 feet along the Salt River to a high of 11,490 feet on Baldy Peak. Rainfall averages from 10 inches per year in the lower elevations to over 30 inches on some of the higher mountains. Approximately 45% of this precipitation falls from June through September. The remaining 55% falls from October through May. The highest mean monthly temperature is 86° F. while the lowest is 29° F. Common vegetation found in this area ranges from desert growth of mesquite and cactus through piñon, jojoba, juniper, manzanita, emory, turbinella, gambel oak, ponderosa pine, tobosa, curley mesquite, and several species of grama and love grasses. The land ownership mix common to this region consists of approximately 90% on United States Forest Service (FS) land and the remaining 10% on private land. Listed land resource units found within the region are Colorado & Green River Plateaus, Arizona Interior Chaparral, Arizona & New Mexico Mountains, Sonoran Basin & Range, Southeastern Arizona Basin & Range, and Southern Desertic Basins, Plains & Mountains.

## CENTRAL MOUNTAIN REGION LAND OWNERSHIP



# Central Mountain Region — Cow / Calf Budget

BREED HERD SIZE	300	BULL to COW	15	CALF CROP PERCENTAGE <sup>1</sup>	65%
CULL RATE	15%			REP HEIFERS KEPT	45

## REVENUES

	QUANTITY	WEIGHT	HIGH PRICE <sup>2</sup>	LOW PRICE	HIGH VALUE	LOW VALUE	VALUE PER COW HIGH	LOW	NEW VALUE
Steer Calves	98	500	\$0.88	\$0.64	\$42,900	\$31,200	\$143.00	\$104.00	
Heifer Calves	53	475	\$0.80	\$0.55	\$19,950	\$13,716	\$66.50	\$45.72	
Cull Cows	37	900	\$0.48	\$0.35	\$15,984	\$11,655	\$53.28	\$38.85	
Cull Bulls	1	1200	\$0.59	\$0.43	\$708	\$516	\$2.36	\$1.72	
<b>TOTAL VALUE PRODUCED</b>					\$79,542	\$57,087	\$265.14	\$190.29	

## VARIABLE COSTS

1. FEED COSTS	UNITS	QUANTITY	HIGH PRICE	LOW PRICE	HIGH COST	LOW COST	VALUE PER COW HIGH	LOW	NEW VALUE
Hay	TON	30.00	\$110	\$83	\$3,300	\$2,475	\$11.00	\$8.25	
BLM	AUY	0.0%	\$16.20	\$16.20	\$0	\$0	\$0.00	\$0.00	
State	AUY	0.0%	\$25.08	\$25.08	\$0	\$0	\$0.00	\$0.00	
USFS	AUY	90.0%	\$16.20	\$16.20	\$5,468	\$5,468	\$18.23	\$18.23	
Private (Owned)	AUY	10.0%	\$0.00	\$0.00	\$0	\$0	\$0.00	\$0.00	
Private (Leased Grazing)	AUY	0%	\$96.00	\$0.00	\$0	\$0	\$0.00	\$0.00	
Salt & Mineral	TON	6.00	\$230	\$173	\$1,380	\$1,035	\$4.60	\$3.45	
Protein Supplement	TON	2.00	\$250	\$188	\$500	\$375	\$1.67	\$1.25	
Other		0.00	\$0	\$0	\$0	\$0	\$0.00	\$0.00	
<b>SUBTOTAL FEED COSTS</b>					\$10,648	\$9,353	\$35.49	\$31.18	

## 2. OTHER VARIABLE COSTS

	HIGH PRICE	LOW PRICE	HIGH COST	LOW COST	VALUE PER COW HIGH	LOW	NEW VALUE
Vet and Medicine			\$1,100	\$825	\$3.67	\$2.75	
Livestock Hauling			\$940	\$705	\$3.13	\$2.35	
Hired Labor			\$5,000	\$3,750	\$16.67	\$12.50	
Operating Costs—Equipment & Machinery			\$4,500	\$3,375	\$15.00	\$11.25	
Operating Costs—Vehicles			\$5,500	\$4,125	\$18.33	\$13.75	
Ranch Maintenance			\$2,500	\$1,875	\$8.33	\$6.25	
Marketing Costs <sup>3</sup>	\$25.00	\$15.00	\$4,700	\$3,760	\$15.67	\$12.53	
Other			\$5,500	\$4,125	\$18.33	\$13.75	
<b>SUBTOTAL OTHER VARIABLE COSTS</b>			\$29,740	\$22,540	\$99.13	\$75.13	

## 3. INTEREST ON VARIABLE COSTS

Sum of Variable Costs X Months Borrowed X Interest Rate per Month							
Annual Interest Rate			10.5%				
Number of Months Borrowed			8			VALUE PER COW HIGH	LOW
			INTEREST COSTS	\$2,827	\$2,232	\$9.42	\$7.44
			TOTAL VARIABLE COSTS	\$43,215	\$34,125	\$144.05	\$113.75
			RETURNS ABOVE VARIABLE COSTS	\$36,327	\$22,962	\$121.09	\$76.54

## OWNERSHIP COSTS

Annual Capital Recovery <sup>4</sup> (At Replacement Value): Represents 65% Asset Ownership <sup>5</sup> 35.0%									
1. CASH COSTS				HIGH	LOW	VALUE PER COW HIGH	LOW	NEW VALUE	
Taxes & Insurance				\$10,434	\$6,782	\$34.78	\$22.61		
Overhead				\$2,100	\$1,365	\$7.00	\$4.55		
<b>Total Fixed Cash</b>				\$12,534	\$8,147	\$41.78	\$27.16		
2. NON CASH COSTS									
Purchased Livestock				\$9,598	\$6,238	\$31.99	\$20.79		
Machinery & Equipment				\$10,434	\$6,782	\$34.78	\$22.61		
Housing & Improvements				\$4,744	\$3,084	\$15.81	\$10.28		
Interest on Retained Livestock <sup>6</sup>				\$15,898	\$10,333	\$52.99	\$34.44		
Management & Operation Labor (6% of gross returns)				\$2,180	\$1,378	\$7.27	\$4.59		
<b>Total Fixed Non-Cash</b>				\$42,853	\$27,816	\$142.84	\$92.72		
<b>TOTAL FIXED COSTS Cash &amp; Non Cash</b>				\$55,388	\$35,963	\$184.63	\$119.88		
<b>TOTAL FIXED CASH COSTS AND VARIABLE COSTS</b>				\$55,749	\$42,272	\$185.83	\$140.91		
<b>TOTAL FIXED COSTS AND VARIABLE COSTS</b>				\$98,602	\$70,088	\$328.67	\$233.63		
<b>RETURNS ABOVE TOTAL CASH COSTS</b>				\$23,793	\$14,814	\$79.31	\$49.38		
<b>RETURNS ABOVE TOTAL COSTS</b>				(\$19,060)	(\$13,001)	(\$63.53)	(\$43.34)		

## BREAKEVEN CALCULATIONS

	HIGH PRICES				LOW PRICES			
	HIGH VARIABLE COSTS	HIGH TOTAL COSTS	LOW VARIABLE COSTS	LOW TOTAL COSTS	HIGH VARIABLE COSTS	HIGH TOTAL COSTS	LOW VARIABLE COSTS	LOW TOTAL COSTS
Required Avg. Calf Prices								
Cash Cost (cwt)	\$45.46	\$58.64	\$35.90	\$44.47	\$45.46	\$58.64	\$35.90	\$44.47
Required Avg. Calf Prices								
Total Costs (cwt)	\$45.46	\$103.72	\$35.90	\$73.73	\$45.46	\$103.72	\$35.90	\$73.73

1) Calf crop is defined as the actual number of calves sold divided by the total number of cows (assumption being all cows are exposed).

2) Prices represent a nineteen-year Arizona average price received +/- 1 Standard Deviation. Data from Cattle Fax report for Arizona feeder cattle cash prices.

3) Marketing prices include commissions, brand inspections, beef council, yardage, feed, and insurance.

4) Annual capital recovery is the method of calculating depreciation and interest recommended by the *Commodity Costs and Returns Estimation Handbook*.

5) The 35% reduction in asset values which represent a mix of new and used machinery.

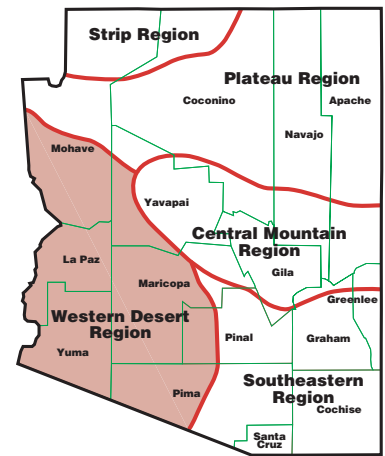
6) Interest on average investment.

# Central Mountain Region — Ranch Investments

Number	Land Values	Price per Unit	10-Year Avg. <sup>2</sup> Rate of Return	Purchase Price	Salvage/Cull Value	Useful Life	Livestock Share	Annual Taxes & Insurance	Annual Capital Recovery
60	Acres of private land	\$7,000	3.9%	\$420,000	\$420,000			\$9,676.80	
405	AU Values <sup>1</sup>	\$1,650	3.9%	\$668,250	\$668,250				
<b>Sub Total</b>				\$1,088,250					
<b>Buildings, Improvements</b>									
0.5	Miles of pipeline	\$1,500	3.9%	\$750	\$75	25	100	\$7	\$46
2	Wells	\$15,000	3.9%	\$30,000	\$3,000	25	100	\$264	\$1,827
1	Miles of Fence	\$9,000	3.9%	\$9,000	\$900	25	100	\$79	\$548
1	Corrals/Working Facilities	\$12,000	3.9%	\$12,000	\$1,200	30	100	\$106	\$664
1	Barns & Shops	\$30,000	3.9%	\$30,000	\$3,000	30	100	\$264	\$1,660
<b>Sub Total</b>				\$81,750				\$10,396	\$4,744
<b>Machinery &amp; Vehicles</b>									
<b>Interest Rate<sup>3</sup></b>									
1	1/2 ton pickup 4WDs	\$20,700	10.0%	\$20,700	\$4,140	7	50	\$91	\$1,908
1	3/4 ton pickup 4WDs	\$23,700	10.0%	\$23,700	\$4,740	7	50	\$104	\$2,184
1	Dozer/Tractors	\$10,000	10.0%	\$10,000	\$2,000	7	100	\$88	\$1,843
2	Gooseneck trailers	\$6,500	10.0%	\$13,000	\$2,600	7	100	\$114	\$2,396
1	Horse tack	\$5,000	10.0%	\$5,000	\$1,000	10	100	\$44	\$751
1	Misc. equipment	\$9,000	10.0%	\$9,000	\$1,800	10	100	\$79	\$1,352
<b>Sub Total</b>				\$81,400				\$521	\$10,434
<b>Purchased Livestock</b>									
<b>Interest Rate<sup>4</sup></b>									
10	Horses	\$2,500	8.0%	\$25,000	\$9,500	10	100	\$220	\$3,070
20	Bulls	\$1,500	8.0%	\$30,000	\$11,400	4	100	\$264	\$6,528
<b>Total AUYS</b>				\$55,000				\$484	\$9,598
<b>Retained Livestock</b>									
<b>Interest on Investment</b>									
300	Cows	\$750	8.0%	\$225,000	\$85,500				\$14,194
45	Replacement Heifers	\$600	8.0%	\$27,000	\$10,260				\$1,703
<b>Total AUYS</b>				\$252,000	\$95,760				\$15,898
<b>Sub Total</b>				\$1,558,400				\$21,078	\$31,076
<b>Total</b>									

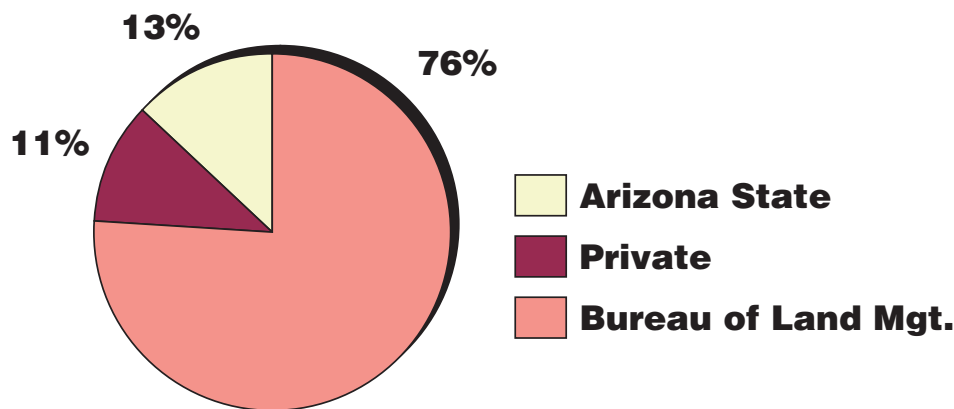
1) AU Numbers represent 1.35 times the total numbers of cows. This number should not be compared to the AU number on the budget page.  
 2) The interest rate of 3.9% used to calculate the capital recovery cost is the USDA-ERS's ten year average long-run rate of return to production assets for Arizona.  
 3) For intermediate assets an interest rate of 2% above prime is used.  
 4) The eight percent reflects a typical return on a low-risk investment (30 YR Treasury Bond)

# WESTERN DESERT REGION



The Western Desert Region includes all of La Paz and Yuma Counties, the lower two-thirds of Mohave County, and Yavapai County southwest of the Prescott National Forest. Also included in this area are the western three-quarters of Maricopa County (excluding that portion included in the Tonto National Forest), the western quarter of Pinal County, and the western half of Pima County. Elevation varies from about 100 feet near Yuma to a high of 8,266 feet on Hualapai Peak in Mohave County. Rainfall averages from three inches per year in the lower elevations to around 18 inches in the higher areas. Approximately 40% of this precipitation falls from June through September. The remaining 60% falls from October through May. The highest mean monthly temperature is 91° F. while the lowest is 35° F. Desert growth covers a large part of this area. The most common vegetation includes cacti, Joshua tree, mesquite, and desert shrubs; ponderosa pine is found on some of the mountaintops. Predominant grasses include several species of grama, plus some desert annuals. The land ownership mix common to this region consists of approximately 76% grazing occurring on Bureau of Land Management (BLM) land, 13% on state land, and the remaining 11% on private land. Listed land resource units found within the region are Mohave Basin & Range, and Southeastern Arizona Basin & Range.

## WESTERN DESERT REGION LAND OWNERSHIP



# Western Desert Region — Cow / Calf Budget

BREED HERD SIZE	370	BULL to COW	15	CALF CROP PERCENTAGE <sup>1</sup>	72%
CULL RATE	10%			REP HEIFERS KEPT	37

## REVENUES

	QUANTITY	WEIGHT	HIGH PRICE <sup>2</sup>	LOW PRICE	HIGH VALUE	LOW VALUE	VALUE PER COW HIGH	LOW	NEW VALUE
Steer Calves	133	450	\$0.88	\$0.64	\$52,747	\$38,362	\$142.56	\$103.68	
Heifer Calves	96	425	\$0.80	\$0.55	\$32,708	\$22,487	\$88.40	\$60.78	
Cull Cows	37	900	\$0.48	\$0.35	\$15,984	\$11,655	\$43.20	\$31.50	
Cull Bulls	1	1250	\$0.59	\$0.43	\$738	\$538	\$1.99	\$1.45	
<b>TOTAL VALUE PRODUCED</b>					<b>\$102,177</b>	<b>\$73,041</b>	<b>\$276.15</b>	<b>\$197.41</b>	

## VARIABLE COSTS

1. FEED COSTS	UNITS	QUANTITY	HIGH PRICE	LOW PRICE	HIGH COST	LOW COST	VALUE PER COW HIGH	LOW	NEW VALUE
Hay	TON	34.00	\$110	\$83	\$3,740	\$2,805	\$10.11	\$7.58	
BLM	AUY	76%	\$16.20	\$16.20	\$5,389	\$5,389	\$14.56	\$14.56	
State	AUY	13%	\$25.08	\$25.08	\$1,427	\$1,427	\$3.86	\$3.86	
USFS	AUY	0%	\$16.20	\$16.20	\$0	\$0	\$0.00	\$0.00	
Private (Owned)	AUY	6%	\$0.00	\$0.00	\$0	\$0	\$0.00	\$0.00	
Private (Leased Grazing)	AUY	4%	\$108.00	\$60.00	\$1,891	\$1,050	\$5.11	\$2.84	
Salt & Mineral	TON	8.00	\$230	\$173	\$1,840	\$1,380	\$4.97	\$3.73	
Protein Supplement	TON	4.00	\$250	\$188	\$1,000	\$750	\$2.70	\$2.03	
Other		0.00	\$0	\$0	\$0	\$0	\$0.00	\$0.00	
<b>SUBTOTAL FEED COSTS</b>					<b>\$15,286</b>	<b>\$12,801</b>	<b>\$41.31</b>	<b>\$34.60</b>	
2. OTHER VARIABLE COSTS			HIGH PRICE	LOW PRICE	HIGH COST	LOW COST	VALUE PER COW HIGH	LOW	NEW VALUE
Vet and Medicine					\$1,900	\$1,425	\$5.14	\$3.85	
Livestock Hauling					\$2,400	\$1,800	\$6.49	\$4.86	
Hired Labor					\$15,000	\$11,250	\$40.54	\$30.41	
Operating Costs—Equipment					\$2,000	\$1,500	\$5.41	\$4.05	
Operating Costs—Machinery					\$436	\$327	\$1.18	\$0.88	
Operating Costs—Vehicles					\$4,000	\$3,000	\$10.81	\$8.11	
Ranch Maintenance					\$5,500	\$4,125	\$14.86	\$11.15	
Marketing Costs <sup>3</sup>			\$25.00	\$20.00	\$6,685	\$5,348	\$18.07	\$14.45	
Other					\$2,000	\$1,500	\$5.41	\$4.05	
<b>SUBTOTAL OTHER VARIABLE COSTS</b>					<b>\$39,921</b>	<b>\$30,275</b>	<b>\$107.89</b>	<b>\$81.82</b>	
3. INTEREST ON VARIABLE COSTS							VALUE PER COW HIGH	LOW	NEW VALUE
Sum of Variable Costs X Months Borrowed X Interest Rate per Month									
Annual Interest Rate					10.5%				
Number of Months Borrowed					8				
					INTEREST COSTS	\$3,865	\$3,015	\$10.44	\$8.15
					TOTAL VARIABLE COSTS	\$59,072	\$46,091	\$159.65	\$124.57
					RETURNS ABOVE VARIABLE COSTS	\$43,105	\$26,950	\$116.50	\$72.84

## OWNERSHIP COSTS

Annual Capital Recovery <sup>4</sup> (At Replacement Value): Represents 65% Asset Ownership <sup>5</sup> 35.0%									
1. CASH COSTS					HIGH	LOW	VALUE PER COW HIGH	LOW	NEW VALUE
Taxes & Insurance					\$27,799	\$18,070	\$75.13	\$48.84	
Overhead					\$4,700	\$3,055	\$12.70	\$8.26	
<b>Total Fixed Cash</b>					<b>\$32,499</b>	<b>\$21,125</b>	<b>\$87.84</b>	<b>\$57.09</b>	
2. NON CASH COSTS									
Purchased Livestock					\$10,430	\$6,779	\$28.19	\$18.32	
Machinery & Equipment					\$15,295	\$9,942	\$41.34	\$26.87	
Housing & Improvements					\$34,381	\$22,348	\$92.92	\$60.40	
Interest on Retained Livestock <sup>6</sup>					\$18,907	\$12,289	\$51.10	\$33.21	
Management & Operation Labor (6% of gross returns)					\$2,586	\$1,616.98	\$6.99	\$4.37	
<b>Total Fixed Non-Cash</b>					<b>\$81,599</b>	<b>\$52,975</b>	<b>\$220.54</b>	<b>\$143.18</b>	
<b>TOTAL FIXED COSTS Cash &amp; Non Cash</b>					<b>\$114,098</b>	<b>\$74,100</b>	<b>\$308.37</b>	<b>\$200.27</b>	
<b>TOTAL FIXED CASH COSTS AND VARIABLE COSTS</b>					<b>\$91,571</b>	<b>\$67,216</b>	<b>\$247.49</b>	<b>\$181.66</b>	
<b>TOTAL FIXED COSTS AND VARIABLE COSTS</b>					<b>\$173,170</b>	<b>\$120,191</b>	<b>\$468.03</b>	<b>\$324.84</b>	
<b>RETURNS ABOVE TOTAL CASH COSTS</b>					<b>\$10,606</b>	<b>\$5,825</b>	<b>\$28.66</b>	<b>\$15.74</b>	
<b>RETURNS ABOVE TOTAL COSTS</b>					<b>(\$70,993)</b>	<b>(\$47,150)</b>	<b>(\$191.87)</b>	<b>(\$127.43)</b>	

## BREAKEVEN CALCULATIONS

	HIGH PRICES				LOW PRICES			
	HIGH VARIABLE COSTS	HIGH TOTAL COSTS	LOW VARIABLE COSTS	LOW TOTAL COSTS	HIGH VARIABLE COSTS	HIGH TOTAL COSTS	LOW VARIABLE COSTS	LOW TOTAL COSTS
Required Avg. Calf Prices Cash Cost (cwt)	\$50.68	\$78.57	\$39.55	\$57.67	\$50.68	\$78.57	\$39.55	\$57.67
Required Avg. Calf Prices Total Costs (cwt)	\$50.68	\$148.58	\$39.55	\$103.12	\$50.68	\$148.58	\$39.55	\$103.12

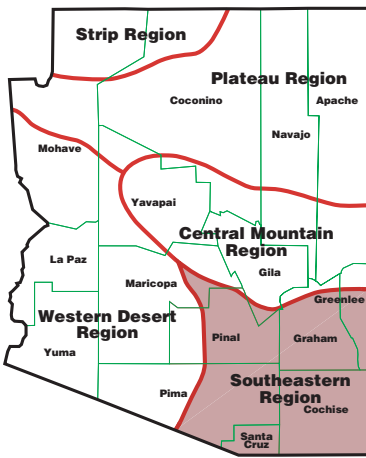
- 1) Calf crop is defined as the actual number of calves sold divided by the total number of cows (assumption being all cows are exposed).
- 2) Prices represent a nineteen-year Arizona average price received +/- 1 Standard Deviation. Data from Cattle Fax report for Arizona feeder cattle cash prices.
- 3) Marketing prices include commissions, brand inspections, beef council, yardage, feed, and insurance.
- 4) Annual capital recovery is the method of calculating depreciation and interest recommended by the *Commodity Costs and Returns Estimation Handbook*.
- 5) The 35% reduction in asset values which represent a mix of new and used machinery.
- 6) Interest on average investment.



# Western Desert Region — Ranch Investments

Number	Land Values	Price per Unit	10-Year Avg. <sup>2</sup> Rate of Return	Purchase Price	Salvage/Cull Value	Useful Life	Livestock Share	Annual Taxes & Insurance	Annual Capital Recovery
1500	Acres of private land	\$320	3.9%	\$480,000	\$480,000			\$11,059.20	
500	AU Values <sup>1</sup>	\$1,950	3.9%	\$974,025	\$974,025				
	<b>Sub Total</b>			<b>\$1,454,025</b>					
<b>Buildings, Improvements</b>									
2	Miles of pipeline	\$1,200	3.9%	\$2,400	\$240	25	100	\$21	\$146
5	Wells	\$12,300	3.9%	\$61,500	\$6,150	25	100	\$541	\$3,746
4	Dirt Tanks	\$4,500	3.9%	\$18,000	\$1,800	10	100	\$158	\$2,058
50	Miles of Fence	\$7,000	3.9%	\$350,000	\$35,000	20	100	\$3,080	\$24,338
2	Corrals/Working Facilities	\$12,000	3.9%	\$24,000	\$2,400	30	100	\$211	\$1,328
1	Barns & Shops	\$50,000	3.9%	\$50,000	\$5,000	30	100	\$440	\$2,766
	<b>Sub Total</b>			<b>\$505,900</b>				<b>\$15,511</b>	<b>\$34,381</b>
<b>Machinery &amp; Vehicles</b>									
1	1/2 ton pickup 4WDs	\$20,700	10.0%	\$20,700	\$4,140	7	50	\$91	\$1,908
1	3/4 ton pickup 4WDs	\$23,700	10.0%	\$23,700	\$4,740	7	50	\$104	\$2,184
1	Dozer/Tractors	\$10,000	10.0%	\$10,000	\$2,000	7	100	\$88	\$1,843
2	Gooseneck trailers	\$6,500	10.0%	\$13,000	\$2,600	7	100	\$114	\$2,396
1	Water trucks	\$28,000	10.0%	\$28,000	\$5,600	7	100	\$246	\$5,161
1	Horse tack	\$5,000	10.0%	\$5,000	\$1,000	10	100	\$44	\$751
1	Misc. equipment	\$7,000	10.0%	\$7,000	\$1,400	10	100	\$62	\$1,051
	<b>Sub Total</b>			<b>\$107,400</b>				<b>\$750</b>	<b>\$15,295</b>
<b>Purchased Livestock</b>									
6	Horses	\$2,500	8.0%	\$15,000	\$5,700	10	100	\$132	\$1,842
25	Bulls	\$1,600	8.0%	\$39,467	\$14,997	4	100	\$347	\$8,588
38	<b>Total AUYS</b>			<b>\$54,467</b>				<b>\$479</b>	<b>\$10,430</b>
<b>Retained Livestock</b>									
370	Cows	\$750	8.0%	\$277,500	\$105,450				\$17,506
37	Replacement Heifers	\$600	8.0%	\$22,200	\$8,436				\$1,401
398	<b>Total AUYS</b>			<b>\$299,700</b>	<b>\$113,886</b>				<b>\$18,906.79</b>
	<b>Total</b>			<b>\$2,421,492</b>				<b>\$27,799</b>	<b>\$60,106</b>

1) AU Numbers represent 1.35 times the total numbers of cows. This number should not be compared to the AU number on the budget page.  
 2) The interest rate of 3.9% used to calculate the capital recovery cost is the USDA-ERS's ten year average long-run rate of return to production assets for Arizona.  
 3) For intermediate assets an interest rate of 2% above prime is used.  
 4) The eight percent reflects a typical return on a low-risk investment (30 YR Treasury Bond)

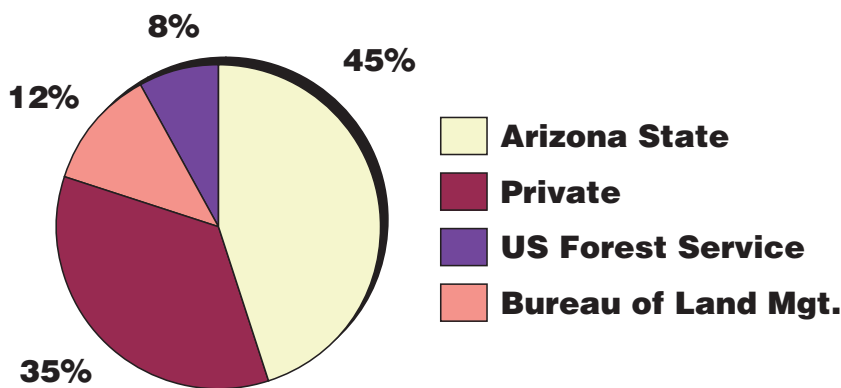


# SOUTHEASTERN DESERT REGION

The Southeastern Desert Region includes all of Cochise, Pinal, and Santa Cruz Counties, as well as those portions of Graham and Greenlee Counties south of the Apache National Forest and the San Carlos

Reservation. The eastern two-thirds of Pinal County and the eastern half of Pima County are also included. Elevations vary from about 2,000 feet in the desert around Tucson to a high of 10,713 feet on Mt. Graham. Rainfall averages from eight inches per year in the lower elevations to 30 inches on some of the higher mountains. Approximately 60% of this precipitation falls from June through September. The remaining 40% falls from October through May. The highest mean monthly temperature is 86° F. while the lowest is 37° F. Vegetation found in this area ranges from cacti in the desert to ponderosa pine on the mountains. Several species of grama grass, lovegrass, mesquite, piñon, juniper, and other desert shrubs are found in this area. The land ownership mix common to this region consists of approximately 45% on state land, 35% on private land, 12% on Bureau of Land Management (BLM) land, and the remaining 8% grazing occurring on Forest Service (FS) land. Listed land resource units found within the region are Arizona & New Mexico Mountains, Sonoran Basin & Range, Southeastern Arizona Basin & Range, and Southern Desertic Basins, Plains, & Mountains.

## SOUTHEASTERN DESERT REGION LAND OWNERSHIP



# Southeastern Region — Cow / Calf Budget

BREED HERD SIZE	350	BULL to COW	20	CALF CROP PERCENTAGE <sup>1</sup>	80%
CULL RATE	20%			REP HEIFERS KEPT	70

## REVENUES

	QUANTITY WEIGHT		HIGH PRICE <sup>2</sup>	LOW PRICE	HIGH VALUE	LOW VALUE	VALUE PER COW		NEW VALUE
							HIGH	LOW	
Steer Calves	140	450	\$0.88	\$0.64	\$55,440	\$40,320	\$158.40	\$115.20	
Heifer Calves	70	425	\$0.80	\$0.55	\$23,800	\$16,363	\$68.00	\$46.75	
Cull Cows	37	900	\$0.48	\$0.35	\$15,984	\$11,655	\$45.67	\$33.30	
Cull Bulls	1	1300	\$0.59	\$0.43	\$767	\$559	\$2.19	\$1.60	
<b>TOTAL VALUE PRODUCED</b>					<b>\$95,991</b>	<b>\$68,897</b>	<b>\$274.26</b>	<b>\$196.85</b>	

## VARIABLE COSTS

1. FEED COSTS		UNITS	QUANTITY	HIGH PRICE	LOW PRICE	HIGH COST	LOW COST	VALUE PER COW		NEW VALUE
								HIGH	LOW	
Hay	TON	30.00		\$110	\$83	\$3,300	\$2,475	\$9.43	\$7.07	
BLM	AUY	12.0%		\$16.20	\$16.20	\$860	\$860	\$2.46	\$2.46	
State	AUY	45.0%		\$25.08	\$25.08	\$4,994	\$4,994	\$14.27	\$14.27	
USFS	AUY	8.0%		\$16.20	\$16.20	\$573	\$573	\$1.64	\$1.64	
Private (Owned)	AUY	25.0%		\$0.00	\$0.00	\$0	\$0	\$0.00	\$0.00	
Private (Leased Grazing)	AUY	10.0%		\$144.00		\$60.00	\$6,372	\$2.655	\$18.21	
Salt & Mineral	TON	4.00		\$237	\$178	\$948	\$711	\$2.71	\$2.03	
Protein Supplement	TON	5.50		\$450	\$338	\$2,475	\$1,856	\$7.07	\$5.30	
Other		0.00		\$0	\$0	\$0	\$0	\$0.00	\$0.00	
<b>SUBTOTAL FEED COSTS</b>						<b>\$19,523</b>	<b>\$14,125</b>	<b>\$55.78</b>	<b>\$40.36</b>	
2. OTHER VARIABLE COSTS				HIGH PRICE	LOW PRICE	HIGH COST	LOW COST	VALUE PER COW		NEW VALUE
								HIGH	LOW	
Vet and Medicine						\$2,000	\$1,000	\$5.71	\$2.86	
Hired Labor						\$2,000	\$1,000	\$5.71	\$2.86	
Operating Costs—Equipment & Machinery						\$1,500	\$500	\$4.29	\$1.43	
Operating Costs—Vehicles						\$5,000	\$2,500	\$14.29	\$7.14	
Ranch Maintenance						\$3,100	\$2,100	\$8.86	\$6.00	
Marketing Costs <sup>3</sup>				\$25.00	\$15.00	\$6,200	\$3,720	\$17.71	\$10.63	
Other						\$1,500	\$500	\$4.29	\$1.43	
<b>SUBTOTAL OTHER VARIABLE COSTS</b>						<b>\$21,300</b>	<b>\$11,320</b>	<b>\$60.86</b>	<b>\$32.34</b>	
3. INTEREST ON VARIABLE COSTS		Sum of Variable Costs X Months Borrowed X Interest Rate per Month						VALUE PER COW		NEW VALUE
								HIGH	LOW	
Annual Interest Rate						10.5%				
Number of Months Borrowed						8				
<b>INTEREST COSTS</b>						<b>\$2,858</b>	<b>\$1,781</b>	<b>\$8.16</b>	<b>\$5.09</b>	
<b>TOTAL VARIABLE COSTS</b>						<b>\$43,680</b>	<b>\$27,226</b>	<b>\$124.80</b>	<b>\$77.79</b>	
<b>RETURNS ABOVE VARIABLE COSTS</b>						<b>\$52,429</b>	<b>\$41,756</b>	<b>\$149.80</b>	<b>\$119.30</b>	

## OWNERSHIP COSTS

Annual Capital Recovery <sup>4</sup> (At Replacement Value): Represents 65% Asset Ownership <sup>5</sup> 35.0%						VALUE PER COW		NEW VALUE	
						HIGH	LOW		
1. CASH COSTS									
Taxes & Insurance						\$5,242	\$3,408	\$14.98	\$9.74
Overhead						\$2,500	\$1,625	\$7.14	\$4.64
<b>Total Fixed Cash</b>						<b>\$7,742</b>	<b>\$5,033</b>	<b>\$22.12</b>	<b>\$14.38</b>
2. NON CASH COSTS									
Purchased Livestock						\$9,151	\$5,948	\$26.14	\$16.99
Machinery & Equipment						\$6,745	\$4,384	\$19.27	\$12.53
Housing & Improvements						\$26,650	\$17,323	\$76.14	\$49.49
Interest on Retained Livestock <sup>6</sup>						\$19,210	\$12,486	\$54.88	\$35.67
Management & Operation Labor (6% of gross returns)						\$3,139	\$2,500	\$8.97	\$7.14
<b>Total Fixed Non-Cash</b>						<b>\$64,894</b>	<b>\$42,641</b>	<b>\$185.41</b>	<b>\$121.83</b>
<b>TOTAL FIXED COSTS Cash &amp; Non Cash</b>						<b>\$72,636</b>	<b>\$47,674</b>	<b>\$207.53</b>	<b>\$136.21</b>
<b>TOTAL FIXED CASH COSTS AND VARIABLE COSTS</b>						<b>\$51,423</b>	<b>\$32,259</b>	<b>\$146.92</b>	<b>\$92.17</b>
<b>TOTAL FIXED COSTS AND VARIABLE COSTS</b>						<b>\$116,317</b>	<b>\$74,900</b>	<b>\$332.33</b>	<b>\$214.00</b>
<b>RETURNS ABOVE TOTAL CASH COSTS</b>						<b>\$44,568</b>	<b>\$36,638</b>	<b>\$127.34</b>	<b>\$104.68</b>
<b>RETURNS ABOVE TOTAL COSTS</b>						<b>(\$20,326)</b>	<b>(\$6,003)</b>	<b>(\$58.07)</b>	<b>(\$17.15)</b>

## BREAKEVEN CALCULATIONS

	HIGH PRICES				LOW PRICES			
	HIGH VARIABLE COSTS	HIGH TOTAL COSTS	LOW VARIABLE COSTS	LOW TOTAL COSTS	HIGH VARIABLE COSTS	HIGH TOTAL COSTS	LOW VARIABLE COSTS	LOW TOTAL COSTS
Required Avg. Calf Prices Cash Cost (cwt)	\$35.66	\$41.98	\$22.23	\$26.33	\$35.66	\$41.98	\$22.23	\$26.33
Required Avg. Calf Prices Total Costs (cwt)	\$35.66	\$94.96	\$22.23	\$61.15	\$35.66	\$94.96	\$22.23	\$61.15

1) Calf crop is defined as the actual number of calves sold divided by the total number of cows (assumption being all cows are exposed).

2) Prices represent a nineteen-year Arizona average price received +/- 1 Standard Deviation. Data from Cattle Fax report for Arizona feeder cattle cash prices.

3) Marketing prices include commissions, brand inspections, beef council, yardage, feed, and insurance.

4) Annual capital recovery is the method of calculating depreciation and interest recommended by the *Commodity Costs and Returns Estimation Handbook*.

5) The 35% reduction in asset values which represent a mix of new and used machinery.

6) Interest on average investment.

# Southeastern Region — Ranch Investments

Number	Land Values	Price per Unit	10-Year Avg. <sup>2</sup> Rate of Return	Purchase Price	Salvage/Cull Value	Useful Life	Livestock Share	Annual Taxes & Insurance	Annual Capital Recovery
100	Acres of private land	\$350	3.9%	\$35,000	\$35,000			\$806.40	
525	AU Values <sup>1</sup>	\$3,000	3.9%	\$1,575,000	\$1,575,000				
<b>Sub Total</b>				<b>\$1,610,000</b>					
<b>Buildings, Improvements</b>									
10	Miles of pipeline	\$1,200	3.9%	\$12,000	\$1,200	25	100	\$106	\$731
2	Wells	\$12,300	3.9%	\$24,600	\$2,460	25	100	\$216	\$1,498
6	Windmills	\$20,000	3.9%	\$120,000	\$12,000	10	100	\$1,056	\$13,717
8	Dirt Tanks	\$1,500	3.9%	\$12,000	\$1,200	10	100	\$106	\$1,372
30	Miles of Fence	\$3,500	3.9%	\$105,000	\$10,500	25	100	\$924	\$6,395
3	Corrals/Working Facilities	\$7,000	3.9%	\$21,000	\$2,100	30	100	\$185	\$1,162
2	Barns & Shops	\$16,000	3.9%	\$32,000	\$2,880	30	100	\$282	\$1,776
<b>Sub Total</b>				<b>\$326,600</b>				<b>\$3,680</b>	<b>\$26,650</b>
<b>Machinery &amp; Vehicles</b>									
1	3/4 ton pickup 4WDs	\$23,700	10.0%	\$23,700	\$4,740	7	50	\$104	\$2,184
1	Dozer/Tractors	\$10,000	10.0%	\$10,000	\$2,000	7	100	\$88	\$1,843
2	Gooseneck trailers	\$3,500	10.0%	\$7,000	\$1,400	7	100	\$62	\$1,290
1	Horse tack	\$5,000	10.0%	\$5,000	\$1,000	10	100	\$44	\$751
1	Misc. equipment	\$4,500	10.0%	\$4,500	\$900	10	100	\$40	\$676
<b>Sub Total</b>				<b>\$50,200</b>				<b>\$337</b>	<b>\$6,745</b>
<b>Purchased Livestock</b>									
5	Horses	\$2,500	8.0%	\$12,500	\$4,750	10	100	\$110	\$1,535
18	Bulls	\$2,000	8.0%	\$35,000	\$13,300	4	100	\$308	\$7,616
<b>Total AUYS</b>									
<b>Sub Total</b>				<b>\$47,500</b>				<b>\$418</b>	<b>\$9,151</b>
<b>Retained Livestock</b>									
350	Cows	\$750	8.0%	\$262,500	\$99,750	\$16,560		<b>Interest on Investment</b>	
70	Replacement Heifers	\$600	8.0%	\$42,000	\$15,960	\$2,650			
<b>Total AUYS</b>									
<b>Sub Total</b>				<b>\$304,500</b>	<b>\$115,710</b>	<b>\$19,210</b>			
<b>Total</b>				<b>\$2,338,800</b>				<b>\$5,242</b>	<b>\$42,546</b>

1) AU Numbers represent 1.35 times the total numbers of cows. This number should not be compared to the AU number on the budget page.  
 2) The interest rate of 3.9% used to calculate the capital recovery cost is the USDA-ERS's ten year average long-run rate of return to production assets for Arizona.  
 3) For intermediate assets an interest rate of 2% above prime is used.  
 4) The eight percent reflects a typical return on a low-risk investment (30 YR Treasury Bond)

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