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White Pine County Cow-Calf Production Costs & Returns, 2004

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INTRODUCTION

Sample costs and returns to raise beef cattle in White Pine County, Nevada, are presented in this publication. This publication is intended to be a guide, used to make production decisions, determine potential returns, and prepare business and marketing plans. Practices described are based on the production practices considered typical for a beef cattle cow-calf operation in this region, but may not apply to every operation. A "*Your Ranch*" column in Table 1 is provided for your use.

ASSUMPTIONS

The following assumptions refer to Tables 1 through 3 and reflect the typical costs and returns associated with beef cattle production in White Pine County, Nevada. The practices described are not the recommendations of the University of Nevada, Reno, but rather the production practices and materials considered typical of a well-managed beef cattle operation in the region as determined by a producer panel conducted in November of 2004. Costs, materials, and practices are not applicable to every operation, as production practices vary among ranchers within the region.

Ranch Description

Livestock. The livestock inventory consists of 500 cows, 25 bulls, and 15 horses. Four replacement bulls are purchased annually, with a useful life of 4 years. Cow replacement is 20%,

with a death loss of 2%. The weaned calf crop produced from over wintered cows and replacement heifers is 88%. Replacement heifers are selected at weaning and consist of 29 head. Steer calves, cull bulls, and cull cows are marketed for delivery in November.

Production Costs and Returns

Feed. The forage base for the ranch consists of summer grazing on federal allotments (April to November), aftermath grazing on meadows, and winter feeding of alfalfa hay and grain. Grass hay and alfalfa costs are based on 2004 market prices. These costs include the full costs of producing the hay (land, equipment, inputs, etc.) and/or purchasing the hay, whichever is lowest. A combination of salt and mineral supplements are provided during the year at an annual cost of $5.50 per head.

Veterinary/Medical. Cows and replacement heifers receive a pregnancy check in November and are provided with an external insecticide, 7 or 8 Way, and an oral de-wormer. Bulls are also provided with an external insecticide in November and given 7 or 8 Way. Weaned, replacement heifers are provided IBR, BVD, PI3, BRSV, 7 or 8 Way, oral de-wormer, Naselgen, and Bangs vaccinations. Steer and heifer calves are branded, earmarked, de-horned in May, and vaccinated with 7 or 8 Way and Naselgen. Steers are also given implants and castrated in May. Total annual veterinary costs are $9.00 per head.

Marketing/Checkoff. Calves are marketed through Video Marketing Sales in the summer with a November delivery. Cull animals are marketed through local auction markets. Annual marketing costs are calculated at 2% of total revenue. Checkoff fees are $1.00 per animal sold.

Horse Maintenance. Costs for shoeing horses, veterinary, and feed expenses are based on costs as reported by the producer panel, approximately $360.00 annually per head.

Labor. Labor involves one owner/manager, one hired employee, and one summer employee. Hired labor costs include an annual salary of $18,000.00 per labor unit with 75% percent of the hired labor time contributed to the livestock enterprise. The owner/manager receives $2,000.00 per month as a family draw. All employee benefits, payroll taxes, and workman's compensation insurance are included in labor costs.

Returns. Returns are based on early 2004 market prices. Returns will vary from year to year and across years due to market conditions. A full listing of prices used in this publication can be found in Table 1.

Overhead and Capital Recovery Costs

Cash Overhead. Cash overhead consists of various cash expenses paid out during the year. These costs include property taxes, interest, office expenses, liability and property insurance, as well as investment/machinery repairs. A complete listing of farm investments and associated costs can be found in Table 2.

Interest on Operating Capital. Total operating capital is calculated based on 80% of total operating (variable) costs. The interest on operating capital is calculated at a rate of 6.5% for a six month period.

***Property Taxes*.** Property taxes in Nevada differ across counties. For the purposes of this publication, investment property taxes are calculated as 1% of the average asset value of the property.

Insurance. Insurance costs for farm investments vary, depending on the assets included and the amount of coverage. Property insurance provides coverage for property loss and is charged at .666% of the average asset value. Liability insurance covers accidents on the farm at an annual cost of $1,749.00.

Fuel and Lube. The fuel and lube for all machinery and vehicles is calculated as 8% of the purchase price.

Investment Repairs. Annual repairs are provided for all ranch investments or capital

recovery items that require maintenance. Annual repairs are calculated at 2% of the purchase price for buildings and equipment and 7% of the purchase price for machinery and vehicles.

Office & Travel. Office and travel costs are estimated at $3,000.00 for an average year. These expenses include office supplies, telephone service, Internet service, and travel expenses to educational seminars.

Capital Recovery. Capital recovery costs are the annual depreciation (opportunity cost) of all farm investments. Capital recovery costs are calculated using straight line depreciation**.** Farm equipment may be purchased new or used, depending on producer panel preferences.

Salvage Value. Salvage value is 10% of the new purchase price. It is an estimate of the remaining value of an investment at the end of its useful life. The salvage value for land is the purchase price, as land does not normally depreciate.

Average Asset Value Computation

$$\left(\frac{\text{Purchase Price + Salvage Value}}{2}\right)$$

Straight Line Depreciation Computation

$$\left(\frac{\text{Purchase Price - Salvage Value}}{\text{Useful Life}}\right)$$

REFERENCES

Smathers, Robert (2001). The Costs of Owning and Operating Farm Machinery in the Pacific Northwest 2000. A Pacific Northwest Publication #346. University of Idaho, Washington State University, and Oregon State University.

Forero, Larry C., Glenn A. Nader, Karen M. Klonsky, Pete Livingston, and Richard L. De Moura (2004). Sample Costs for Beef Cattle Cow-Calf Production, 300 Head, Sacramento Valley. Publication BF-SV-04, University of California Cooperative Extension.

NOTES

Sample production costs and returns publications for significant agricultural products in various regions of Nevada are available online at the University of Nevada Cooperative Extension Web site at http://www.unce.unr.edu/pubs.html. For additional information, contact the Department of Resource Economics at the University of Nevada, Reno at (775) 784-6701 or your local University of Nevada Cooperative Extension office.

Table 1: White Pine County 500 Cow-Calf Production Costs and Returns

Description	Weight Per Animal	Unit of Measure	Total Units	Price/Cost Per Unit	Total Value	Value/Cost Per Head	Your Ranch
GROSS INCOME							
Cull Cows	1100.00	lbs	90.00	$0.48	$47,520.00	$95.04	_____
Cull Bulls	1600.00	lbs	6.00	$0.65	$6,240.00	$12.48	_____
Yearling Replacements	0.00	lbs	0.00	$0.80	$0.00	$0.00	_____
Heifer Calves	425.00	lbs	217.00	$1.20	$110,670.00	$221.34	_____
Steer Calves	450.00	lbs	216.00	$1.28	$124,416.00	$248.83	
TOTAL INCOME					**$288,846.00**	**$577.69**	
OPERATING COSTS							
Aftermath Grazing		Head	500.00	$12.00	$6,000.00	$12.00	_____
Grain		Ton	8.50	$120.00	$1,020.00	$2.04	_____
Alfalfa Hay		Ton	1400.00	$70.00	$98,000.00	$196.00	_____
Federal Grazing (BLM)		AUM	3179.00	$1.43	$4,545.36	$9.09	_____
Horse (Shoeing, Vet, Feed, etc.)		Head	15.00	$360.00	$5,400.00	$10.80	_____
Veterinary/Medical		Head	500.00	$9.00	$4,500.00	$9.00	_____
Marketing (Brand, Video, Commission)		Head	529.00	$9.33	$5,776.92	$11.55	_____
Checkoff		Head	529.00	$1.00	$529.00	$1.06	_____
Salt & Minerals		Head	500.00	$5.50	$2,750.00	$5.50	_____
Hired Labor		Annual	1.50	$18,000.00	$20,250.00	$40.50	_____
Operator Labor		Monthly	12.00	$2,000.00	$24,000.00	$48.00	_____
Accounting & Legal Fees		$	1.00	$3,000.00	$3,000.00	$6.00	_____
Maintenance (Buildings, Vehicles, etc.)		$	1.00	$16,507.00	$16,507.00	$33.01	_____
Fuel & Lube		$	1.00	$15,224.00	$15,224.00	$30.45	_____
Utilities		$	1.00	$2,100.00	$2,100.00	$4.20	_____
Miscellaneous		Head	500.00	$6.00	$3,000.00	$6.00	_____
Interest Operating Capital		$	$170,081.82	0.065	$5,527.66	$11.06	
TOTAL OPERATING COSTS					**$218,129.94**	**$436.26**	
INCOME ABOVE OPERATING COSTS					**$70,716.06**	**$141.43**	
OWNERSHIP COSTS							
Capital Recovery (Depreciation):							
Buildings, Improvements, & Equipment		$	1.00	$7,540.50	$7,540.00	$15.08	_____
Machinery & Vehicles		$	1.00	$16,423.50	$16,423.50	$32.85	_____
Purchased Livestock (Bulls & Horses)		$	1.00	$15,312.50	$15,312.50	$30.63	_____
Cash Overhead:							
Liability Insurance		$	1.00	$1,749.00	$1,749.00	$3.50	_____
Office & Travel		$	1.00	$3,000.00	$3,000.00	$6.00	_____
Interest on Retained Livestock		$	1.00	$919.88	$919.88	$1.84	_____
Annual Investment Insurance		$	1.00	$1,565.80	$1,565.80	$3.13	_____
Annual Investment Taxes		$	1.00	$2,351.05	$2,351.05	$4.70	
TOTAL OWNERSHIP COSTS					**$48,861.73**	**$97.72**	
TOTAL COSTS					**$266,991.67**	**$533.98**	
NET PROJECTED RETURNS					**$21,854.33**	**$43.71**	

Table 2: Investment Summary

Description	Purchase Price	Salvage Value	Livestock Share (%)	Useful Life (yrs)	Annual Taxes	Annual Insurance	Annual Capital Recovery	Annual Repairs	Annual Fuel & Lube
Buildings, Improvements, and Equipment									
Barn	$20,000.00	$2,000.00	100	40.00	$110.00	$73.26	$450.00	$400.00	
Fencing	$35,000.00	$0.00	100	30.00	$175.00	$116.55	$1,166.67	$700.00	
Hauling System	$1,000.00	$100.00	100	30.00	$5.50	$3.66	$30.00	$20.00	
Portable Corrals	$20,000.00	$2,000.00	100	12.00	$110.00	$73.26	$1,500.00	$400.00	
Water Development	$10,000.00	$1,000.00	100	30.00	$55.00	$36.63	$300.00	$200.00	
Machine Shop & Tools	$11,000.00	$1,100.00	80	15.00	$48.40	$32.23	$528.00	$176.00	
Range Improvements	$15,000.00	$1,500.00	100	20.00	$82.50	$54.95	$675.00	$300.00	
Electric Fence	$500.00	$0.00	100	15.00	$2.50	$1.67	$33.33	$10.00	
Implements	$10,000.00	$1,000.00	75	20.00	$41.25	$27.47	$337.50	$150.00	
Flatbed Trailer	$3,000.00	$300.00	100	20.00	$16.50	$10.99	$135.00	$60.00	
Bale Feeder	$4,000.00	$400.00	100	20.00	$22.00	$14.65	$180.00	$80.00	
Feed Wagon	$3,000.00	$300.00	100	20.00	$16.50	$10.99	$135.00	$60.00	
Tack	$10,000.00	$1,000.00	100	10.00	$55.00	$36.63	$900.00	$200.00	
Gooseneck (2)	$16,000.00	$1,600.00	100	20.00	$88.00	$58.61	$720.00	$320.00	
Scales	$5,500.00	$1,000.00	100	10.00	$32.50	$21.65	$450.00	$110.00	
Sub Total	$164,000.00	$13,300.00	NA	NA	$860.65	$573.19	$7,540.50	$3,186.00	
Machinery and Vehicles									
120 HP Tractor	$120,000.00	$12,000.00	60	25.00	$396.00	$263.74	$2,592.00	$5,040.00	$5,760.00
80 HP Tractor	$15,000.00	$1,500.00	60	25.00	$49.50	$32.97	$324.00	$630.00	$720.00
Tractor/Crawler	$21,000.00	$2,100.00	80	30.00	$92.40	$61.54	$504.00	$1,176.00	$1,344.00
Dump Truck	$5,500.00	$550.00	60	20.00	$18.15	$12.09	$148.50	$231.00	$264.00
3/4 Ton 4x4	$36,000.00	$3,600.00	90	4.00	$178.20	$118.68	$7,290.00	$2,268.00	$2,592.00
1 Ton (Diesel)	$42,000.00	$4,200.00	90	8.00	$207.90	$138.46	$4,252.50	$2,646.00	$3,024.00
Economy Pickup	$10,000.00	$1,000.00	90	8.00	$49.50	$32.97	$1,012.50	$630.00	$720.00
Backhoe	$10,000.00	$1,000.00	100	30.00	$55.00	$36.63	$300.00	$700.00	$800.00
Sub Total	$259,500.00	$25,950.00	NA	NA	$1,046.65	$697.07	$16,423.50	$13,321.00	$15,224.00
Purchased Livestock									
Bulls (25)	$62,500.00	$5,250.00	100	4.00	$338.75	$225.61	$14,312.50		
Horses (15)	$18,000.00	$3,000.00	100	15.00	$105.00	$69.93	$1,000.00		
Sub Total	$80,500.00	$8,250.00	NA	NA	$443.75	$295.54	$15,312.50		
Total	**$504,000.00**	**$47,500.00**	**NA**	**NA**	**$2,351.05**	**$1,565.80**	**$39,276.50**	**$16,507.00**	**$15,224.00**
Retained Livestock (interest rate)									
Relacement Heifers (29)	$14,152.00	$14,152.00	100				$919.88		
Total	**$14,152.00**						**$919.88**		

Table 3: Monthly Cash Flow

Description	January	February	March	April	May	June	July	August	September	October	November	December	Total
Production:													
Cull Cows	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$23,760.00	$23,760.00	0.00	$47,520.00
Cull Bulls	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$3,120.00	$3,120.00	0.00	$6,240.00
Yearling Repl	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	0.00	$0.00
Heifer Calves	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$55,335.00	$55,335.00	0.00	$110,670.00
Steer Calves	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$62,208.00	$62,208.00	0.00	$124,416.00
Total Income	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$144,423.00	$144,423.00	$0.00	$288,846.00
Operating Inputs:													
Aftermath Grazing	$3,000.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$600.00	$3,000.00	$6,000.00
Grain	$153.00	$306.00	$71.40	$33.66	$33.66	$33.66	$33.66	$33.66	$33.66	$33.66	$153.00	$153.00	$1,020.00
Alfalfa Hay	$19,600.00	$19,600.00	$19,600.00	$9,800.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$9,800.00	$19,600.00	$98,000.00
Federal Grazing	$0.00	$0.00	$0.00	$568.17	$568.17	$568.17	$568.17	$568.17	$568.17	$568.17	$568.17	$0.00	$4,545.36
Horse	$450.00	$450.00	$450.00	$450.00	$450.00	$450.00	$450.00	$450.00	$450.00	$450.00	$450.00	$450.00	$5,400.00
Veterinary/Medical	$375.00	$375.00	$375.00	$375.00	$375.00	$375.00	$375.00	$375.00	$375.00	$375.00	$375.00	$375.00	$4,500.00
Marketing	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$2,888.46	$2,888.46	$0.00	$5,776.92
Checkoff	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$264.50	$264.50	$0.00	$529.00
Salt & Minerals	$229.17	$229.17	$229.17	$229.17	$229.17	$229.17	$229.17	$229.17	$229.17	$229.17	$229.17	$229.17	$2,750.00
Hired Labor	$1,125.00	$1,125.00	$1,125.00	$1,125.00	$2,250.00	$2,250.00	$2,250.00	$2,250.00	$2,250.00	$2,250.00	$1,125.00	$1,125.00	$20,250.00
Operator Labor	$2,000.00	$2,000.00	$2,000.00	$2,000.00	$2,000.00	$2,000.00	$2,000.00	$2,000.00	$2,000.00	$2,000.00	$2,000.00	$2,000.00	$24,000.00
Accounting & Legal	$250.00	$250.00	$250.00	$250.00	$250.00	$250.00	$250.00	$250.00	$250.00	$250.00	$250.00	$250.00	$3,000.00
Maintenance	$1,375.58	$1,375.58	$1,375.58	$1,375.58	$1,375.58	$1,375.58	$1,375.58	$1,375.58	$1,375.58	$1,375.58	$1,375.58	$1,375.58	$16,507.00
Fuel & Lube	$1,268.67	$1,268.67	$1,268.67	$1,268.67	$1,268.67	$1,268.67	$1,268.67	$1,268.67	$1,268.67	$1,268.67	$1,268.67	$1,268.67	$15,224.00
Utilities	$175.00	$175.00	$175.00	$175.00	$175.00	$175.00	$175.00	$175.00	$175.00	$175.00	$175.00	$175.00	$2,100.00
Miscellaneous	$250.00	$250.00	$250.00	$250.00	$250.00	$250.00	$250.00	$250.00	$250.00	$250.00	$250.00	$250.00	$3,000.00
Interest OC	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$5,527.66	$5,527.66
Total Operating	$30,251.42	$27,404.42	$27,169.82	$17,900.25	$9,225.25	$9,225.25	$9,225.25	$9,225.25	$9,225.25	$12,378.21	$21,772.55	$35,779.08	$218,129.94
Net Returns	-$30,251.42	-$27,404.42	-$27,169.82	-$17,900.25	-$9,225.25	-$9,225.25	-$9,225.25	-$9,225.25	-$9,225.25	$132,044.79	$122,650.45	-$35,779.08	$70,716.06

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