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Curtis Hoyt  
*South Dakota State University*

Dan Oedekoven  
*South Dakota State University*

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## South Dakota Beef Herd Profitability 1986-1993

Curtis Hoyt<sup>1</sup> and Dan Oedekoven<sup>2</sup>  
West River Agricultural Research and Extension Center

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### Summary

The average profitability of beef cow herds evaluated by the South Dakota Farm Business Management group has ranged from \$201 profit in 1987 to \$104 profit per cow in 1993. Average total costs per cow in a pasture drylot have increased from \$180 in 1986 to \$310 in 1993. Average total cow costs of range run have increased from \$166 in 1986 to \$302 in 1993.

High profit herds in both range run and pasture drylot had lower 8-year average total costs, \$264/cow drylot high profit compared to \$272 drylot average (-3%) and \$252/cow range high profit compared to \$264 range average (-4.5%). Yet high profit herds produced greater total income/cow: \$489/cow Drylot High Profit to \$401 Drylot Average (+22%); \$451/cow Range Run High Profit to \$392 Range Run Average (+15%).

Key Words: Cow-Calf Profitability, Cow Costs

### Introduction

Beef is the number one agricultural product produced in South Dakota. The cow/calf enterprise is the backbone of the beef industry. Beef cow herds have been profitable over the last 8 years, but costs have been increasing. This has resulted in tighter profit margins. Beef cow/calf producers must be especially aware of their costs. This study evaluates the change in income, expenses, production, and performance levels of the beef cow herds summarized in the South Dakota Farm Business Management<sup>3</sup> annual reports. The cow/calf enterprises were separated into range run cow herds typical of

western South Dakota and pasture/drylot cow herds, typical of eastern South Dakota. High profit groups were compared to the average to determine what could lead to greater profits/cow.

### Materials and Methods

Eight years of cow/calf enterprise income and expenses data from farms and ranches in South Dakota were reviewed. High profit cow/calf enterprises on ranches were separated and compared to the average. Herd size, weaning weights, and percentage of weaned calves were compared. Total income per cow, total costs per cow, total feed, pasture costs, and allocated overhead costs for machinery and equipment were included in the review. Ranches were reviewed as separated in the South Dakota Farm Business Management Summaries into Range Run Average Profit Group (RA), Range Run High Profit Group (RHP), Pasture/Drylot Average Group (DA), and Pasture/Drylot High Profit Group (DHP). Designations were according to how cows were wintered, in drylot or range settings, during the winter months.

### Results and Discussion

This study suggests that high profit cow herds are operated by ranchers who can produce heavier weaned calves (+4% RHP and +7.3% DHP weaning weights) on lower total costs. Feed costs which account for an average of 68% of the high profit group's total cost are the largest cow/calf cost. Average drylot and range run cow/calf producers spent similar percentages over the 8-year period. Average drylot/pasture total feed costs were 72.9% and range run was

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<sup>1</sup>Area Farm Management.

<sup>2</sup>Former Farm Business Management Instructor.

<sup>3</sup>In cooperation with the Office of Adult Vocational-Technical Education.

66.9% of total costs. Maintaining animal performance without increasing overall feed costs is key to higher profits. High profit range run producers had 6.4% lower total feed costs and 9.8% lower nonpasture feed costs than

average range run herds (Table 1). High profit drylot herds also had 9.7% lower total feed costs and 11.2% lower nonpasture feed costs (Table 1).

Table 1. Average to High Profit cow/calf herd comparisons, 1986-1993

	Average herds	High Profit herds	High Profit percentage change
<u>Pasture/drylot, Eastern</u>			
Number of beef cows, head	93	85	-8.6
Percentage of calves weaned	90.6	90.7	0
Avg weaning wt, lb	496	532	+7.3
Gross cow income, \$	401	489	+22
Total cost/cow, \$	272	264	-3
<b>Profit/cow, \$</b>	<b>129</b>	<b>225</b>	<b>+74</b>
Total feed costs/cow, \$	196	177	-9.7
Pasture costs/cow, \$	79	73	-7.6
Nonpasture feed costs/cow, \$	117	104	-11.2
Allocated machinery/equipment costs, \$	557	624	+12.7
<u>Range Run, Western</u>			
Number of beef cows (head)	188	204	+8.5
Percentage of calves weaned	91.3	92.3	+1
Avg weaning wt, lb	497	517	+4
Gross cow income, \$	392	451	+15
Total cost/cow, \$	264	252	-4.5
<b>Profit/cow, \$</b>	<b>128</b>	<b>199</b>	<b>+55</b>
Total feed costs/cow, \$	172	161	-6.4
Pasture costs/cow, \$	90	87	-3.3
Nonpasture feed costs/cow, \$	82	74	-9.8
Allocated machinery/equipment costs	74	68	-8.1

The average profitability of beef cow herds has ranged from \$201 profit in 1987 to \$104 profit per cow in 1993 (Table 2). Average total costs per cow in a pasture drylot have increased from \$180 in 1986 to \$310 in 1993. Average total cow costs of range run have increased from \$166 in 1986 to \$302 in 1993.

Allocated machinery and equipment costs took the largest increase from 1986 to 1993. Costs increased in every category. These costs include equipment/machinery repair, fuel, building repair, utilities, interest, labor, depreciation on equipment, machinery, and buildings. The author recognizes that, when

Table 2. Cow/calf profitability 1986-93

	Year							
	1986	1987	1988	1989	1990	1991	1992	1993
Pasture drylot average (DA)								
Gross income/cow, \$	263	377	420	414	461	414	427	434
Total cost/cow, \$	180	191	287	311	310	304	284	310
<b>Profit/cow, \$</b>	<b>83</b>	<b>186</b>	<b>133</b>	<b>103</b>	<b>151</b>	<b>110</b>	<b>143</b>	<b>124</b>
Range run average (RA)								
Gross income/cow, \$	261	370	394	440	425	421	416	406
Total cost/cow, \$	166	169	292	291	270	304	319	302
<b>Profit/cow, \$</b>	<b>95</b>	<b>201</b>	<b>102</b>	<b>149</b>	<b>155</b>	<b>117</b>	<b>97</b>	<b>104</b>

Allocated Machinery/Equipment Costs

	<u>1986</u>	<u>1993</u>	8-yr. <u>avg.</u>
Range Run Avg.	\$15.69	\$73.25	\$74.46
Range Run High Profit	11.64	98.00	67.82
Pasture Drylot Avg.	21.82	63.31	55.05
P/D High Profit	25.10	66.78	61.89

profits are available, repairs and capital improvements will and should be made, but 300 to 400% plus increases in these costs may not

be justified. Producers should become aware of their individual costs on machinery, buildings, and equipment. These expenditures are taking a larger part of the potential profit.

In conclusion, high profit producers are able to produce larger calves at average or below costs. Feed costs are approximately two-thirds of all costs. Cow/calf producers need to watch carefully machinery, building and equipment costs if they are to remain profitable.