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CORNHUSKER ECONOMICS

UNIVERSITY OF
Nebraska
Lincoln

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Institute of Agriculture & Natural Resources
Department of Agricultural Economics
<http://agecon.unl.edu/cornhuskereconomics>

University of Nebraska–Lincoln Extension

Calving Date and Wintering System Effects on Cow and Calf Performance

Market Report	Yr Ago	4 Wks Ago	5/25/12
<u>Livestock and Products,</u>			
<u>Weekly Average</u>			
Nebraska Slaughter Steers, 35-65% Choice, Live Weight.....	\$106.04	\$120.91	\$122.76
Nebraska Feeder Steers, Med. & Large Frame, 550-600 lb....	147.50	186.48	182.65
Nebraska Feeder Steers, Med. & Large Frame 750-800 lb....	122.73	151.85	153.60
Choice Boxed Beef, 600-750 lb. Carcass.....	178.18	190.00	194.88
Western Corn Belt Base Hog Price Carcass, Negotiated.....	94.13	79.03	82.33
Pork Carcass Cutout, 185 lb. Carcass, 51-52% Lean.....	91.78	77.11	79.22
Slaughter Lambs, Ch. & Pr., Heavy, Woolled, South Dakota, Direct.....	189.25	*	151.00
National Carcass Lamb Cutout, FOB.....	404.11	365.55	366.74
<u>Crops,</u>			
<u>Daily Spot Prices</u>			
Wheat, No. 1, H.W. Imperial, bu.....	8.29	5.69	6.16
Corn, No. 2, Yellow Nebraska City, bu.....	7.57	6.38	5.99
Soybeans, No. 1, Yellow Nebraska City, bu.....	13.90	14.62	13.57
Grain Sorghum, No. 2, Yellow Dorchester, cwt.....	12.04	10.48	9.63
Oats, No. 2, Heavy Minneapolis, MN, bu.....	3.83	3.58	3.18
<u>Feed</u>			
Alfalfa, Large Square Bales, Good to Premium, RFV 160-185 Northeast Nebraska, ton.....	140.00	225.00	207.50
Alfalfa, Large Rounds, Good Platte Valley, ton.....	87.50	145.00	140.00
Grass Hay, Large Rounds, Good Nebraska, ton.....	*	97.50	97.50
Dried Distillers Grains, 10% Moisture, Nebraska Average.....	219.00	231.50	215.50
Wet Distillers Grains, 65-70% Moisture, Nebraska Average.....	80.50	77.75	75.75
*No Market			

Introduction

Profitability of beef cattle production is highly dependent upon cost of production. The largest variable cost associated with cow/calf production is feed cost. One strategy to reduce cost is to extend the grazing season. Knowledge of the cows' nutritional requirements, and factors such as calving and weaning date and utilization of crop residue can be used to extend grazing. A second factor affecting profitability of beef cattle production is revenue. Cattle markets tend to have seasonal variation throughout the year and vary with respect to calf size and class, creating opportunities to match a production system with the markets. Determining the most profitable beef cattle production system requires knowledge of the productivity of possible systems.

Data from a four year study involving 217 cows/year (5/8 Red Angus, 3/8 Continental) were used to compare net returns among five cow/calf production systems. They varied both winter grazing regimes and calving season: 1) March calving cows wintered on native range; 2) March calving cows wintered on corn residue; 3) June calving cows wintered on native range; 4) June calving cows wintered on corn residue; and 5) August calving cows wintered on corn residue.

Methods and Results

Calves born in March were weaned October 31, (221 days of age). Calves born in June and August were weaned April 10, (298 and 247 days of age, respectively). Steers born in March entered the feedlot at weaning (November; calf-fed). Steers and heifers born in June and August were divided equally into two post-weaning management treatments. Half entered the



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feedlot immediately after weaning (May, calf-fed), and the other half grazed sub-irrigated meadow and entered the feedlot as yearlings (September-October).

Pre-calving body weight and body condition scores were greatest for August calving cows and least for March calving cows. Cow body condition scores at weaning were similar among calving dates, and were not affected by wintering treatment. Pregnancy rates were similar among calving dates and wintering systems.

Adjusted 205 day weaning weights were greatest for calves born in March, intermediate for calves born in August and least for calves born in June, but not affected by wintering system. Carcass weight of calf-fed steers was greatest for those born in June, followed by August and least for March. Feedlot performance was not affected by the cow wintering system. Yearlings had greater feedlot dry matter intake and average daily gain than calf-fed calves.

Average United States Department of Agriculture (USDA) reported monthly prices for the years 2007-2010 were used to value both inputs and outputs. Prices utilized were at time of purchase for feed ingredients and replacement cows and time of sale for cattle.

Costs did not differ among calving dates, but net returns were greatest for June calving cows, and least for March calving cows due to differences in weaned calf value. Wintering cows on corn residue increased net returns for June calving cows, but decreased them for March calving cows. Retaining ownership of calf-fed steers through finishing increased net returns, compared to selling at weaning. Winter treatment did not affect calf feedlot performance, and steers generated greater net returns than heifers. Net returns were greater for calf-fed cattle compared to yearling cattle when purchased at weaning and sold on a grid pricing system. Purchasing and finishing yearlings was not profitable. Net returns vary by calving date, wintering system, ownership length, post weaning management system and calf gender.

Implications

Calving date impacts cow body condition scores and calf growth rates for both pre- and postweaning periods. Winter feeding programs utilizing corn residue yield had results similar to native Sandhills winter range, and do not affect cow or calf performance. Calf gender and finishing as a calf-fed or yearling are important considerations in post weaning management. These factors need to be considered within the context of the timing of their occurrence relative to seasonal changes in the cost of inputs and the value of outputs.

Reproduction, growth performance and timing of calf and cull animal marketing are critical to profitability of production systems. Production system inputs such as harvested feeds and labor have a large influence on costs, and are a major component of profitability over which a producer has control. Seasonal trends in market prices for both inputs and outputs have an impact on profit relative to each system's production and marketing strategy. The results from this study indicate retaining ownership of steers through finishing can maintain or increase net returns. Profitability of any production system is dependent on both economic factors and physical production, and opportunity exists to alter both. Profitability does not come from one factor alone, but is a function of the whole system.

For more information on this topic or access to detailed data from this research please contact:

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