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CORNHUSKER ECONOMICS

UNIVERSITY OF
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Institute of Agriculture & Natural Resources
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Calf Finishing Versus Background/Yearling Finishing Systems: Where's the Profit?

Market Report	Yr Ago	4 Wks Ago	9/19/08
<u>Livestock and Products,</u>			
<u>Weekly Average</u>			
Nebraska Slaughter Steers, 35-65% Choice, Live Weight.	\$93.60	\$98.56	\$97.31
Nebraska Feeder Steers, Med. & Large Frame, 550-600 lb.	125.83	123.37	117.70
Nebraska Feeder Steers, Med. & Large Frame 750-800 lb.	121.05	117.72	111.74
Choice Boxed Beef, 600-750 lb. Carcass.	145.73	162.80	160.67
Western Corn Belt Base Hog Price Carcass, Negotiated.	63.41	81.69	68.48
Feeder Pigs, National Direct 50 lbs, FOB.	47.89	54.89	42.53
Pork Carcass Cutout, 185 lb. Carcass, 51-52% Lean.	66.42	91.15	76.53
Slaughter Lambs, Ch. & Pr., Heavy, Wooled, South Dakota, Direct.	103.25	99.00	96.62
National Carcass Lamb Cutout, FOB.	257.83	278.48	269.62
<u>Crops,</u>			
<u>Daily Spot Prices</u>			
Wheat, No. 1, H.W. Imperial, bu.	7.64	8.07	6.40
Corn, No. 2, Yellow Omaha, bu.	3.34	5.69	5.27
Soybeans, No. 1, Yellow Omaha, bu.	8.78	13.02	11.41
Grain Sorghum, No. 2, Yellow Dorchester, cwt.	5.79	8.73	7.98
Oats, No. 2, Heavy Minneapolis, MN, bu.	2.71	*	*
<u>Feed</u>			
Alfalfa, Large Square Bales, Good to Premium, RFV 160-185 Northeast Nebraska, ton.	135.00	190.00	190.00
Alfalfa, Large Rounds, Good Platte Valley, ton.	87.50	77.50	77.50
Grass Hay, Large Rounds, Premium Nebraska, ton.	*	88.75	85.00
Dried Distillers Grains, 10% Moisture, Nebraska Average.	*	175.00	168.50
Wet Distillers Grains, 65-70% Moisture, Nebraska Average.	38.50	59.50	59.75
*No Market			

As corn prices have more than doubled in the last two years, cattle producers continually look for alternatives to finishing calves exclusively in feedlots on high concentrate rations. Historically, Nebraska feeders have placed a high proportion of fall-weaned calves on feed in October and November and sold them as fed cattle in May. However, as corn prices increase, livestock producers have more incentive to background calves during the winter and following summer on forages, and delay placing the cattle on feed until they are long yearlings at the end of the summer grazing season.

Based on University of Nebraska–Lincoln research examining the performance of cattle in both types of systems from 1996 to 2007, the relative difference in returns to calf finishing versus yearling systems is relatively small (about \$4.00/head) on average, but highly variable (Figure 1 on next page). Average returns to the calf and yearling system were \$18.54/head and \$14.33/head, but ranged from losses exceeding \$177/head to profits above \$347/head. In the ten years of the study where both systems were directly comparable, the yearling system was more profitable than calf finishing in four years and less profitable in six of the years.

As producers considering retained ownership look ahead to this fall's calf crop, decisions need to be made whether to: 1) place calves on feed, or 2) background calves on corn residue over the winter months and possibly run the short yearlings on grass pasture next summer, with the option of placing them on feed early next fall. Assuming cattle performance in these systems is similar to the previous years in this study and using forecasted prices as of September 17, 2008, it appears that the yearling system could generate returns of approximately \$88/head, compared to \$10.50/head for calves placed directly on feed and targeted to sell in May 2009. This is based on 640 lb. feeder steers being placed on feed this November at \$117/cwt and 525 lb. feeder steers entering the backgrounding/yearling finishing system this November at \$126/cwt. The steers in each system would be sold for a forecasted \$164/cwt and \$169/cwt (dressed grid price) in May 2009 and December 2009, respectively. Corn price was forecasted to be \$5.50/bu and \$5.60/bu for the calf-feds and



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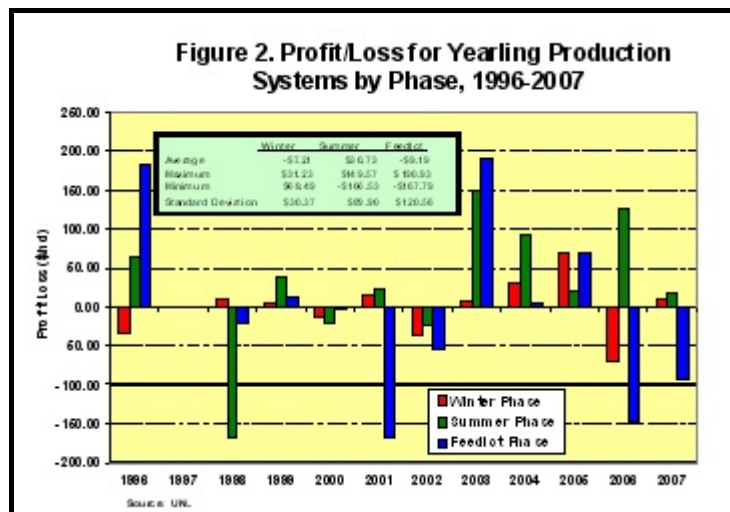
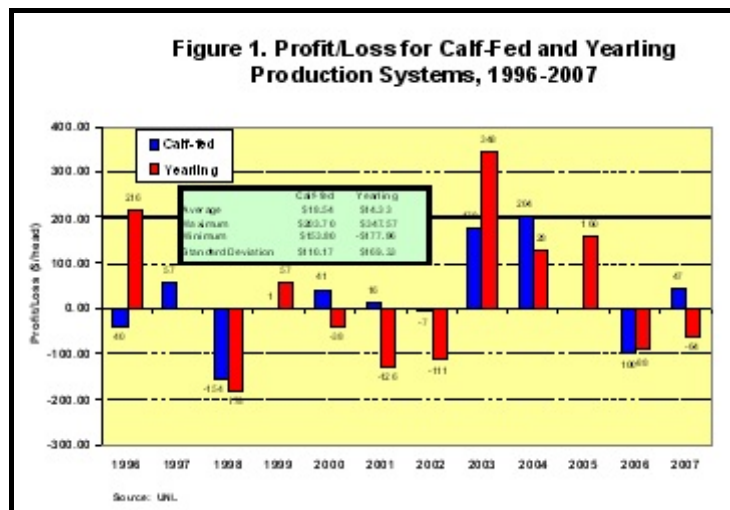
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yearlings, respectively. The steers in the yearling system would be backgrounded on grass at an expected cost of \$29/AUM.

This research also explored the profitability of each phase within the yearling production system. In the yearling systems' winter phase, calves were backgrounded on corn residue from November through May and supplemented with wet corn gluten feed. As approximately 750/lb. yearlings, the steers entered the summer phase where they grazed cool and warm season grass pasture through August. The long yearlings then entered the feedlot phase at which point they were finished to slaughter weight and harvested near the first of December. Results of that profitability analysis are illustrated in Figure 2.

Differences in cost of gain in the feedlot versus forage based gains suggest that some phases of the production system can be more profitable than others. The overall \$14.33/head average return for yearlings resulted from an average summer grazing profit of \$30.73/head, but was offset by average losses of \$7.21/head and \$9.19/head in the winter and feedlot finishing phases, respectively. This analysis suggests that to maximize returns, a producer should, on average, focus on summer grazing programs for short yearlings. Alternatively, backgrounding through the winter and summer on forage has typically been more profitable than continuing to finish the cattle in the fall.

Looking ahead to the 2008 fall calf crop and using the price forecasts described above, the winter and summer grazing phases may not be as profitable as the yearling finishing phase. Current budget projections point to about \$81/head returns possible for the finishing phase in fall 2009, while winter corn stalk and summer grass pasture grazing appear to offer returns of approximately -\$3.70/head and \$10.90/head, respectively. These projections are based on the forecasted value for the feeder animal entering and leaving each phase. In other words, the expected market value for the feeder steer exiting the winter backgrounding phase becomes the 'selling price' to that phase and the 'purchase price' to the summer phase. So, each of the three phases can be viewed as a separate enterprise. Of course, as prices change over the course of the next year, the relative profitability of each of these systems will change as well. Currently, it looks like



backgrounding through next summer will be profitable, with a greater opportunity to make money on the calves by finishing out the long yearlings. But, lower fed cattle prices and other factors might change that decision.

When considering switching production systems or capitalizing on profitable phase(s) within a system based on average profits, caution is warranted. Previous years' returns were highly variable for both calf-fed and yearling systems, but standard deviations of historical profits were larger for the yearling system: \$169.33/head versus \$110.17/head (Figure 1). This indicates that the yearling system has been relatively more risky over time. This makes sense, since the cattle in the yearling system are owned for longer periods of time and are grown and fed using several diverse methods (e.g., winter corn stalks, summer pasture and feedlot). Also, as shown in Figure 2,

the standard deviation (i.e., variability) of returns to the winter, summer and feedlot finishing phases of the production system were \$30/head, \$90/head and \$121/head, implying that finishing the long yearling cattle was significantly more risky than backgrounding. Thus, the decision of switching systems or phases depends on an individual's unique risk aversion level.

For more information, refer to:

- Small, R.M., D.R. Mark, D.M. Feuz, T.J. Klopfenstein, W.A. Griffin and D.A. Adams. "Profit Variability for Calf-fed and Yearling Production Systems." 2009 Nebraska Beef Cattle Report. University of Nebraska-Lincoln Extension, December 2008.
- Griffin, W.A., T.J. Klopfenstein, G.E. Erickson, D.M. Feuz and J.C. MacDonald. "Comparison of a Long Yearling System and Calf-fed Performance and Economics." 2007 Nebraska Beef Cattle Report. University of Nebraska-Lincoln Extension

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