

In The Cattle Markets

Darrell R. Mark, Ph.D., Assoc. Professor

Rebecca M. Small, Graduate Research Assistant

Department of Agricultural Economics, University of Nebraska–Lincoln

Are We There Yet?

I've been asked that question a lot in the last couple weeks – not by tired kids on some Griswold-like family vacation to Wally World, but rather by livestock feeders eyeing the plummet in corn prices with some hope of reversing (or at least slowing) the deep losses they've been experiencing. Although corn prices have dropped, fed cattle prices have also dropped about \$8/cwt in the past month. Since nearby corn futures posted a high at \$7.625/bu the last week of June, corn has dropped \$2.185/bu to its low at \$5.44/bu on July 23. This precipitous decline in corn price resulted from ideas that corn crop conditions have significantly improved in recent weeks. In fact, as of Sunday, June 20, 65% of the national corn crop was rated good or excellent, three percentage points *higher* than last year at this time. The actions of traders in the corn futures market clearly indicate that many believe nearly trendline yields (about a 12 billion bushel corn crop) are still possible and the 2008-09 ending stocks will be closer to a comfortable level (around one billion bushels). Because this year's planted acreage is yet uncertain and yield prospects are highly variable, reasonable arguments could be made that corn prices may rebound at some point and move higher into fall harvest. Nonetheless, now is a good time to pencil out some breakevens and see if feeding yearlings or calves could be profitable. And, for those with cattle on feed and purchasing corn, it is a time to watch for a bottom in the corn market and consider making purchases.

Back in the May 5, 2008 issue of [In the Cattle Markets](#), I talked about the difference hedging corn, distillers grain, and fed cattle prices makes in the returns to feeding yearlings. Let's again start with similar assumptions (so you can go back and compare to that article) and calculate the projected return to feeding yearling steers. Last week's average price for 750 lb. steers in Nebraska was \$117.77/cwt. Assuming that those steers could gain 3.69 lbs per day, they would reach 1,300 lbs on November 30, 2008 after being on feed for 150 days. I also assume feed conversion is 6.5 lbs. feed/lb. gain (dry matter basis), 1.5% death loss, \$15/head for processing, and \$0.35/head/day for yardage. Corn in Omaha, NE could be purchased for \$5.25/bu this week and wet distillers grain plus solubles (WDGS) could be bought for \$58-72.50/ton (average of \$65.25/ton). The finished steers could be hedged for an expected price of \$105.81/cwt (based on December futures at \$107.10/cwt, an expected basis of -\$1.04/cwt, and \$0.25/cwt risk management costs). Assuming these prices were locked in today (see Scenario 1, Table 1), the feeding cost of gain is just under \$80/cwt, and a profit of nearly \$53/head is possible. That's about \$7/head better than back on April 24 for the same cattle with the same production assumptions.

Since the high in the corn market in late June, prices for both 500-600 lb. and 700-800 lb. steers have went up about \$4/cwt on average. In other words, the drop in corn prices has not

resulted in the spread between calf and yearling prices widening as we would expect (typically the premium for calves increases as corn price decreases). Instead, calves have become cheaper relative to yearlings. And, that current benefit is reflected in a bottom-line for feeding calves that is almost \$40/head better than yearlings. Examine Scenario 1 on Table 2. It has all the same feed cost assumptions as Scenario 1 in Table 1: that corn, WDGS, and fed cattle prices are all hedged when the cattle are purchased. I updated the production assumptions to reflect feeding calves (i.e., lower average daily gain, better feed conversion, lower selling weight, etc.). These calves, if they gain 3.16 lbs per day, would finish at 1,250 lbs. on February 1, 2009 and could be hedged at \$105.02/cwt. The feeding cost of gain is \$76.71/cwt and the return to feeding is \$90/head.

Despite there being more profit *potential* on calves under these current market prices, there is more risk during the feeding period as well. Consider the other scenarios in Tables 1 and 2. Drops in WDGS price (Scenario 2) are of course favorable, and benefit calf finishing more than yearling finishing (profit improves by \$15.86/head for calves and \$13.30/head for yearlings compared to Scenario 1). But, notice that in Scenarios 3 and 4 when we suppose that corn and WDGS is not hedged and bought at \$6/bu and \$7/bu, respectively, (with WDGS at 85% of corn price), the returns to feeding calves drops more relative to yearlings. At \$7/bu corn, the calves make \$114/head less in Scenario 4 than in Scenario 1, while the yearlings make \$96/head less.

The returns shown in the first couple columns of Tables 1 and 2 are encouraging, but it is important to note that those positive returns could be eroded fairly quickly if the corn market rebounds or fed cattle prices drop. Notice that for exactly the same cattle (e.g., same performance), losses of \$192 and \$144 per head can result in reasonably possible price scenarios (see Scenario 5 in Tables 1 and 2). Also, all these returns assume that cattle performance is at least as good as projected.

These production and price risks are also important to consider when evaluating calf versus yearling finishing systems in their entirety (backgrounding plus finishing). As corn prices moved dramatically higher in the past two years, significantly more interest in backgrounding systems that utilize more grass-based gains has developed for fall-weaned calves. We have calculated the returns to calf-fed and backgrounding + yearling finishing systems from 1996 through 2007 and found significant variability in those returns, particularly for yearling systems. Calf-feds were evaluated as being placed on feed in November and finished in May (based on actual performance data), while yearling system calves were backgrounded on crop residue during the winter, cool and warm season grasses in the summer, and finished in the feedyard during the following fall as long yearlings. Profits for the calf-fed systems ranged from \$221.57/head to -\$151.44/head, while the yearling system profits ranged from \$356.48/head to -\$171.03/head. On average, both production systems had positive profits for the years evaluated in the budgets, and the yearling systems showed an average profit of only \$0.33/head more than the calf-fed systems' average profit. However, yearling system profits were more variable (standard deviation of profit of \$170/head compared to \$110/head for calf-feds), suggesting that while yearling systems may offer a higher maximum profit under certain market conditions, there is more risk of loss as well. Producers should consider the greater profit variability associated with backgrounding calves and then finishing yearlings.

Budgets assuming performance similar to the past couple years, along with projections of prices based on the futures market, show that the backgrounding + yearling finishing system offers profits greater than those provided by calf-fed systems for this fall's calf crop. In fact, given the assumptions made in the budgets, the calves produced in a yearling production system similar to that described above are forecasted to net \$37.77/head more than calf-feds (\$105/head compared to \$67/head).

So, "Are we there yet?" It appears that we are. There is a potential profit *right now*. But, just because we are there now, doesn't mean we will be there for long. Typically, profits are bid out of the market pretty quickly in this margin business. Remember, there are significant risks that need to be hedged and cattle performance has to be good to get these returns. I suppose that is always the case in cattle feeding though.

Table 1. Ration Cost & Profit/Loss for Yearling Finishing (750 lbs to 1300 lbs) from 8/23/2008 to 11/30/2008 Under Various Feed Cost & Fed Cattle Price Hedging Strategies¹

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
Corn Price Hedged?	Yes, on 7/23/2008	Yes, on 7/23/2008	No, buy for \$6/bu avg	No, buy for \$7/bu avg	No, buy for \$6/bu avg
WDGS Price Hedged?	Yes, Avg Price on 7/23/2008	Yes, Low Price on 8/23/2008	No, buy for 85% of corn price	No, buy for 85% of corn price	No, buy for 85% of corn price
Fed Cattle Price Hedged?	Yes, on 7/23/2008	Yes, on 7/23/2008	Yes, on 7/23/2008	Yes, on 4/24/2008	No, sell for \$90/cwt
Feeder Cattle Price	117.77	117.77	117.77	117.77	117.77
Fed Cattle Price	105.81	105.81	105.81	105.81	90
Corn Price, \$/bu	5.25	5.25	6.00	7.00	6.00
WDGS Price, \$/ton ²	65.25	58	74.13	86.48	74.13
Alfalfa Hay Price, \$/ton	85	85	85	85	85
Supplement Price, \$/ton	270	270	270	270	270
Ration Cost, \$/ton DM ³	208.15	199.86	233.56	268.02	233.56
Total Feeding cost/hd	412.26	399.12	452.54	507.19	451.00
Feeding Cost of Gain, \$/cwt	79.89	77.48	87.31	97.37	87.03
Profit/Loss, \$/head	52.84	66.14	12.05	-43.28	-191.92

¹Assumed average daily gain of 3.69 lbs/day, feed conversion of 6.5 lbs feed/lb gain, and 150 days on feed. Assumed 1.5% death loss, \$15/head for processing/medicine, and \$0.35/head/day yardage. Interest on feeder steer and half of feed and variable costs charged at 7%.

²Priced FOB feedyard with a 60 mile haul at \$3.00/loaded mile.

³Ration was 49% corn, 40% wet distillers grains plus solubles (WDGS), 7% alfalfa hay, and 4% supplement, all on a dry matter basis.

Table 2. Ration Cost & Profit/Loss for Calf Finishing (550 lbs to 1250 lbs) from 8/23/2008 to 2/1/2009 Under Various Feed Cost & Fed Cattle Price Hedging Strategies¹

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
Corn Price Hedged?	Yes, on 7/23/2008	Yes, on 7/23/2008	No, buy for \$6/bu avg	No, buy for \$7/bu avg	No, buy for \$6/bu avg
WDGS Price Hedged?	Yes, Avg Price on 7/23/2008	Yes, Low Price on 8/23/2008	No, buy for 85% of corn price	No, buy for 85% of corn price	No, buy for 85% of corn price
Fed Cattle Price Hedged?	Yes, on 7/23/2008	Yes, on 7/23/2008	Yes, on 7/23/2008	Yes, on 4/24/2008	No, sell for \$90/cwt
Feeder Cattle Price	124.57	124.57	124.57	124.57	124.57
Fed Cattle Price	105.02	105.02	105.02	105.02	90
Corn Price, \$/bu	5.25	5.25	6.00	7.00	6.00
WDGS Price, \$/ton ²	65.25	58	74.13	86.48	74.13
Alfalfa Hay Price, \$/ton	85	85	85	85	85
Supplement Price, \$/ton	270	270	270	270	270
Ration Cost, \$/ton DM ³	208.15	199.86	233.56	268.02	233.56
Total Feeding cost/hd	562.82	486.62	549.94	614.7	548.25
Feeding Cost of Gain, \$/cwt	76.71	74.45	83.66	93.08	83.41
Profit/Loss, \$/head	90.62	106.48	41.99	-23.97	-144.04

¹Assumed average daily gain of 3.16 lbs/day, feed conversion of 6.0 lbs feed/lb gain, and 194 days on feed. Assumed 1.8% death loss, \$18/head for processing/medicine, and \$0.35/head/day yardage. Interest on feeder steer and half of feed and variable costs charged at 7%.

²Priced FOB feedyard with a 60 mile haul at \$3.00/loaded mile.

³Ration was 49% corn, 40% wet distillers grains plus solubles (WDGS), 7% alfalfa hay, and 4% supplement, all on a dry matter basis.

The Markets

Last week, the fed cattle market was \$2-3 dollars lower on a dressed and live weight basis in Nebraska and Kansas. Live weight prices in Kansas were \$96-97/cwt while dressed prices in Nebraska were \$154-155/cwt. For the week, Choice boxed beef averaged \$170.77, \$2.57 lower than the previous week but nearly \$28 more than last year. The spread between Choice and Select widened to average nearly \$8 last week. Yearling feeder cattle prices were lower in Nebraska last week. Steer calf prices were \$5-6 lower, averaging nearly \$125/cwt. Yearling steer prices averaged about \$117/cwt, \$0.82 less than the previous week. The decline in feeder cattle prices came in spite of a \$0.51/bu drop (through Thursday) in the Omaha, NE corn market. Dried distillers grain prices (basis Iowa) were steady at \$195/ton.

	Week of 7/18/08	Week of 07/11/08	Week of 07/20/07
Kansas Fed Steer Price, live weight	\$96.67	\$99.39	\$89.91
Nebraska Fed Steer Price, dressed weight	\$154.47	\$157.83	\$140.01
700-800 lb. Feeder Steer Price, KS 3 market average	\$114.97	\$114.84	\$117.43
500-600 lb. Feeder Steer Price, KS 3 market average	--	\$121.99	\$130.57
700-800 lb. Feeder Steer Price, NE 7 market average	\$117.77	\$118.59	\$120.22
500-600 lb. Feeder Steer Price, NE 7 market average	\$124.57	\$130.35	\$129.16
Choice Boxed Beef Price, 600-900 lb. carcass	\$170.77	\$173.34	\$142.83
Choice-Select Spread, 600-900 lb. carcass	\$7.95	\$7.19	\$6.11
Corn Price, Omaha, NE, \$/bu (Thursday quote)	\$5.79	\$6.30	\$3.06
DDG Wholesale Price, Iowa, \$/ton	\$195.00	\$195.00	\$95.00