

In The Cattle Markets

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The Difference Risk Management Makes

The impact of higher corn prices on livestock feeding operations has generated significant interest lately, even from the nonagricultural community. News of deep losses and operations exiting the business are prevalent. Anecdotally, I've heard of losses this past winter ranging from \$100/head to \$400/head (yes, a *loss* of \$400/head). Interestingly, I also know of cattle feeders that have been making a small profit on cattle too. The question I'm often asked then is why are some feeders making money and others are losing so much money. While there are a myriad of possible reasons, it appears that one likely difference among these operations is how they manage price risk.

I doubt if there has been a time in recent history where the feeding cost of gain is so variable across different cattle feeders. Again anecdotally, I know of feedyards in the same geographic area with \$65/cwt cost of gain and those over \$90/cwt cost of gain. The ones with the low feeding cost of gain have been aggressive about managing corn price risk, but also ingenious about finding alternative feedstuffs, contracting them below market average prices, and learning how to store and feed the products. One way some feeders have accomplished this is to purchase distillers grains during the seasonal low in the summer and store it through the winter (see [graph](#) in September 5, 2006 issue of *In the Cattle Markets*).

Let's examine the potential profit/loss from feeding a 750 lb. steer to 1,300 lbs. this past winter under several cattle and feedstuff prices that represent various hedging strategies described in the five scenarios of Table 1. The ration composition, cattle performance, feeder cattle input price, and expenses (other than corn and WDGS prices) were held fixed across the five scenarios. On November 20, 2007, a 750 lb. feeder steer could be purchased in Nebraska for an average price of \$115.34/cwt (this was held constant across all scenarios). In Scenario 1, I assumed that all of the corn and WDGS was purchased (or cash contracted) for the prevailing Nebraska prices of \$3.77/bu and \$45/ton on the day the cattle were purchased. Similarly, I assumed the fed cattle sales price was hedged in the April 2008 futures market on November 20, 2007 and an expected price of \$99.43/cwt would be realized with an average Nebraska basis of \$0.91/cwt. By locking in these prices, the ration cost was \$155/ton (DM basis) and the total cost to feed the steer was \$71.99/cwt. This provided a profit of \$31.58/head. The same pricing assumptions were made in Scenario 2, with the exception that the WDGS was contracted at the low end of the reported WDGS price range, which on November 20, 2007 was \$39-51/ton, instead of the \$45/ton average price. For the feeders that can find the best deals or purchase in large enough quantities to get the lowest price, feeding cost of gain dropped \$2.26/cwt and profit improved by \$12/head in Scenario 2.

Not hedging the fed cattle sales price had a bigger impact on the bottom line, however. In Scenario 3, all the feed prices were the same as in Scenario 1, but the fed cattle were not

hedged. Instead, the average Nebraska direct steer price for the week of April 18, 2008 was used as the sales price. By not hedging the fed cattle price at \$99.43/cwt and taking the spot market price of \$90.33/cwt, a net loss of nearly \$86/head would have been realized, \$117/head less than the fully hedged Scenario 1 strategy. In Scenario 4, I assumed as before that the fed cattle price would be hedged but that the corn and WDGS price would be purchased hand-to-mouth. So, average Nebraska cash corn and WDGS prices for the November 20, 2007 to April 18, 2008 feeding period were used. This increased the corn price in the ration to \$4.76/bu and the WDGS price to \$57.04/ton. As a result, the ration cost increased to \$189/ton and the feeding cost of gain increased to \$83/cwt. The cattle lost nearly \$30/head in this scenario when the corn and WDGS prices were not hedged.

What happens when none of the prices were hedged? In Scenario 5, I assumed that the fed cattle sale was not hedged and the corn and WDGS was purchased at the average cash prices during the feeding period. By not hedging the feed costs and fed cattle price, these cattle (with the same performance, etc.) now lost more than \$147/head.

It's easy to look backwards and identify the most profitable strategy. What about current placements? Let's again look at five reasonably likely scenarios in Table 2. For comparison purposes, all cattle performance and ration assumptions remain the same as before, as well as expenses other than the feeder steer and feed. The 750 lb. steer could be purchased for \$104.33/cwt on April 24, 2008 based on the average Nebraska cash market price. Cash corn and WDGS could have been contracted or purchased for \$5.60/bu and \$66.75/ton on April 24, 2008. The fed cattle price could be hedged on April 24 by selling October live cattle futures at \$103.97/cwt and result in an expected sales price of \$102.64/head after adjusting for Nebraska basis. Even by hedging the feed costs at these relatively high prices, the fed cattle price could be hedged at a high price too, and a profit of \$46/head could still be realized – even at \$92/cwt cost of gain. Scenario 2 considers the same situation, but that the WDGS is obtained for the lowest price in the reported range during the week of April 24 (\$56/ton, compared to the average of \$66.75/ton). This drops feeding cost of gain by \$4/cwt and improves profits by \$22/head compared to Scenario 1.

In Scenario 3 and 4, the fed cattle price remains hedged at \$102.64/cwt, but the feed costs are not. I assumed that the corn price paid on average for the feeding period was \$6/bu and \$7/bu in Scenarios 3 and 4, respectively, and that the WDGS was obtained for 85% of the corn price (on a dry matter basis). This increased feeding cost of gain to \$97.44/cwt and \$108.80/cwt. Note that even in Scenario 3 (\$6/bu corn), a profit of nearly \$16/head can be realized if the fed cattle price is hedged. At \$7/bu corn (Scenario 4), a loss of \$46.57/head results. Compare this to Scenario 5 where the fed cattle price was not hedged either and was assumed to drop to \$90/cwt while corn was \$6/bu. Now the loss approaches \$150/head.

What's the point of all this? First, there are ways to be profitable even with expensive feed grain prices—but it isn't necessarily easy. Second, contracting makes a difference in these volatile markets. It may not be the most profitable strategy in the future, but it should help avoid the big potential losses too. Thirdly, inherent in this analysis is the idea that if you can pencil out and hedge a potential profit (or reasonable breakeven), then buying the feeder steers at the market price makes sense. But, if it doesn't calculate to a positive bottom line, it would be best not to buy the feeders—“betting on the come” is getting more and more risky when we have so much more feed grain price volatility than in the past.

Table 1. Ration Cost & Profit/Loss for Yearling Finishing (750 lbs to 1300 lbs) from 11/20/2007 to 4/18/2008 Under Various Feed Cost & Fed Cattle Price Hedging Strategies¹

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
Corn Price Hedged?	Yes, on 11/20/2007	Yes, on 11/20/2007	Yes, on 11/20/2007	No, bought hand-to-mouth	No, bought hand-to-mouth
WDGS Price Hedged?	Yes, Avg Price on 11/20/2007	Yes, Low Price on 11/20/2007	Yes, Avg Price on 11/20/2007	No, bought hand-to-mouth	No, bought hand-to-mouth
Fed Cattle Price Hedged?	Yes, on 11/20/2007	Yes, on 11/20/2007	No, sold cash on 4/18/08	Yes, on 11/20/2007	No, sold cash on 4/18/08
Feeder Cattle Price	115.34	115.34	115.34	115.34	115.34
Fed Cattle Price	99.43	99.43	90.33	99.43	90.33
Corn Price, \$/bu	3.77	3.77	3.77	4.76	4.76
WDGS Price, \$/ton ²	45	39	45	57.04	57.04
Alfalfa Hay Price, \$/ton	87.5	87.5	87.5	87.5	87.5
Supplement Price, \$/ton	270	270	270	270	270
Ration Cost, \$/ton DM ³	155.09	148.23	155.09	188.99	188.99
Total Feeding cost/hd	366.02	353.77	365.14	426.63	425.74
Feeding Cost of Gain, \$/cwt	71.99	69.73	71.83	83.17	83.01
Profit/Loss, \$/head	31.58	44.01	-85.82	-29.90	-147.30

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 Yearling Finishing (750 lbs to 1300 lbs) from 4/24/2008 to 9/21/2008 Under Various Feed Cost & Fed Cattle Price Hedging Strategies¹

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
Corn Price Hedged?	Yes, on 4/24/2008	Yes, on 4/24/2008	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 4/24/2008	Yes, Low Price on 4/24/2008	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 4/24/2008	Yes, on 4/24/2008	Yes, on 4/24/2008	Yes, on 4/24/2008	No, sell for \$90/cwt
Feeder Cattle Price	104.33	104.33	104.33	104.33	104.33
Fed Cattle Price	102.64	102.64	102.64	102.64	90
Corn Price, \$/bu	5.60	5.60	6.00	7.00	6.00
WDGS Price, \$/ton ²	66.75	56	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	217.18	204.9	233.75	268.22	233.75
Total Feeding cost/hd	476.71	454.75	506.34	567.95	505.1
Feeding Cost of Gain, \$/cwt	91.98	87.93	97.44	108.8	97.21
Profit/Loss, \$/head	45.97	68.24	15.92	-46.57	-147.15

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.

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The Markets

Last week, the fed cattle market was mostly steady in Nebraska and Kansas. Live weight prices in Kansas were steady at \$92/cwt. Dressed cattle prices in Nebraska were down \$1-2 from the previous week, but live weight prices were steady to \$0.50/cwt higher. For the week, Choice boxed beef averaged \$154.85, just slightly higher than the previous week. The spread between Choice and Select narrowed by \$0.73 last week but is still close to \$9/cwt smaller than last year. Feeder cattle prices rallied strongly in Nebraska last week, with steer calf prices averaging close to \$9/cwt higher and yearling steers being \$2.25 higher. Calf prices were about \$2/cwt higher in Kansas as well, but yearling prices were about \$2/cwt lower in Kansas. The strength in feeder calf prices came in spite of a higher corn market last week. On Thursday, corn prices in Omaha, NE were \$0.28/bu higher than the previous week as the market rallied on concerns about slow planting progress. Dried distillers grain prices (basis Iowa) were steady last week, but close to \$70/ton more than last year.

	Week of 5/2/08	Week of 04/25/08	Week of 05/04/07
Kansas Fed Steer Price, live weight	\$92.04	\$92.00	\$96.28
Nebraska Fed Steer Price, dressed weight	\$148.88	\$150.00	\$154.38
700-800 lb. Feeder Steer Price, KS 3 market average	\$108.01	\$109.72	\$109.89
500-600 lb. Feeder Steer Price, KS 3 market average	\$124.43	\$122.31	\$125.04
700-800 lb. Feeder Steer Price, NE 7 market average	\$107.17	\$104.92	\$113.44
500-600 lb. Feeder Steer Price, NE 7 market average	\$128.76	\$119.98	\$130.59
Choice Boxed Beef Price, 600-900 lb. carcass	\$154.85	\$154.50	\$156.48
Choice-Select Spread, 600-900 lb. carcass	\$2.47	\$3.20	\$11.35
Corn Price, Omaha, NE, \$/bu (Thursday quote)	\$5.75	\$5.47	\$3.65
DDG Wholesale Price, Iowa, \$/ton	\$172.50	\$172.50	\$105.00