## Iowa Farm Outlook



## Fall Feeder Cattle Marketing Decisions

Cow-calf producers are considering fall calf marketing decision and feedlots are also evaluating their placement decisions. While market forces impacting projected feeding profits will determine feeder cattle price levels, there are management factors that can influence the price the seller receives for the calves and the profit potential for the buyer.

## Market conditions...

Year-to-date cattle slaughter and beef production is ahead of the same period in 2005. The August cattle on feed inventory in the 1000+ capacity feedlots was 10.8 million head, up $7.2 \%$ from the year before and the second largest August inventory since at least 1996 when USDA changed report formats. The largest inventory for this month was 2001 ahead of a lot of red ink in 2002. Carcass weights continue to be a challenge. While average carcass weights have moderated in large part due to increased cow slaughter, steer carcass weights are near a record. Weights typically increase seasonally into November.

Drought in the Great Plains has pulled placements to the feedlots ahead of schedule. The number of placements Jan-Jul is up $4.8 \%$ over the same period in 2005 and July placements were up $17 \%$ from the year before. On average the cattle were placed at lower weights than last year. The estimated average weight of July placement was 697 lbs compared to 710 lbs the year before. This is due to a $43 \%$ increase in the number of placements weighing under 600 lbs and $19 \%$ more placements weighing 600-699 lbs. It is important to note that placements were also up 5\% in the 700-799 and 800+ weight classes. While the focus is on more light-weight placements that will postpone the marketing date, there were also more heavy cattle placed that will come to slaughter on schedule. The lighter placements may also lead to lighter carcass weights at slaughter time, but there is a lot of product to move before then. In spite of these cautions, Live Cattle futures set life of contract highs August 30 and feeder cattle were near contract highs set earlier.

Cash fed cattle prices have been stronger in recent weeks than most analysts expected. Demand, at least for live cattle and presumably for beef appears strong. There is a concern that the higher gas prices were impacting consumer spending on beef at mid-range restaurants and grocery stores. However, packers were aggressive in preparing for Labor Day weekend featuring. In spite of higher selling prices recently, they are still below breakeven for most feedlots given the prices paid for feeder cattle earlier. If these losses continue it will make for more cautious buyers this fall.

## What are Feeder Cattle Worth???

Table 1 is a simple breakeven analysis for feeding a steer calf and yearling steer at different corn and fed cattle prices. The assumptions about the inputs used are listed in the table. These estimates are based on the assumptions stated, i.e., performance, inputs used, and input prices. Because the "Target Return" is \$0, no
profit over cost, this is the most a buyer could pay and breakeven on the cattle. For example, if a feedlot thinks that fed cattle will sell for $\$ 91$ next spring and value their corn at $\$ 2.00 /$ bu the most they could pay for a 550 lb . steer is $\$ 136.76$. If the buyer has different expectations for selling price, corn prices, performance, or other costs they can adjust their bid accordingly. Ultimately, feeder cattle are worth whatever buyers are willing to pay, but this table provides some insight into how different factors will impact that decision.

| Steer Calf | Corn |  |  | Fed Cattle Selling Price |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Inputs | Price | \$87.00 | \$89.00 | \$91.00 | \$93.00 | \$95.00 |
| In weight | 550 | \$1.60 | 133.79 | 137.98 | 142.18 | 146.37 | 150.57 |
| Out weight | 1200 | \$1.70 | 132.43 | 136.63 | 140.82 | 145.02 | 149.21 |
| Target ADG | 3.1 | \$1.80 | 131.08 | 135.27 | 139.47 | 143.66 | 147.86 |
| Death loss | 1.50\% | \$1.90 | 129.72 | 133.92 | 138.11 | 142.31 | 146.50 |
| Corn (bu) | 76 | \$2.00 | 128.37 | 132.56 | 136.76 | 140.95 | 145.15 |
| Hay (ton) | 0.44 | \$2.10 | 127.01 | 131.21 | 135.40 | 139.60 | 143.79 |
| Hay Price (\$/t) | \$60.00 | \$2.20 | 125.66 | 129.85 | 134.05 | 138.24 | 142.44 |
| Supplement (\$/hd) | \$20.00 | \$2.30 | 124.30 | 128.50 | 132.69 | 136.89 | 141.08 |
| Interest | 7.0\% | \$2.40 | 122.95 | 127.14 | 131.34 | 135.53 | 139.73 |
| Yardage (\$/hd/day) | \$0.30 | \$2.50 | 121.59 | 125.79 | 129.98 | 134.18 | 138.37 |
| Vet-Med | \$15.00 | \$2.60 | 120.24 | 124.43 | 128.63 | 132.82 | 137.02 |
| Trucking | \$15.00 | \$2.70 | 118.88 | 123.08 | 127.27 | 131.47 | 135.66 |
| Other | \$5.00 | \$2.80 | 117.53 | 121.72 | 125.92 | 130.11 | 134.31 |
| Target Return | \$0.00 | \$2.90 | 116.17 | 120.37 | 124.56 | 128.76 | 132.95 |
| Yearling Steer |  | Corn | Fed Cattle Selling Price |  |  |  |  |
|  | Inputs | Price | \$87.00 | \$89.00 | \$91.00 | \$93.00 | \$95.00 |
| In weight | 750 | \$1.60 | 110.88 | 114.08 | 117.29 | 120.49 | 123.70 |
| Out weight | 1250 | \$1.70 | 110.04 | 113.25 | 116.45 | 119.66 | 122.86 |
| Target ADG | 3.2 | \$1.80 | 109.21 | 112.41 | 115.62 | 118.82 | 122.03 |
| Death loss | 0.75\% | \$1.90 | 108.37 | 111.58 | 114.78 | 117.99 | 121.19 |
| Corn (bu) | 64.2 | \$2.00 | 107.54 | 110.74 | 113.95 | 117.15 | 120.36 |
| Hay (ton) | 0.37 | \$2.10 | 106.70 | 109.91 | 113.11 | 116.32 | 119.52 |
| Hay Price (\$/t) | \$60.00 | \$2.20 | 105.87 | 109.07 | 112.28 | 115.48 | 118.68 |
| Supplement (\$/hd) | \$12.50 | \$2.30 | 105.03 | 108.24 | 111.44 | 114.65 | 117.85 |
| Interest | 7.0\% | \$2.40 | 104.20 | 107.40 | 110.61 | 113.81 | 117.01 |
| Yardage (\$/hd/day) | \$0.30 | \$2.50 | 103.36 | 106.57 | 109.77 | 112.97 | 116.18 |
| Vet-Med | \$10.00 | \$2.60 | 102.53 | 105.73 | 108.93 | 112.14 | 115.34 |
| Trucking | \$15.00 | \$2.70 | 101.69 | 104.90 | 108.10 | 111.30 | 114.51 |
| Other | \$5.00 | \$2.80 | 100.86 | 104.06 | 107.26 | 110.47 | 113.67 |
| Target Return | \$0.00 | \$2.90 | 100.02 | 103.22 | 106.43 | 109.63 | 112.84 |

Change is breakeven purchase price for a given change in key variables

| Variable | Change | Calf | Yearling |
| :---: | ---: | ---: | ---: |
| Profit / Head | $+\$ 10 /$ head | -1.77 | -1.29 |
| Yardage | $+.01 / \mathrm{hd} /$ day | -0.37 | -0.20 |
| ADG | $+10 \%$ | 1.40 | 0.90 |
| Feed:Gain | $-10 \%$ | 3.30 | 2.06 |

Adding Value to Feeder Cattle...
In addition to market forces, cattle characteristics also impact what a calf is worth and they are impacted by management practices. There is a growing appreciation by feedlots for the importance of animal health on feedlot profitability. While healthy feeder cattle reduce the cost of gain and treatment cost, they also have higher quality grade and as a result higher selling prices on most grids. This value is being bid back into feeder cattle with a known vaccination and weaning record.

The Iowa Beef Center researched Iowa feeder cattle markets last winter and have the initial results. The focus of the research was to determine if buyers valued preconditioning and if it made a difference whether the seller or a third party, like a veterinarian, made the claim. Data was collected from 105 sales at nine auction markets across Southern and Western Iowa between October 20, 2005 to February 24, 2006. This research would not have been possible without the cooperation of the auction markets and their assistance is greatly appreciated. Four data recorders worked with USDA market reporters to record detailed visual, physical, and information characteristics about each lot of cattle as they were sold. This data provides the same information that buyers at the auction observe and hear. Market conditions for the day of the sale including daily live cattle futures prices and cash corn prices were included in the economic analysis.

There were 20,051 lots of cattle from 20 preconditioned, 5 featured, and 80 special sales. Lots were $52 \%$ steers and $69 \%$ were black and black mixed. Ninety-six percent of the lots were calves of which $41 \%$ were certified vaccinated and weaned, $24 \%$ uncertified vaccinated and weaned, $22 \%$ vaccinated but not weaned, $4 \%$ weaned but not vaccinated, and $9 \%$ neither vaccinated and nor weaned.

The data were analyzed using statistical modeling to determine what variables impacted the price of feeder cattle. The model explained $71 \%$ of the variation in prices and all of the variables listed are significant except for the premium on selling in December. We normally expect a larger seasonal increase than this data shows, but if you remember December 2005 started extremely cold and finished muddy. That weather combination dampened the buyers’ enthusiasm.

The estimated coefficients in Table 2 can be interpreted as the dollar per hundredweight change from the base price due to a one unit change in the variable holding everything else constant. For example, steers averaged $\$ 8.71 /$ cwt more than heifers, or black hided cattle average $\$ 3.06$ more than non-black cattle. Calves in larger groups sell for higher prices to a maximum premium of $\$ 12.90 / \mathrm{cwt}$ at about a pot-load. Cattle sold at larger sales also received higher prices than cattle sold a smaller sales.

The last five variables in the table address the calf management issue. Calves that were certified vaccinated and weaned at least 30 days averaged $\$ 6.15 /$ cwt more than the base. These calves are mostly Green Tag with a signed Preconditioning Certificate or Gold Tag. Buyers paid $\$ 3.40$ over base if the seller claimed they were vaccinated and weaned 30 days and $\$ 3.14$ if they were Green Tag, but not certified as to when they were weaned. Calves that were vaccinated, but not weaned or weaned but not vaccinated were valued at $\$ 2.42$ and $\$ 1.70$ over the base, respectively.

Bottom line: there is value in third party certification. The certificate was worth at least $\$ 2.75 / \mathrm{cwt}$ ( $\$ 6.15-$ $\$ 3.40$ ), or $\$ 15$ on a 550 pound calf over buying the product and doing it yourself. The research identified other ways to increase the value of your calves as well. Watch for a full report in the near future.

| Table 2: Statistically Estimated Premiums and Discounts at Iowa Feeder Cattle Auctions for |  |
| :--- | :---: |
| Specific Cattle and Market Attributes, 2005-2006 | Estimates $(\$ / \mathrm{cwt}) *$ |
| Explanatory Variables | 124.98 |
| Intercept | -0.17 |
| Weight | 0.000059 |
| Weight Squared | 5.95 |
| Yearling (Base: Calves) | Base |
| Heifer | 8.71 |
| Steer | 2.51 |
| Bull | 3.06 |
| Black and Black Mixed (Base: Non Black) | -1.70 |
| Horns (Base: No Horns) | -2.41 |
| Fleshy (Base: Not Fleshy) | -12.40 |
| Sick and Dirty | -9.36 |
| Sick and Not Dirty | -1.18 |
| Healthy but Dirty | Base |
| Healthy and Clean | 0.33 |
| Lot Size | -0.002110 |
| Lot Size Squared | 2.54 |
| Sale Size (in thousand head) | -0.00028 |
| Sale Size Squared (in thousand head) | 0.72 |
| Live Cattle Futures | -0.05 |
| Corn Prices (in cents) | Base |
| October | 1.55 |
| November | 0.46 |
| December | 3.39 |
| January | 6.61 |
| February | 6.15 |
| Certified Vaccinated and Weaned at least 30 days | 3.40 |
| Uncertified Vaccinated and Weaned at least 30 days | 3.14 |
| Vaccinated and Weaned Other (No date or <30 days) | 2.42 |
| Vaccinated but Not Weaned | 1.70 |
| Weaned but Not Vaccinated | Base |
| Not Vaccinated, Not Weaned |  |
| A All significant with p-value < 0.0001 except monthly time dummy for December which is not |  |
| significant with p-value 0.19. |  |
|  |  |

## Grain Markets to Focus on September 12 USDA Crop Forecasts, Demand

The corn market dropped 20 cents per bushel in response to the August 11 crop report, but regained about $1 / 2$ of its losses by August 25. Since then, grain traders have been looking ahead to possible changes in production numbers in the September 12 and October 12 USDA crop forecasts. Reports from the John Deere-ProFarmer crop tour hinted that corn yields and acreage harvested for grain in parts of the western Corn Belt may not quite measure up to indications from the August crop report. Widespread August rains around the Midwest are good for kernel fill on corn, but any negative effects on ear size from earlier dry weather and extreme heat cannot be fully reversed.

In the soybean market, prices have declined almost continually since the crop report was released, with the November 2006 futures losing 46 cents per bushel from the close on August 4 to the close on August 29. Half of the decline occurred a few days before the USDA report, as the market responded to private forecasts showing projections that large U.S. soybean carryover stocks would continue into late summer of 2007.

## Price Trends into Harvest

Price trends into harvest will depend heavily on (1) USDA's next two crop forecasts, and (2) export demand indicators. August weather conditions across the Midwest point to a strong likelihood that western Corn Belt soybean crop forecasts will be increased from those shown in the August crop report (See our August 15 Outlook Letter for state yield forecasts). That, in turn, points to potential down-side risk in November futures of 15 to 25 cents, with similar declines in new-crop bean prices for harvest delivery. In other words, recent rains suggest to us that new-crop harvest time soybean prices in central Iowa have down-side risk into the $\$ 4.60$ to $\$ 4.75$ area. Prices at that level would generate moderate LDPs. Pressure on prices would reflect expected shortages of storage space and expectations that this year's large soybean carryover stocks will continue into August of 2007. Harvest prices moderately below the loan rate should stimulate export demand and also reinforce expectations that Brazil's soybean plantings will drop at least modestly below last season this fall.

Potential changes in corn production numbers appear to be more uncertain than for soybeans. The most uncertain areas for corn production prospects are Nebraska (for the dry-land acres and yield), South Dakota, Kansas, Minnesota, North Dakota, and west central and northwest Iowa Uncertainty on crop size makes the harvest price outlook for corn a bit more uncertain than for soybeans. Our most-likely cash corn price trading range into harvest is 7 to 10 cents either side of late August prices. Late August prices in central Iowa were generally in the $\$ 1.81-\$ 1.86$ per bushel range.

## Wide Basis

The basis for both corn and soybeans has been extremely wide for the entire 2005-06 grain marketing year. Even more extreme basis problems have been reported for wheat in parts of the eastern Corn Belt and Montana. High fuel costs have increased the transportation cost differential between interior elevators and delivery locations for futures markets, and are part but not all of the reason for the weak basis. Expected tightness in storage availability at harvest also appears to have weakened the basis, as the grain trade prepares for a possible repeat of the need to pile grain outside this fall. Outside grain storage can involve substantial risk of quality deterioration. This risk tends to get built into the basis when crops are large.

Table 1 below shows current indications of changes in total Iowa and U.S. corn and soybean supplies for this fall, based on USDA's August crop forecasts and changes in June stocks vs. a year earlier. The June stocks report is the latest available USDA grain stocks data, and will be updated September 29. Iowa cattle on feed in lots over 1,000 head were 11 percent larger than a year earlier in August. The June 1 hog inventory in the state was up one percent from the previous year. Based on these numbers as well as market incentives to feed to heavy weights and a sharp increase in corn processing for ethanol, Iowa domestic corn use this summer probably was modestly above a year earlier. Thus, the June 1 changes in stocks numbers may over-
state the change in total Iowa grain supplies for this fall vs. a year ago. Similar market influences were at work for the U.S. as a whole this summer, along with a modest increase in U.S. corn exports, so that the change in June 1 stocks also may over-state the potential change in national grain stocks this fall. Although there are no published figures on the amount of new storage space being added this summer, industry reports indicate sales of on-farm storage bins have been large.

In short, current crop forecasts suggest state-wide pressure on Iowa grain storage space may not be quite as severe as in the last two years. The change may be most noticeable in the northwest and west central parts of the state because of less than ideal crop conditions. For the U.S., storage availability will vary by geographic area. Storage space in the eastern Corn Belt may be a bit tighter this year than in the western Corn Belt.

| cornCornSoybeans |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2005 | 2006 | 2005 | 2006 | \% Chg |
| lowa | Mil. Bu. |  |  |  |  |
| June 1 Stocks | 1,001 | 969 | 174 | 229 | 1.9\% |
| Production | 2,163 | 2,145 | 533 | 452 | -3.6\% |
| Total | 3,164 | 3,114 | 707 | 681 | -2.0\% |
| U.S. |  |  |  |  |  |
| June 1 Stocks | 4,321 | 4,363 | 699 | 990 | 6.6\% |
| Production | 11,112 | 10,976 | 3,086 | 2,928 | -2.1\% |
| Total | 15,433 | 15,338 | 3,786 | 3,918 | 0.2\% |
| *Based on Aug. 2006 USDA crop forecasts \& changes in June USDA stocks, which are the latest available. |  |  |  |  |  |

## New-Crop Export Sales

U.S. sales of 2006 corn and soybeans for export are starting off more strongly than last year, despite forecasts of higher U.S. corn yields which should lessen foreign buyer concern about supplies. Late-summer export sales are an indicator of foreign buyer nervousness about U.S. crop prospects as well as an indicator of expected availability of foreign grain supplies. Cumulative new-crop U.S. corn export sales through August 17 and comparisons with the last several years are shown in Figure 1. Corn sales at this writing are $59 \%$ above a year earlier but are well below sales at this time in 1995 and 1996. However, as the chart indicates, there is not a close relationship between early-season export sales and the marketing year total exports.

Figure 1. Cumulative U.S. New-Crop Corn Export Sales in Mid-August

Bil. Bu.


Figure 2 shows the same relationship for soybeans. Cumulative U.S. new-crop soybean export sales through August 17 were $94 \%$ above a year earlier. However, these sales were sharply below sales at the same date in 1997, 2003, and 2004. As with corn, the relationship between early-season new-crop sales and marketing year total exports is not a close one.

Figure 2. Cumulative U.S. New-Crop Soybean Export Sales in Mid-August

Bil. Bu.
Mktg. Yr. Exports


## Marketing Considerations

Where farm storage space is available, the grain market is signaling that this is a year to strongly consider storing both corn and soybeans. The spread or "carry" between December 2006 and July 2007 corn futures at this writing is about 34 cents per bushel. For soybeans, the spread between November 2006 and July 2007 is nearly 47 cents. These are unusually large incentives to hedge and store grain into next spring or early summer, or to sell on contracts where the basis is not established until later. In addition, the basis for both crops appears likely to improve significantly into next spring and early summer. The amount of improvement will vary from one location to another, with the greatest improvement likely being in areas near processing plants, river terminals, and concentrated livestock feeding.

We expect moderate LDPs for both corn and soybeans this fall. LDPs appear likely to reach a maximum during the last third of the harvest, and then trend downward into the winter and spring.

Some market advisors have been encouraging sales of 2007, 2008, and 2009 corn crops. Given the rapid expansion of corn processing for ethanol and the almost certain need for substantially more corn acres in the next few years, prices for those crop years at times are likely to show further upside potential as well as strong responsiveness to any widespread weather concerns. Selling crops that far out require consideration of likely trends in costs such as fuel, fertilizer, and land rents, and whether most or all currently rented land for the farming operation will continue to be available.

