

# Iowa Farm Outlook

Department of Economics  
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## Glean More Information from Cattle Market Reports

When discussing fed cattle prices, we all have our traditional benchmarks. I like to use negotiated prices, which include auction barn sales, video or electronic auction sales, and direct trades. From an analyst's perspective these transactions provide a good snapshot, as price is known at the time the deal is struck and will not change regardless of how the cattle perform on the rail.

However, the last couple of years have seen much discussion regarding the shrinking negotiated cash trade and rising use of non-cash methods of trade including contracts, marketing agreements, alliances, and formula pricing arrangements.

As cash market volumes decline, cash price data become less readily available. More importantly, the representativeness of prices quoted from cash transactions becomes increasingly questionable. Much of formula pricing uses negotiated reported prices as the base in the formula. As such, it is critical the negotiated price be representative and reliable as a market price that accurately reflects current supply and demand conditions.

Producers who regularly market fed cattle, and analysts alike, should consider the entirety of prices in the marketplace as they develop near-term price expectations. Various Mandatory Price Reports for fed cattle provide timely volume and price information. The reports referenced below are available at USDA's Agricultural Marketing Service Market News: <https://www.ams.usda.gov/market-news>.

The intent of price reporting is to reduce asymmetric information among market participants, which helps to achieve more efficient market outcomes and level the playing field and counterbalance possible market power. Price information signals resource allocation, production, processing, and marketing decisions.

The focus here is on weekly reports at the national level.

LM\_CT142: committed and delivered cattle report documents cattle that have been set for marketing; includes a breakdown of volumes by pricing mechanism (negotiated, negotiated grid, formula, and forward contract), weight determination (live or dressed), pen make-up (steers and heifers or other fed cattle), and region of origin

The following report captures behavior at the time of **purchase**:

LM\_CT154: weekly summary of the cattle bought the prior week; most the volume in this report is for negotiated cash purchases, providing prices most closely related to auction prices. Also included are negotiated grids, where only the base level is given.

The following reports capture behavior at the time of **slaughter**:

LM\_CT151: final grid price; determined after slaughter and given in the formula and forward contract report

LM\_CT153: packer owned cattle; carcass characteristics and volume can be monitored to see if packers own cattle that differ from average cattle. This report also summarizes the forward contract volume and different basis metrics.

LM\_CT155: premiums and discounts; report partially explains differences among the various prices.

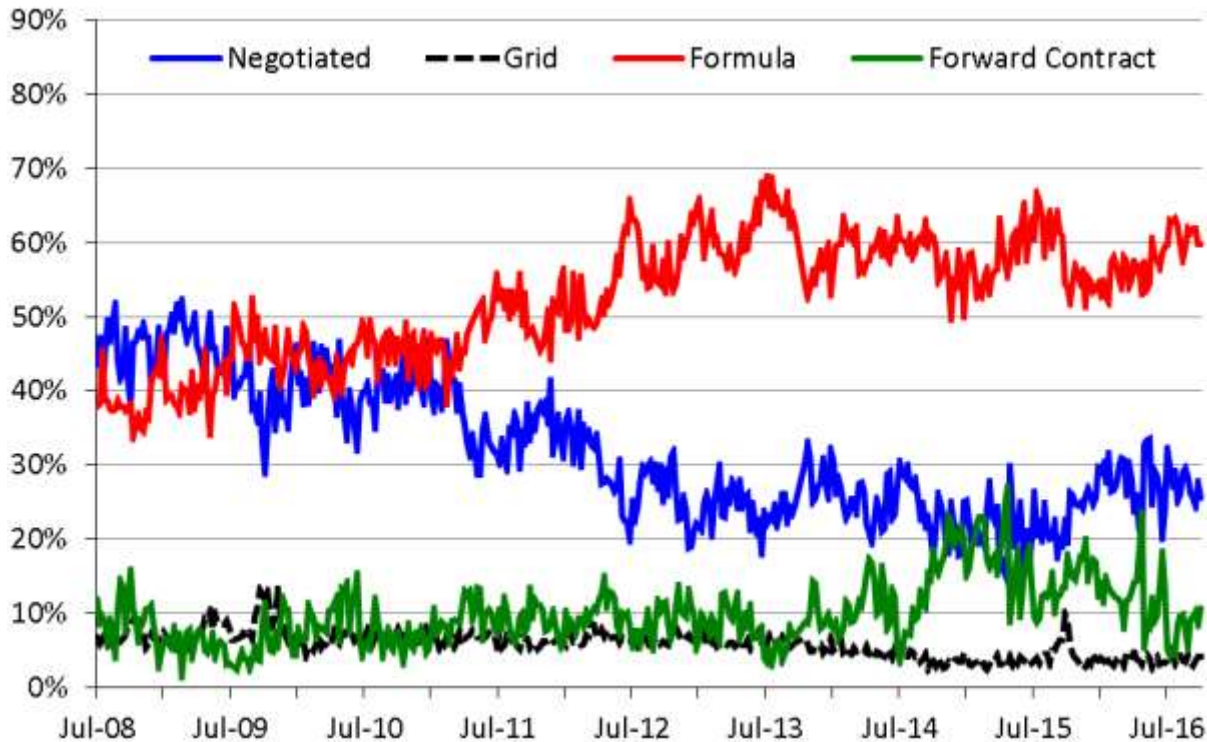
## Sizing up some tradeoffs

Knowledge of grid pricing systems and their associated premiums and discounts aids producers in marketing cattle that fit current demand specifications and in maximizing revenues from cattle sales. Granted, producers often receive premiums in grid pricing systems, but the cost of raising such cattle is typically higher. Producers must therefore analyze added costs as well as added benefits in deciding which premium targets fit their management and marketing plan.

## Rising negotiated trades improve price discovery

For years the number of cash cattle traded on a negotiated basis kept falling (figure 1). Percent of cattle produced that traded on a negotiated basis dwindled as well. Some of the reduction in negotiated cash trade volume in 2014-2015 was simply due to fewer fed cattle to trade after years of industry contraction.

**Figure 1: Steers/Heifers Sold by Transaction, National, Weekly**



Data Source: USDA-AMS. Livestock Marketing Information Center.

Now the industry is expanding. Producers are also forward contracting fewer cattle because of the steeply discounted futures market and wide basis levels. As a result, more cattle are trading on a negotiated basis once again. So far in 2016, negotiated transactions have represented 28% of the national market. This compares to 22%, 24%, and 25% in 2015, 2014, and 2013, respectively. The last time the percent of cattle produced that traded on a negotiated basis was this high was in 2012.

It's true some areas, most notably Texas, Oklahoma, and New Mexico, do not trade many negotiated cattle. But even this region is up to 5% negotiated transactions compared to 2% in each of the last two years. In other states, negotiated trade is larger and appears to be on the rise. In Nebraska this year, almost 60% of the transactions have been negotiated, up from 49% last year.

Thin negotiated markets are bringing new forms of pricing into the array of price discovery institutions and platforms. The Fed Cattle Exchange, an electronic, web-based fed cattle market, is one such example. This type of marketing institution will likely see continued interest as a way to provide lower cost opportunities for producers, packers, processors and others to participate in price discovery, instead of direct negotiation.

The issue of reliability of the negotiated price has several dimensions. First, reliability is subject to how much error (i.e., doesn't accurately reflect current supply and demand conditions) in the negotiated market price one

is willing to tolerate. Narrower tolerance suggests the need for more negotiated trades. Second, reliability of the negotiated price depends on how much confidence producers want to have in the negotiated price being within a certain error tolerance. That is, if one wants to be 90% sure that the negotiated market price is accurate, this takes a lot more transactions than if one wants to be 80% sure.

With negotiated volume on the upswing, reliability is improving. Time will tell if the rise in negotiated volume will continue.

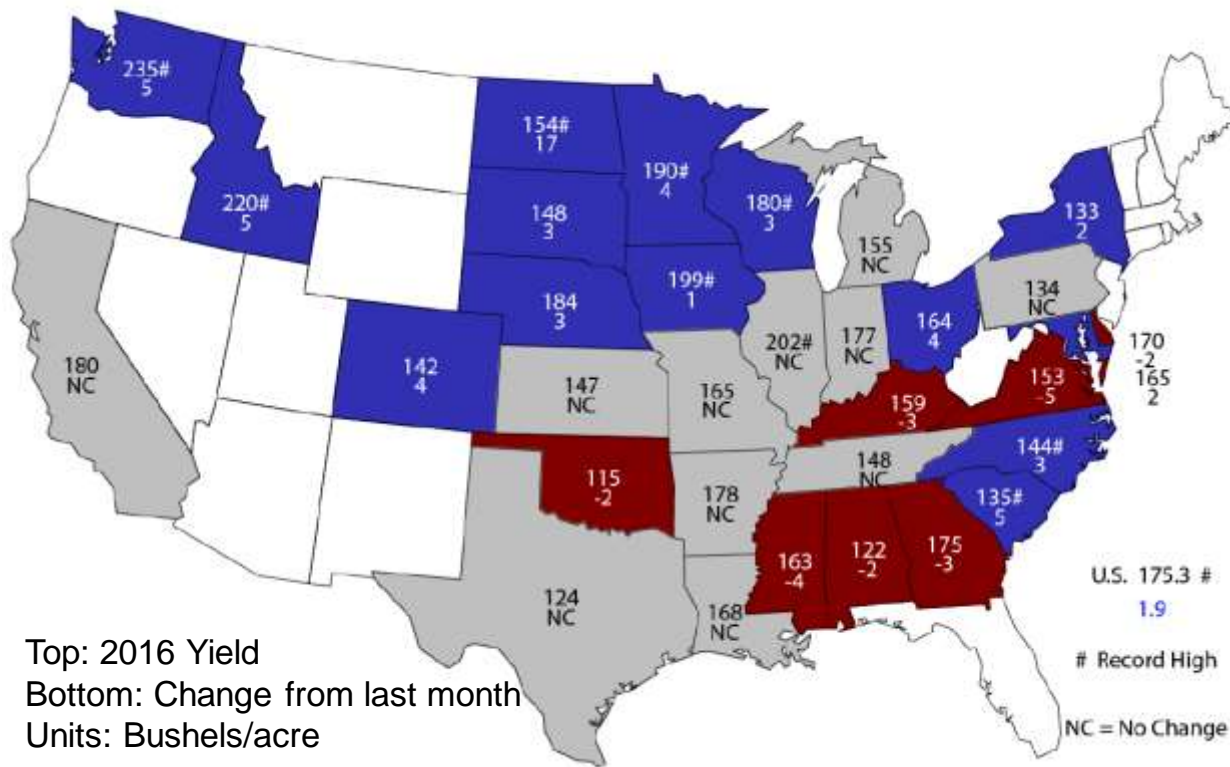
*Lee Schulz*

### A Projected Change in the Balance

With the harvest pretty well completed across most of the country, the evidence for the bounty of this year's crops can be seen, in the many piles of crops stored outside of grain elevators across this great land. I recently drove from Ames to Fargo, North Dakota and back and all along the drive I saw an incredible harvest. The yield numbers this year are phenomenal, especially for the northern and western Corn Belt.

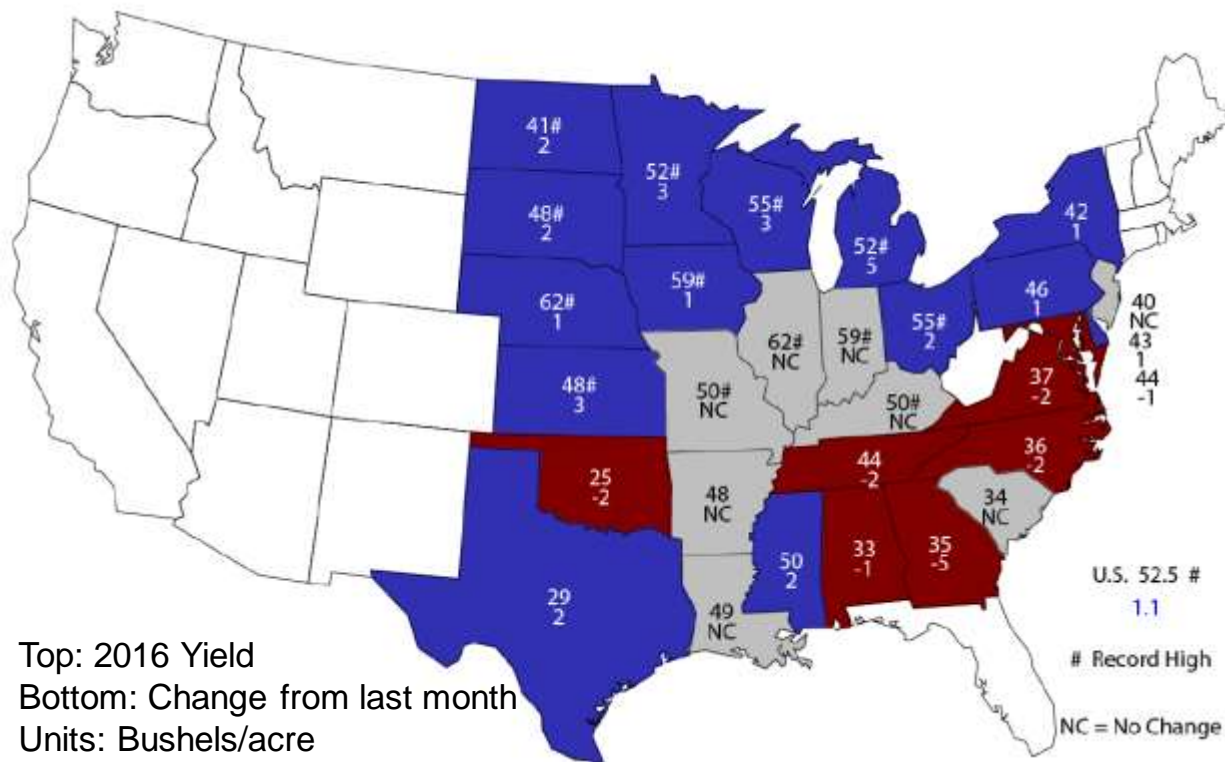
Figure 1 shows the current yield estimates for the 2016 corn crop. USDA will release the final yield estimates in January, but these preliminary yields show a record-setting crop for the nation and for Iowa. The national corn yield stands at 175.3 bushels per acre, topping the old record from 2014 by 4.3 bushels. National corn production exceeded 15 billion bushels for the 1<sup>st</sup> time. In Iowa, the estimate of 199 bushels per acre beat last year's record of 192 bushels. Several other states set corn records as well, including Washington, Idaho, North Dakota, Minnesota, Wisconsin, Illinois, and North and South Carolina.

**Figure 1. Nov. 2016 Corn Yield Estimates. Source: USDA-NASS.**



It was a similar story for the soybean crop. Records across the nation fell. The national soybean yield stands at 52.5 bushels per acre, besting last year's record of 48 bushels per acre. National soybean production exceeded 4 billion bushels for the 1<sup>st</sup> time. Iowa's yield of 59 bushels per acre beat last year's record by 2.5 bushels. Soybean yield records were set from the Great Plains to the Rust Belt and from the Canadian border to Memphis.

**Figure 2. Nov. 2016 Soybean Yield Estimates. Source: USDA-NASS.**



The challenge with this year's crops is the same challenge the crop markets have faced for the past few years. Supply has grown just a bit quicker than demand. The record production this year is paired with record crop usage. For corn, usage has increased in all of the four major categories: feed and residual, ethanol, export, and food, seed, and other uses. Overall, usage is up nearly a billion bushels for the marketing year. But with that record corn crop, production exceeds usage by roughly 600 million bushels.

However, that trend may come to an end in the coming year. USDA recently released their estimate preview for the 2017 marketing year. Figure 3 contains the corn supply and demand table for the previous 4 years and the outlook for 2017. Based on current prices and USDA's models, corn area is projected to decline by 4.5 million acres in 2017. That, in combination with yields declining slightly back to trend, reduces expected production to 14.06 billion bushels. That would be a 1.15 billion bushel drop in corn production.

Corn usage is also expected to decline, but the reduction is much smaller. Feed and residual is projected to decline by 150 million bushels, but most of that decline is likely due to the residual component (smaller crops lead to smaller harvest and storage losses, the major part of the residual). Corn usage for ethanol is projected to continue its steady climb, adding 25 million bushels. Food, seed, and other industrial uses are projected to grow by 5 million bushels. And USDA sees corn exports shrinking by 275 million bushels, due to a stronger dollar and increased global competition. But, in total, corn usage is projected to be down only 395 million bushels. So usage could exceed supply. And while USDA did not raise its season-average price estimate, holding at \$3.30 per bushel. The projections do provide some reason for optimism in 2017.

Soybean usage has been on a strong run over the past few years, with records each of the last three years. Like with corn in 2016, the usage growth has been across the board. Domestic crush, seed usage, and exports have all expanded to work through the massive string of soybean crops. But also just like corn, supply growth exceeded usage growth. The question going forward for soybeans in 2017 is whether that continues. Most agricultural models, including USDA's, show substantial increases in soybean area in 2017, building on the record plantings in 2016. That sets the stage for soybean production to once again exceed usage. However, USDA's recent estimate for 2017 shows that with a return to trendline yields it's possible that soybeans could also turn the corner and have usage exceed production.

**Figure 3. Corn Supply and Usage. Source: USDA-WAOB 2013-16, USDA-OCE 2017.**

		2013	2014	2015	2016	2017
Area Planted	(mil. acres)	95.4	90.6	88.0	94.5	90.0
Yield	(bu./acre)	158.1	171.0	168.4	175.3	170.8
Production	(mil. bu.)	13,829	14,216	13,601	15,226	14,060
Beg. Stocks	(mil. bu.)	821	1,232	1,731	1,738	2,403
Imports	(mil. bu.)	36	32	67	50	50
Total Supply	(mil. bu.)	14,686	15,479	15,400	17,013	16,513
Feed & Residual	(mil. bu.)	5,040	5,280	5,130	5,650	5,500
Ethanol	(mil. bu.)	5,124	5,200	5,206	5,300	5,325
Food, Seed, & Other	(mil. bu.)	1,369	1,401	1,429	1,435	1,440
Exports	(mil. bu.)	1,920	1,867	1,898	2,225	1,950
Total Use	(mil. bu.)	13,454	13,748	13,662	14,610	14,215
Ending Stocks	(mil. bu.)	1,232	1,731	1,738	2,403	2,298
Season-Average Price	(\$/bu.)	4.46	3.70	3.61	3.30	3.30

USDA puts 2017 soybean plantings at 85.5 million acres, up 1.8 million from this year. USDA's trend yield is 47.9 bushels per acre, down 4.6 bushels from this year's record. The combination points to soybean production at 4.05 billion bushels, still a whopper crop, but roughly 300 million bushels below this year. And unlike corn, the usage growth across all categories is projected to continue as crush adds 5 million bushels, seed adds 3 million, and exports adds 50 million. So trade looms large in the soybean market. And that usage growth leads to smaller ending stocks and higher prices. For 2017, USDA set the season-average price estimate at \$9.35 per bushel, 15 cents higher than this year's estimate.

**Figure 4. Soybean Supply and Usage. Source: USDA-WAOB 2013-16, USDA-OCE 2017.**

		2013	2014	2015	2016	2017
Area Planted	(mil. acres)	76.8	83.3	82.7	83.7	85.5
Yield	(bu./acre)	44.0	47.5	48.0	52.5	47.9
Production	(mil. bu.)	3,358	3,927	3,926	4,361	4,050
Beg. Stocks	(mil. bu.)	141	92	191	197	480
Imports	(mil. bu.)	72	33	24	30	30
Total Supply	(mil. bu.)	3,570	4,052	4,140	4,588	4,560
Crush	(mil. bu.)	1,734	1,873	1,886	1,930	1,935
Seed & Residual	(mil. bu.)	107	146	121	127	130
Exports	(mil. bu.)	1,638	1,842	1,936	2,050	2,100
Total Use	(mil. bu.)	3,478	3,862	3,943	4,108	4,165
Ending Stocks	(mil. bu.)	92	191	197	480	396
Season-Average Price	(\$/bu.)	13.00	10.10	8.95	9.20	9.35



Given USDA's forecast, the outlook for 2017 is cautiously optimistic. Production is projected to decline, allowing crop usage to catch up. Export demand looks to be the key component on the demand side, with corn finding it a bit more challenging than soybeans. Domestic demand is expected to remain strong, mainly on the back of continued livestock expansion and biofuel growth. Futures markets for both crops are reflecting this optimism, showing carry for the remainder of the 2016 marketing year. Corn futures continue this carry through the 2017 marketing year as well. Soybean futures do not, indicating the market has already partially adjusted for the increased acreage next year.

And while prices aren't projected to rebound significantly, crop margins do look a little better as production costs continue to work their way slowly downward. So while the general storyline in the crop markets remain the same as it has been over the past couple of years, there are few more reasons for optimism as we look forward to 2017.

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