IOWA STATE UNIVERSITY
Extension and Outreach

Iowa Farm Outlook

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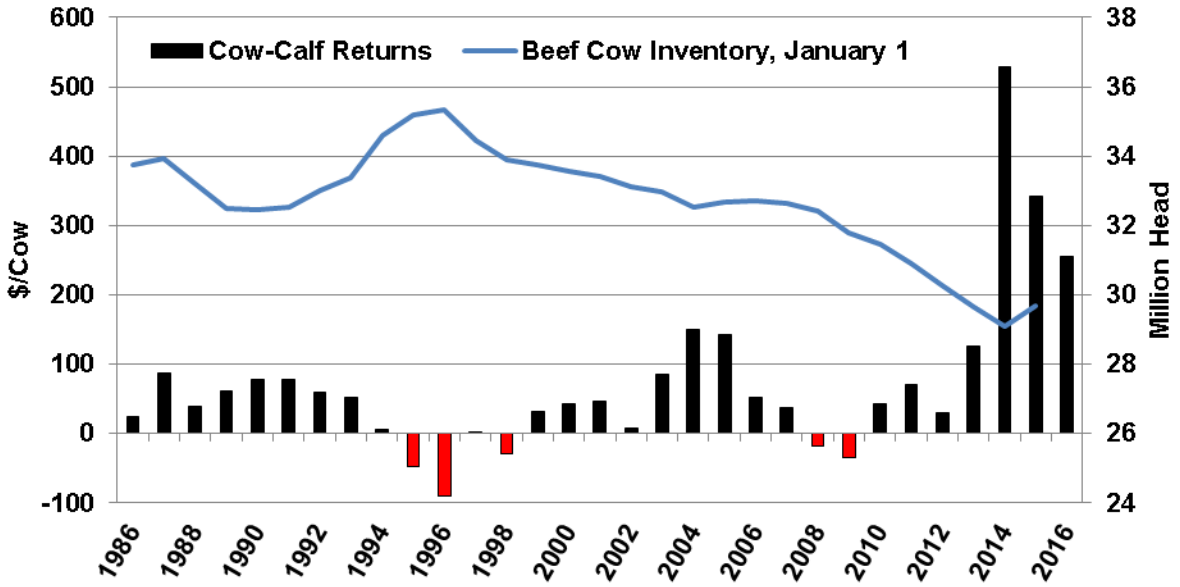
Replacement Quality Heifer Prices Supported by Latest Data

Beef cow herd expansion started briskly in 2014 with a 2.1% increase in beef cow numbers in the first year of expansion. To date, the 2015 beef cow culling rate is 6.8%, down from 8.0% this time last year, and is one of the lowest culling rates in recent history. Producers continue to retain heifers to rebuild their herds at "astronomical" rates—the 6.5% rate of heifer retention as beef cow replacements so far in 2015 is the third highest rate since 1974. The resulting beef cow herd is young and productive. Furthermore, the dramatic improvement in forage and pasture conditions in much of the country in 2015 means that the cow-calf sector is poised to continue expanding.

The dramatic fall in calf prices the last few months has overshadowed the fact that estimates of cow-calf returns are still some of the largest on record. As shown in figure 1, cow-calf returns for 2015 are expected to exceed $340/cow and projected returns for 2016 exceed $250/cow. Previously, returns over cash costs greater than $100 characterized very favorable years. There is, and will likely continue be, market incentives to expand the beef cow herd for the next several years.

Figure 1. Cow-Calf Returns and Beef Cow Inventory, U.S., Annual[1]



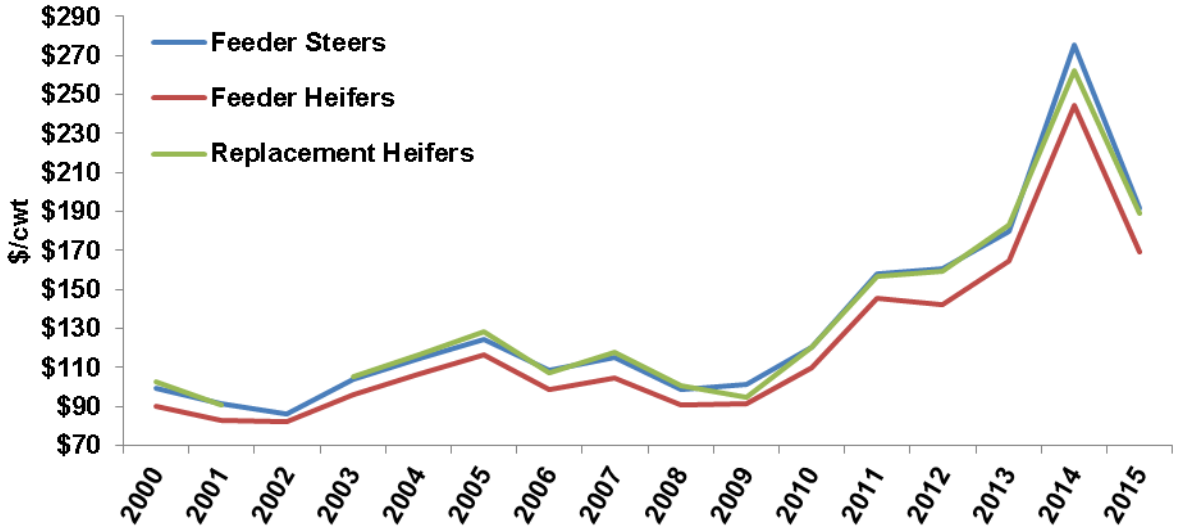
[1] Returns over cash cost (includes pasture rent), November 24, 2015.
Data Source: USDA AMS and USDA NASS. Compiled and analysis by LMIC.

With this considerable focus on growth of the U.S. and regional beef cow herd, many producers and market analysts are closely watching bred female demand. There have been a lot of comments from local auction markets all over the country that heifers suitable for breeding replacements have been bringing as much as similar weight feeder steers.

Figure 2 shows November prices for the 550-599 pound weight class of feeder steers, feeder heifers, and replacement quality heifers as designated and reported by USDA's Agricultural Marketing Service. Prices this November have decreased from the 2014 record highs and are about $77/cwt—or 30%—lower than one year

ago. Of interest and focus here, though, are the spreads, or premiums, of feeder steers compared to feeder heifers and the difference between replacement quality heifers and feeder heifers.

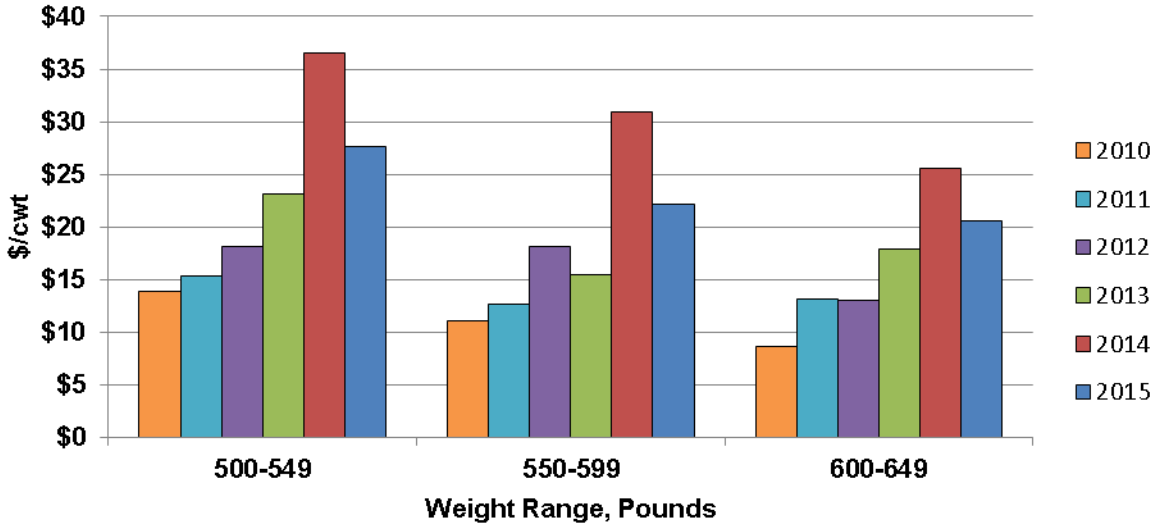
Figure 2. November Iowa Combined Market Average Feeder Steer, Feeder Heifer, and Replacement Quality Heifer Prices, 550-599 Pounds[1]



[1] Medium and large 1.
Data Source: USDA AMS.

Feeder steer prices are $28/cwt higher than feeder heifer prices for 500-549 pound calves this year (figure 3). The feeder steer to feeder heifer spread is $21-22/cwt for 550-599 pound and 600-649 pound calves this year. These spreads are $5-9/cwt smaller than they were a year ago but still $5-6/cwt higher than the 2010-2013 average.

Figure 3. November Feeder Steer to Feeder Heifer Spread[1]



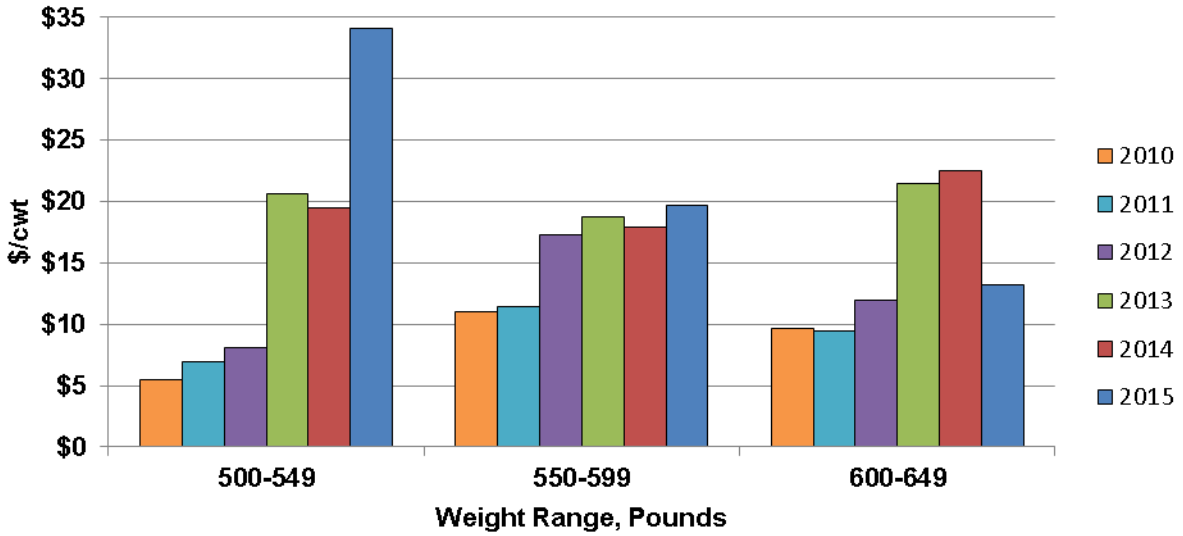
[1] Iowa combined market average feeder steer and feeder heifer prices, medium and large 1.
Data Source: USDA AMS.

The observation that the feeder steer to feeder heifer price spread was so high in 2014 and still relatively high in 2015 is interesting, and doesn't intuitively support increased replacement heifer demand. As replacement heifer demand increases, fewer heifers are sold for feeding purposes, thereby reducing the supply of feeder heifers. This tightening supply of feeder heifers would result in stronger prices for heifers relative to steer prices, i.e., a narrower feeder steer to feeder heifer price spread. However, 2014 was a record profitable year for cattle finishing which supported feeder steer prices and likely explains the large spread even in the midst of strong replacement heifer demand. As expected, the 2015 spread is smaller which is consistent with much lower

profitability for cattle finishing, even fewer heifers available for feeding purposes, and continued strong replacement heifer demand.

A better gauge of replacement heifer demand, though, is to examine the premium paid for replacement quality heifers relative to similar weight feeder heifers (figure 4). As shown, the replacement quality heifer to feeder heifer premium this November was more than $34/cwt for 500-549 pound heifers, almost $20/cwt for 550-599 pound heifers, and about $13/cwt for 600-649 pound heifers. For the heaviest heifers in figure 1, this premium is $9/cwt less than last year. But, for 500-549 pound heifers, the replacement quality premium is almost $15/cwt higher than in 2014. With producers still focused on replacement heifer development, 500-549 pound heifers likely represent the ideal or optimum weight to begin with now to be bred early next summer.

Figure 4. November Replacement Quality Heifer to Feeder Heifer Spread[1]



[1] Iowa combined market average replacement quality and feeder heifer prices, medium and large 1.
Data Source: USDA Agricultural Marketing Service.

While the replacement heifer to feeder heifer premium is not consistently higher across each weight category this year, the strength in the premium for the light weight class (and to some degree the middle weight class) points to continued interest in herd rebuilding. And, that's significant when compared to November 2012, 2013, and 2014 prices because significant herd expansion plans were unfolding then.

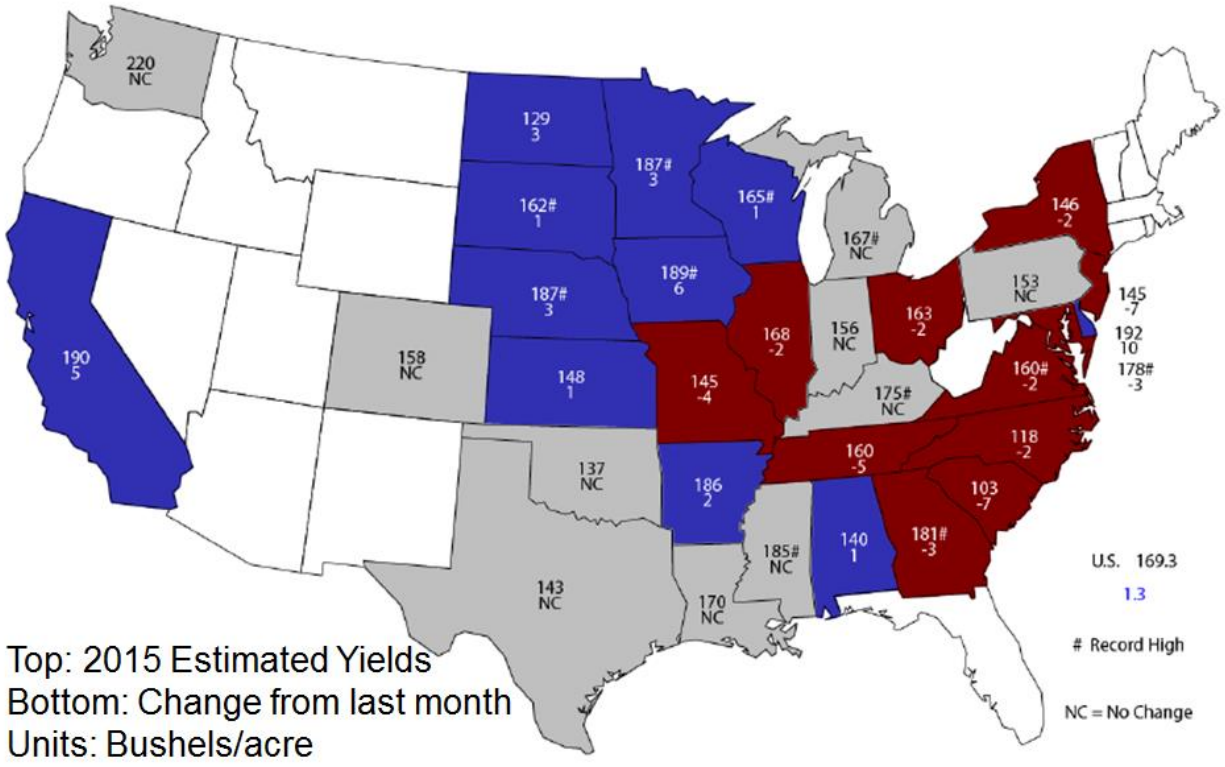
When it comes to this expansionary phase there are still a number of questions to be answered, such as—how much additional herd growth is needed—how fast can, and will, it happen—and where will it take place. The answers to these questions, and many more, are not completely apparent at this time and will depend on a number of factors yet to be determined in the coming weeks, months, and years. However, at this time an overwhelming number of factors, including low beef cow culling rates, high replacement heifer retention rates, and replacement heifer buying interest, point to accelerated herd expansion.

Lee Schulz

December is All about Demand

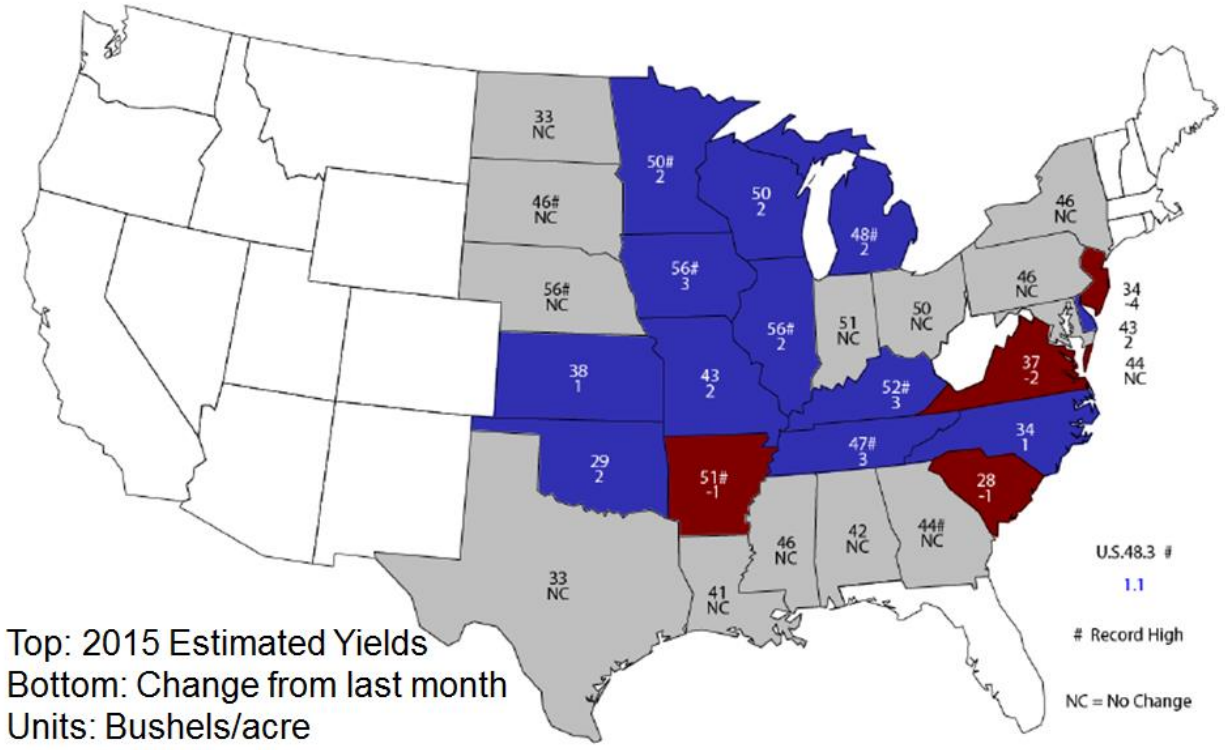
With the December reports, USDA usually makes no adjustments to supply, so the focus shifts to demand. To summarize the supply situation, it's another big set of crops. Figures 1 and 2 show the state-level yields USDA recently estimated. While the national corn yield is not a record, 11 states did post record yields. That includes most of the states in the northern and western Corn Belt. Iowa is projected to yield 189 bushels per acre, topping the old record yield by 8 bushels. South Dakota, Nebraska, Minnesota, and Wisconsin also look to have new records as well. Meanwhile, areas of the country that experienced record yields last year, including the stretch from Missouri to Ohio, saw corn yields decline sizably.

Figure 1. Nov. 2015 Corn Yield Estimates. Source: USDA-NASS.



That same pattern of yields showed up for soybeans as well. The western and northern Corn Belt is projected to have record yields. But in the case of soybeans, the records extend all the way into Illinois. The national yield is also expected to reach record levels. Iowa's soybean yield is projected at 56 bushels per acre, well above the previous record.

Figure 2. Nov. 2015 Soybean Yield Estimates. Source: USDA-NASS.



Global crop production in 2015 was significant. For corn, while world production is projected to decline by nearly 3.5%, the total production figure is still the 2nd largest the world has grown. Corn production was lower in many countries, including Argentina, Brazil, Mexico, and Ukraine. But Canada, Russia, South Africa, and China grew more corn. So global corn supplies remain high. Global soybean production is still on the rise. While the Argentine crop is smaller, soybean production increased in Brazil, Paraguay, and India. In fact, world soybean production is set to hit another record in 2015. So the issue of large supplies is not just a U.S. issue, but a world one.

Figures 3 and 4 show the latest supply and demand estimates for the U.S. corn and soybean crops. And in both cases, USDA is showing a weakening demand picture. In both figures, we have the estimates for the current marketing year, the numbers for the previous three marketing years, and the change in current estimates from last month. Corn demand has been at record levels over the past couple of years. And while corn demand is still strong, it is starting to decline. The surge in animal numbers is boosting feed demand into the 5.3 billion bushel range, but the projections show that growth stalling. Food, seed and industrial usage is growing slightly, but levels remain below the demand from 2012. Corn usage for ethanol hit a record in the 2014 marketing year, but USDA sees a small setback for 2015 as other feedstocks, such as sorghum, are priced to compete for usage. And exports continue to slide, now projected back at 1.8 billion bushels. The combination of high world corn production, a strong U.S. dollar, and weakness in global economies have created a major drag on corn exports. Most of the major importing countries have cut back on corn purchases. Only the Mexican market has been a source of growth for corn. The boost the corn market received from the free trade agreements with Colombia, Peru, and South Korea has dissipated.

Figure 3. Corn Supply and Usage. Source: USDA-WAOB.

		2012	2013	2014	2015	2015 Δ
Area Planted	(mil. acres)	97.3	95.4	90.6	88.4	0
Yield	(bu./acre)	123.1	158.1	171.0	169.3	1.3
Production	(mil. bu.)	10,755	13,829	14,216	13,654	99
Beg. Stocks	(mil. bu.)	989	821	1,232	1,731	0
Imports	(mil. bu.)	160	36	32	30	0
Total Supply	(mil. bu.)	11,904	14,686	15,479	15,415	99
Feed & Residual	(mil. bu.)	4,315	5,040	5,315	5,300	25
Ethanol	(mil. bu.)	4,641	5,124	5,209	5,175	-75
Food, Seed, & Other	(mil. bu.)	1,397	1,369	1,359	1,380	0
Exports	(mil. bu.)	730	1,920	1,864	1,800	-50
Total Use	(mil. bu.)	11,083	13,454	13,748	13,655	-100
Ending Stocks	(mil. bu.)	821	1,232	1,731	1,760	199
Season-Average Price	($/bu.)	6.89	4.46	3.70	3.65	-0.15

For soybeans, the major demand story is exports. Domestic usage of soybeans continues to grow for the 2015 marketing year as the livestock industry expands. But that growth has slowed, paralleling the impact on corn demand. But while USDA has raised its soybean export number, the total is still over 100 million bushels below last year's level. The major withdrawal has been from China, but exports to Mexico, Indonesia, and Taiwan are smaller as well. The European Union and Japan have been the growth markets for soybeans over the past couple of months.

Figure 4. Soybean Supply and Usage. Source: USDA-WAOB.

		2012	2013	2014	2015	2015 Δ
Area Planted	(mil. acres)	77.2	76.8	83.3	83.2	0
Yield	(bu./acre)	40.0	44.0	47.5	48.3	1.1
Production	(mil. bu.)	3,042	3,358	3,927	3,981	93
Beg. Stocks	(mil. bu.)	169	141	92	191	0
Imports	(mil. bu.)	41	72	33	30	0
Total Supply	(mil. bu.)	3,252	3,570	4,052	4,203	94
Crush	(mil. bu.)	1,689	1,734	1,873	1,890	10
Seed & Residual	(mil. bu.)	105	107	145	133	3
Exports	(mil. bu.)	1,317	1,638	1,843	1,715	40
Total Use	(mil. bu.)	3,111	3,478	3,861	3,738	53
Ending Stocks	(mil. bu.)	141	92	191	465	40
Season-Average Price	($/bu.)	14.40	13.00	10.10	8.90	-0.25

With the large crops and the concerns about demand, the crop markets have been in retreat for some time. USDA's current price projections show prices weakening for the 2015 crops, in comparison to 2014. Corn prices are projected to slightly lower, down 5 cents per bushel. But the soybean price drop is more significant, down $1.20 per bushel. As we enter December, the futures markets are more pessimistic about the outlook for the 2015/16 marketing year average price. Corn futures are suggesting a season-average price around $3.50 for the 2015 crop, while soybean futures point to a 2015/16 season-average price in the $8.40 range. And those price projections do not improve much as we look to the 2016/17 crops. Corn prices add a quarter to $3.75 per bushel and soybean prices add 20 cents.

The concern for 2016 is that crop acreage will remain high for the coming planting season. In fact, given some of the planting issues from this year and the relative prices looking forward, there's a good argument that corn area will increase in 2016, despite the low prices. As I've travelled around Iowa over the past month, I saw a lot of fields fertilized and prepped for corn production next year. Also, the acres that were not planted this year due to the wet conditions in Missouri and Illinois will likely come back into corn production in 2016, as weed pressure may guide crop choice.

Meanwhile, soybean area may decline slightly in the U.S., but that will probably be offset by production increases elsewhere in the world. With the continued weakness in South American currencies, Brazil and Argentina will see a boost in demand for their soybeans. Also, the results of the Argentine election suggest that export taxes there will be significantly reduced as we move into 2016. So global export competition will continue to get stronger, even though U.S. crop prices are low.

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