IOWA STATE UNIVERSITY
Extension and Outreach

Iowa Farm Outlook

Department of Economics
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Cattle Inventory Report Affirms What Happened in 2015 and What May Happen in 2016

Curious about how fast the beef cow herd grew in 2015, and is expected to grow in 2016? Interested in the size of the 2015 calf crop and feeder cattle supplies? Concerned with regional shifts in cattle production? Producer responses to surveys for USDA's annual cattle report helped to answer these questions and many more. These inventory numbers are official statistics and they will help drive supply forecasts for the second half of 2016 and 2017. Table 1 contains a summary of the U.S. and Iowa cattle inventory, calf crop, and the percentage change from last year.

Overall the take-home contribution of this report was additional confirmation of growing cattle inventories. Every national inventory number on January 1, 2016 was larger than a year ago and several final estimates were above the range of pre-report expectations. However, these larger numbers should not be all that surprising given the beef cattle herd is in a period of accelerated expansion driven by 2014 profit signals.

Table 1. Cattle Inventory by Class and Calf Crop

	United States			Iowa		
January 1 inventory *	2015	2016	2016 as % of 2015	2015	2016	2016 as % of 2015
Cattle and calves	89,143.0	91,988.0	103.2	3,850	3,950	102.6
Cows and heifers that calved	38,609.0	39,646.2	102.7	1,110	1,150	103.6
Beef cows	29,302.1	30,330.8	103.5	900	940	104.4
Milk cows	9,306.9	9,315.4	100.1	210	210	100.0
Heifers 500 pounds and over	19,261.2	19,822.3	102.9	940	920	97.9
For beef cow replacement	6,086.4	6,285.2	103.3	180	190	105.6
For milk cow replacement	4,710.4	4,824.0	102.4	130	120	92.3
Other heifers	8,464.4	8,713.1	102.9	630	610	96.8
Steers 500 pounds and over	15,629.5	16,320.4	104.4	1,290	1,320	102.3
Bulls 500 pounds and over	2,109.4	2,142.4	101.6	60	60	100.0
Calves under 500 pounds	13,533.9	14,056.7	103.9	450	500	111.1
Cattle on feed	13,025.0	13,177.0	101.2	1,220	1,230	100.8
Calf crop **	33,522.0	34,301.7	102.3	1,040	1,060	101.9

* 1,000 head, ** 2014 and 2015. Data Source: USDA-NASS. Full report: http://usda.mannlib.cornell.edu/usda/current/Catt/Catt-01-29-2016.pdf.

Low culling boosts cow numbers

Combining the fairly significant decrease in beef cow slaughter in 2015, with increased beef cow inventories in 2015 compared to 2014, it was all but certain beef cow numbers would continue the trend higher. The 2015 beef cow culling rate (beef cow slaughter as percent of the January 1 beef cow inventory) of 7.5% was the lowest culling rate in the history of the data back to 1986—the next lowest culling rate was 8.1% in 1991.

Nationally, beef cow numbers are up 3.5% at 30.3 million head. Among the ten largest beef cow states, the beef cow herd was up in all states except Montana which had a 10,000 head or 0.7% decrease. The largest increase in beef cow numbers occurred in Texas, followed by Nebraska, South Dakota, Oklahoma, Missouri and Kansas. Beef cow numbers increased 40,000 head or 4.4% in Iowa. In net, there was a 593,000 head, or 3.5%, increase in beef cow numbers in the top ten beef cow states—trumping the 303,000 head increase of a year ago and the largest increase since 1994.

Fading profits dampen heifer retention

The inventory of beef replacement heifers was up 3.3% (up 198,000 head), a bit smaller than pre-report expectations. A year ago the beef replacement heifer inventory increased 9.6% compared to 2014 (up 535,100 head). Expanding is less expensive but profitability projections are much lower than they were a year ago. Consequently, heifer retention levels are trending back to more normal levels. Furthermore, the large year over year increase in heifer retention experienced a year ago was unsustainable with relatively tight feeder cattle supplies meeting still strong feedlot placement demand. The 6.3 million head of replacement heifers is the largest since 1994.

Among the top ten beef cow states, beef replacement heifers were up in five states (Texas, Oklahoma, Missouri, Iowa, and Kentucky). The result is a net increase of beef replacement heifers of 0.4% among top ten states. Montana, Nebraska, South Dakota, Kansas, and Florida had fewer replacement heifers compared to last year. Oklahoma led the increase among states with 40,000 more beef replacement heifers, an increase of 9.5% year over year. Nebraska and South Dakota had the largest decrease with 30,000 fewer beef replacement heifers each, a 7.1% and 7.4% decrease respectively.

Feeder cattle supplies surge

The 2015 U.S. calf crop was 34. 3 million head, up 2.3% from 2014. This was the first year over year increase in the U.S. calf crop since 1995 and the largest increase since 1980. A larger calf crop contributed to the 5.3% increase in the estimated feeder cattle supplies on January 1, at 25.9 million head, up from 24.6 million head one year ago. Inventories of steers over 500 pounds were up 4.4%; calves under 500 pounds were up 3.9% and other (not for replacement) heifers were up 2.9%. The fact that cattle on feed was up 1.2% actually limited the increase in estimated feeder supplies outside of feedlots to 5.3%. Estimated feeder supplies as a percent of the 2015 calf crop was 75.5%, up from 73.4% last year and above the ten year average of 74.5%. This indicates that a larger than average percent of feeder cattle supplies were carried over from 2015 into 2016. This could make the 2016 feeder cattle market a bit more bearish than previously expected.

Among the top cattle finishing states, feeder cattle supplies were up in eight states. The result is a net increase of feeder cattle supplies of 5.6% among top ten states. Only Texas and Wisconsin have fewer feeder cattle supplies compared to last year while Oklahoma, Kansas, Nebraska, California, Iowa, South Dakota, Minnesota, and Colorado had an increase from 2015. The 130,000 head, or 9.5%, increase in feeder cattle supplies in Nebraska will be supportive of maintaining the state’s position as the number one cattle feeding state in terms of cattle on feed—a position Nebraska took over from Texas one ago with the January 1, 2015 all cattle on feed inventory estimate.

Fundamentals to guide markets

Rising inventories underscore the heightened role demand strength will have on prices. The main fundamental headwind to prices will be the rising beef supply driven by herd expansion. Ultimately, growth in domestic and export beef demand will be a more significant cattle price driver. Demand will also drive how large inventories can and will expand in the coming years.

Lee Schulz

Groundhog Day

Have you ever seen the movie "Groundhog Day"? In the movie, the main character relives the same day over and over again. In some sense, that's how the crop markets feel to me right now, like we are sort of stuck reliving the same situations over and over again. Crop agriculture finds itself in an amazingly consistent spot. Many of the issues surrounding the crop markets in 2014 and 2015 remain. Large supplies have been produced both domestically and internationally. Crop demands are holding near record levels, with domestic usage growing, but international demand in decline. Crop stocks continue to build and prices remain in the doldrums. Projections for the upcoming crop year show that there are plenty of acres available for corn and soybean production this year as other crops cannot offer profitable opportunities. The global economy remains weak; energy prices continue to fall. Put it all together and the outlook for the crop markets stays as it has been over the last couple of years, with supplies racing by demand, stocks building, and prices below breakeven.

As we enter 2016, we have over 11 billion bushels of corn and 2.7 billion bushels of soybeans in storage in the United States. Both of these totals are higher than there were a year ago. So there is more crop hanging over the markets as we moved into 2016 and with that much crop in storage, price rallies will be short-lived as any significant rally will loosen up some of those stored bushels. Production, whether we are looking at the local, state, regional, national, or global level, has been plentiful over the past few years. And that supply has overshadowed good crop demand.

Corn demand has been very consistent over the past three years. Livestock feed demand slowly worked higher, as exports have declined. Meanwhile, ethanol has basically held at record high levels. All together, these sources of demand will consume roughly 13.6 billion bushels of corn. That's a demand level larger than all but three US corn crops (the last three US corn crops). For feed demand, the trend is for continued growth. All sectors of the livestock industry are in expansion mode. The increase in meat production is being driven by an expansion in the number of animals raised and the weights to which they are being grown. This increase is pushing feed demand higher and that will be supportive for the crop markets over the course of the year. But that demand is not enough to pull crop prices higher.

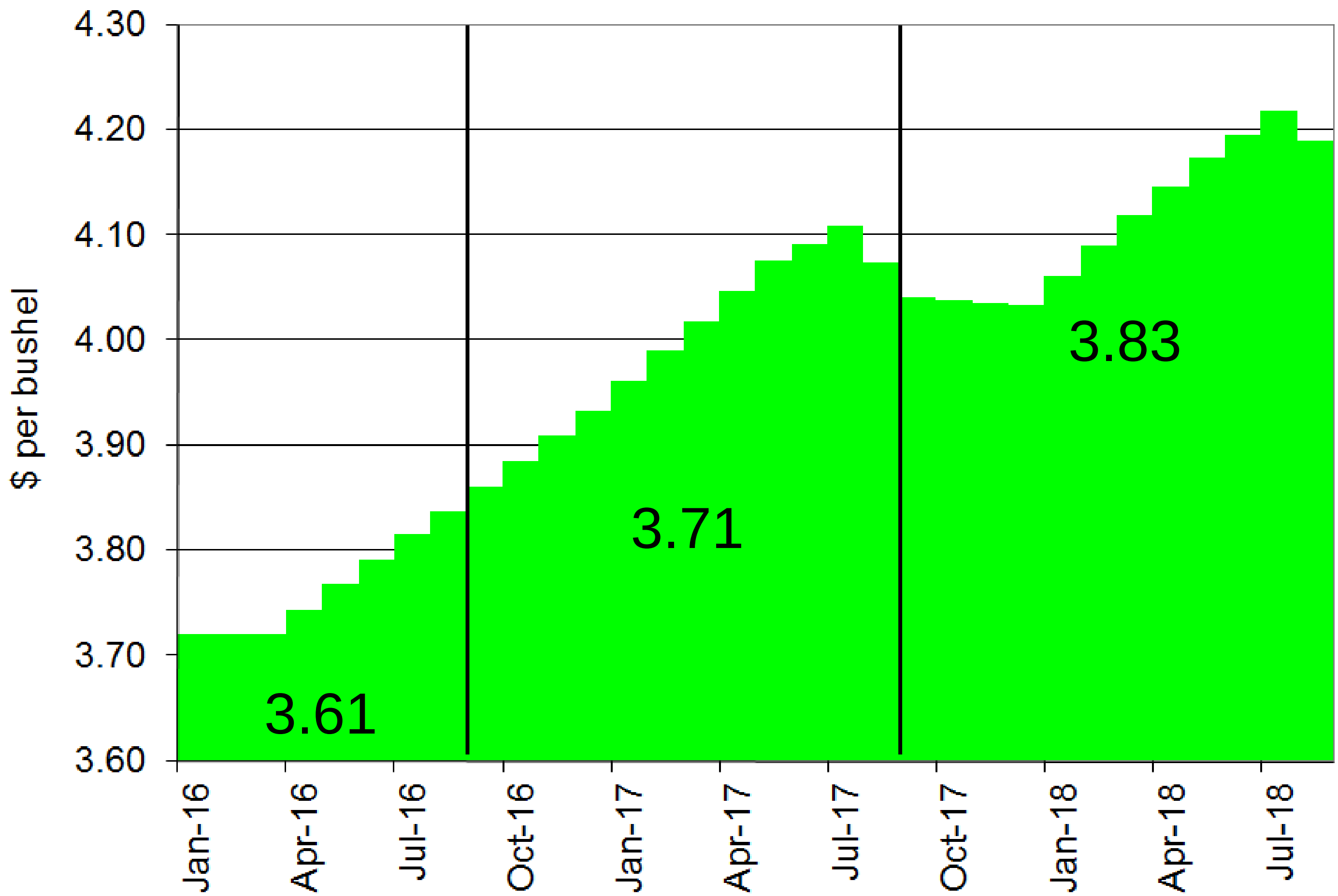
Despite the continuation of low crude oil prices, ethanol production remained on a record pace. Throughout 2015, weekly corn usage for ethanol production exceeded 100 million bushels a majority of the year. With EPA's recent announcement for the Renewable Fuels Standard, the industry has a little more certainty on the policy front. But the big key for the ethanol industry will remain with its ability to compete in the fuel market. Ethanol prices have stayed competitive with gasoline, through the energy downslide. And US consumers are driving more, given the low fuel prices. So domestic demand is growing. And as with the crop markets, the weakness for ethanol demand hinges in the international market where the lower oil prices are constraining international demand.

Corn export demand is the weak link in the current demand picture. But it is also the area that could offer the largest surprise. Corn export pace has been down significantly this fall as the strength of the US dollar and the large size of the global corn crop have limited global corn trade. Currently, Mexico is the only major corn market where we have seen year-over-year growth in corn demand. For the rest of the world, corn export demand is off by roughly 25 percent. The free trade agreements signed over the past few years have helped expand some markets in the past. But the negative factors influencing exports are currently dominating the corn trade scene. And the near-term outlook suggests that the US dollar will continue to strengthen.

The soybean use picture is much like corn's. The growth in domestic crush demand is linked to the expansion in the livestock industry. The feeding of additional cattle, hogs, chickens, and turkeys means more need for soybean meal. Soybean exports had hit record levels for the last couple of years, but the outlook shows that record demand is retreating a bit. The same negative factors that are reducing corn export demand are influencing the soybean market. The US dollar is strong and global soybean supplies are at record levels. Add in the major concerns being expressed about the Chinese economy (our largest soybean trading partner) and you have an export market in decline. But even with the retreat, soybean exports are still projected at very healthy levels.

There doesn't seem to be an alternative crop market (wheat, cotton, rice, sorghum, etc.) calling for increased production. Winter wheat plantings declined this fall, opening up even more land for corn and soybeans. With the lack of alternatives, many producers will stick the crops they've recently grown (and grown well). In fact, corn plantings will likely increase in 2016, despite the lower prices. The prevented planting acres in the southern Corn Belt from 2015 will likely head into corn production in 2016. Currently, I project roughly 90 million acres will be planted to corn, with an additional 81 million acres seeded to soybeans. Those acreage totals imply the potential to produce another 13.7 billion bushels of corn and 3.9 billion bushels of soybeans, another year of very large supplies, barring a weather disruption.

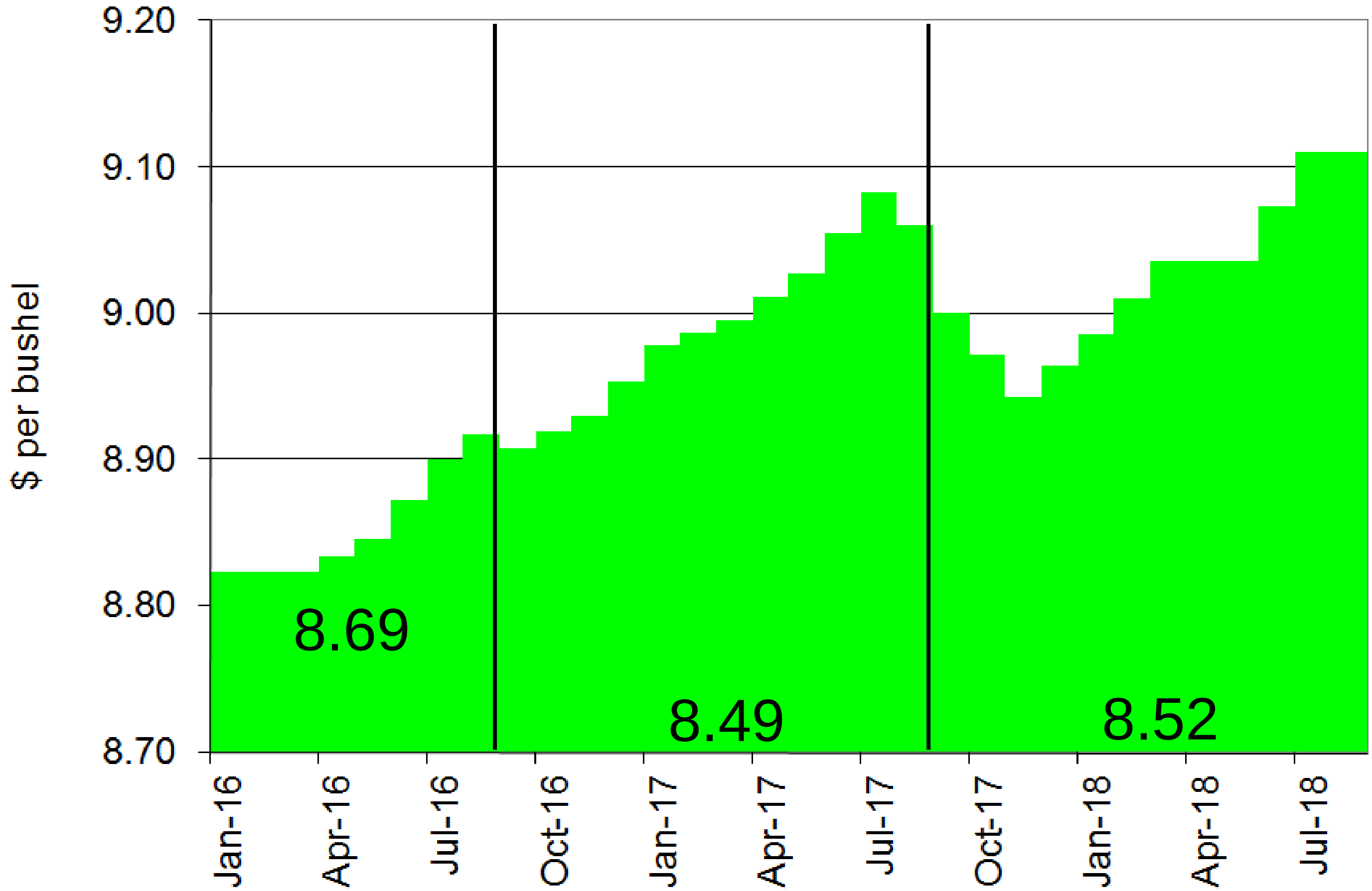
Figure 1. Corn Prices.



Looking at projected crop prices in Iowa for the 2016 and 2017 crops, the profit outlook is similar to 2014 and 2015. As they were for the last couple of years, the price projections are below production costs, even though production cost estimates are falling. As we wrap up January, futures prices for corn are showing some price improvement as we move through the next couple of years. Based on those futures prices, average cash prices in Iowa are projected to be in the $3.70 per bushel range for the 2016 corn crop. Looking further out in the future, average cash corn prices for the 2017 crop are projected in the $3.80 per bushel range. However, with production cost estimates still north of $4 per bushel, the economics in the corn sector will be challenging.

Soybean economics will also be challenging over the next couple of years. While production cost estimates remain above $10 per bushel, cash prices are projected well below that. For both the 2016 and 2017 soybean crops, average cash prices are expected to hover in the $8.50 range, given futures prices from the end of January.

Figure 2. Soybean Prices.



As was true last year (and every year), the key to knowing when you have a good price in front of you is knowing your production costs. It's hard to figure a profit if you don't know your costs. Communication with your farm business partners (lenders, landlords, crop insurance agents, agronomists, etc.) will be crucial as we negotiate in this low-to-no margin environment. These individuals can help producers explore ways to control costs while maintaining production, manage production and financial risks, and conserve working capital on the farm.

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