IOWA STATE UNIVERSITY
Extension and Outreach

Iowa Farm Outlook

Department of Economics
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December 2013 Hogs and Pigs Report Summary

On December 27 USDA released the Quarterly *Hogs and Pigs Report* reporting inventories as of December 1, 2013. These quarterly reports are usually highly anticipated by market participants as they provide key data for estimating hog supplies. Also, these reports give an indication as to what producers intend to do in the next few quarters. Given the host of issues facing the hog industry this report was much anticipated and will be dissected and debated for weeks if not months to come. Pending the report, there were broad expectations that: i) market hog inventory would be slightly lower than a year ago, attributed primarily to lower year over year pipeline pig supplies, ii) breeding herd inventory would show some form of expansion, iii) Porcine Epidemic Diarrhea Virus (PEDv) impacted the number of pigs per litter and reduced productivity during the Sep-Nov period, and iv) farrowing intentions for Dec-Feb 2013/14 and Mar-May 2014 would show the potential for solid growth with improved margins, realized and forward, having a big impact on the profitability picture. Most final estimates were within the range of pre-report expectations with one major exception (namely, the breeding herd inventory being down 1.1% from a year ago) generally suggesting 2014 hog supplies may be even tighter than previously believed.

U.S. Hogs and Pigs

Revisions were made to past inventory estimates to bring them in line with final pig crop, official slaughter, death loss, and updated import and export data. Specifically, USDA revised its estimates of the Dec-Feb 2012/13 and Mar-May 2013 pig crop. This was widely expected given the slaughter numbers reported this fall. USDA lowered their previous estimate of the Dec-Feb 2012/13 sows farrowing by 56,000 head and lowered their estimate of the Mar-May 2013 sows farrowing by 105,000 head. The pigs per litter estimates for these two periods remained the same. This resulted in the Dec-Feb 2012/13 pig crop decreasing by 563,000 head and the Mar-May 2013 pig crop decreasing by 1,085,000 head. The take-home contribution of these revisions is that previous USDA estimates of the Dec-Feb 2012/13 and Mar-May 2013 pig crops under-estimated the size of the breeding herd liquidation in the latter part of 2012.

Table 1 provides a summary of the December 1, 2013 hogs and pigs estimates for the U.S. The U.S. total hogs and pigs inventory, at 65.940 million head, was 0.7% below a year ago. The total market hog inventory was down 0.6% at 60.183 million head and the breeding herd inventory, at 5.757 million head, was down 1.1%. Pre-report estimates pegged the breeding herd inventory at 1.1% (between 0.2% and 1.9%) above a year ago. The decline in the kept for breeding inventory of 1.1% indicates that there has been no expansion and in fact some liquidation. This decline comes at a time when sow and gilt slaughter has been lower and thought to be low enough to suggest growth. Through the first 50 weeks of 2013 sow slaughter has been 3.1% below 2012 and 9.1% below the 2007-11 average. Sow slaughter has been down significantly since the beginning of July, a time of year in which sow slaughter is typically trending upward. Since July sow slaughter has been 7.0% below 2012 and 10.5% below the 2007-11 average. In addition, according to University of Missouri data, gilt slaughter year to date has been 2.0% below year ago levels.

The inventory of pigs less than 50 pounds, at 19.049 million head, was down 1.3% and the inventory of pigs 50 to 119 pounds, at 16.669 million head, was down 0.5%. Pig inventory weighing 120 to 179 pounds, at 12.626 million head, was down 0.1% while inventory weighing 180 pounds and over, at 11.838 million head, was down 0.3%. Market participants were watching these categories closely for an indication of the impact from PEDv with many analysts expecting year over year declines. This was second report following the outbreak and spread of PEDv in the U.S. and corresponded closely to the period when the market would see the wide-spread impact of the disease.

Sep-Nov sows farrowing, at 2.882 million head, was down 0.2%. The Sep-Nov pigs per litter, at 10.16 pigs, was up only a modest 0.1% compared to a year ago (figure 1). The Sep-Nov pig crop, at 29.298 million head, was down 0.1%. This was still the fourth largest Sep-Nov pig crop in the history of the data going back to 1974.

The outlook for hog supplies in 2014 will be affected by producer intentions to farrow sows in the coming months. Dec-Feb 2013/14 sows farrowing, at 2.825 million head, would be up 1.3% compared to a year ago and Mar-May 2014 sows farrowing, at 2.855 million head, would be up 1.4%. This is somewhat perplexing as a smaller breeding herd would correspond to fewer sows farrowing. Lower feed costs and the potential for strong and sustained profits this next year will likely encourage producers to maximize sows farrowing but the initial farrowing intention estimates may be too optimistic given the size of the breeding herd. And, if growth in pigs per litter remains relatively flat as was experienced this last quarter, there could be very limited growth in the pig crops in the upcoming quarters.

Table 1. U.S. Quarterly Hogs and Pigs Report

	2012	2013	2013 as % of 2012	Pre-Report Estimate	Actual - Estimate
December 1 inventory [1/]					
All hogs and pigs	66,374	65,940	99.3	99.9	-0.6
Kept for breeding	5,819	5,757	98.9	101.0	-2.1
Market	60,555	60,183	99.4	99.8	-0.4
Under 50 pounds	19,299	19,049	98.7	99.7	-1.0
50-119 pounds	16,752	16,669	99.5	99.7	-0.2
120-179 pounds	12,634	12,626	99.9	99.9	0.0
180 pounds and over	11,871	11,838	99.7	100.1	-0.4
Farrowing [2/]					
Sep-Nov farrowed	2,888	2,882	99.8	100.4	-0.6
Dec-Feb intentions [3/]	2,788	2,825	101.3	100.9	0.4
Mar-May intentions [4/]	2,816	2,855	101.4	101.2	0.2
Sep-Nov pigs per litter	10.15	10.16	100.1	100.8	-0.7
Sep-Nov pig crop [1/]	29,319	29,298	99.9	101.2	-1.3

Full report: http://usda01.library.cornell.edu/usda/current/HogsPigs/HogsPigs-12-27-2013.pdf

Pre-Report estimates compiled by the Wall Street Journal.

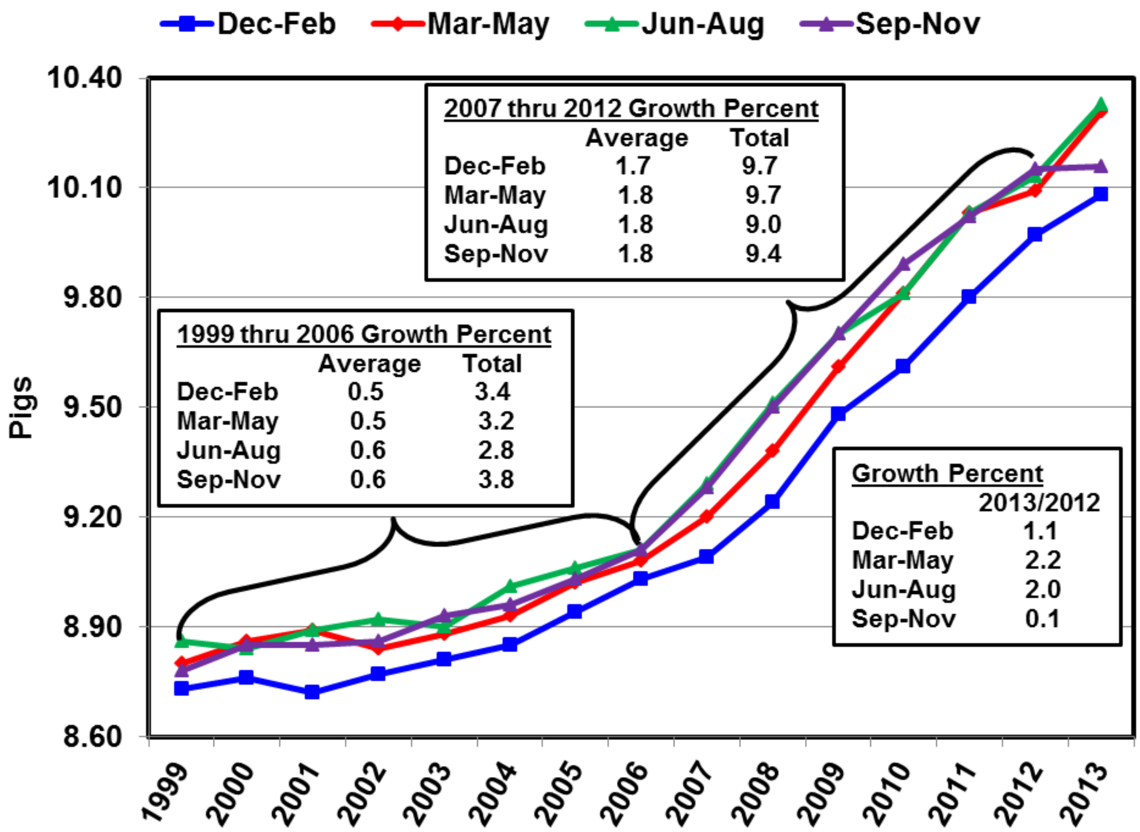
[1/] Thousand head. [2/] Thousand litters. [3/] Dec-Feb 2012/2013 and 2013/2014. [4/] Mar-May 2013 and 2014.

Iowa Hogs and Pigs

USDA revised its estimates of the Dec-Feb 2012/13 and Mar-May 2013 pig crop for Iowa. USDA lowered their previous estimate of the Dec-Feb 2012/13 sows farrowing by 10,000 head and lowered their estimate of the Mar-May 2013 sows farrowing by 20,000 head. The pigs per litter estimates for these two periods remained the same. This resulted in the Dec-Feb 2012/13 pig crop decreasing by 103,000 head and the Mar-May 2013 pig crop decreasing by 210,000 head.

Table 2 provides a summary of the December 1, 2013 hogs and pigs estimates for Iowa. The total hogs and pigs inventory, at 20.500 million head, was 0.5% below a year ago. The total market hog inventory was down 0.2% at 19.530 million head and the breeding herd inventory, at 0.970 million head, was down 5.8%. This was the smallest Iowa December 1 breeding hog inventory in the history of the data going back to 1963. The 5.8% decrease from a year ago represents the largest year over year decrease since the 7.9% decrease in 1999.

Figure 1. Pigs per Litter, U.S., Quarterly (Source: USDA-NASS)



The inventory of pigs less than 50 pounds, at 4.950 million head, was down 3.3% while the inventory of pigs 50 to 119 pounds, at 6.130 million head, was up 1.7%. Pig inventory weighing 120 to 179 pounds, at 4.850 million head, was up 2.1% while inventory weighing 180 pounds and over, at 3.600 million head, was down 1.9%.

Table 2. Iowa Quarterly Hogs and Pigs Report

	2012	2013	2013 as % of 2012
December 1 inventory [1/]			
All hogs and pigs	20,600	20,500	99.5
Kept for breeding	1,030	970	94.2
Market	19,570	19,530	99.8
Under 50 pounds	5,120	4,950	96.7
50-119 pounds	6,030	6,130	101.7
120-179 pounds	4,750	4,850	102.1
180 pounds and over	3,670	3,600	98.1
Farrowing [2/]			
Sep-Nov farrowed	505	480	95.0
Dec-Feb intentions [3/]	465	460	98.9
Mar-May intentions [4/]	475	465	97.9
Sep-Nov pig crop [1/]	5,202	5,088	97.8
Sep-Nov pigs per litter	10.30	10.60	102.9

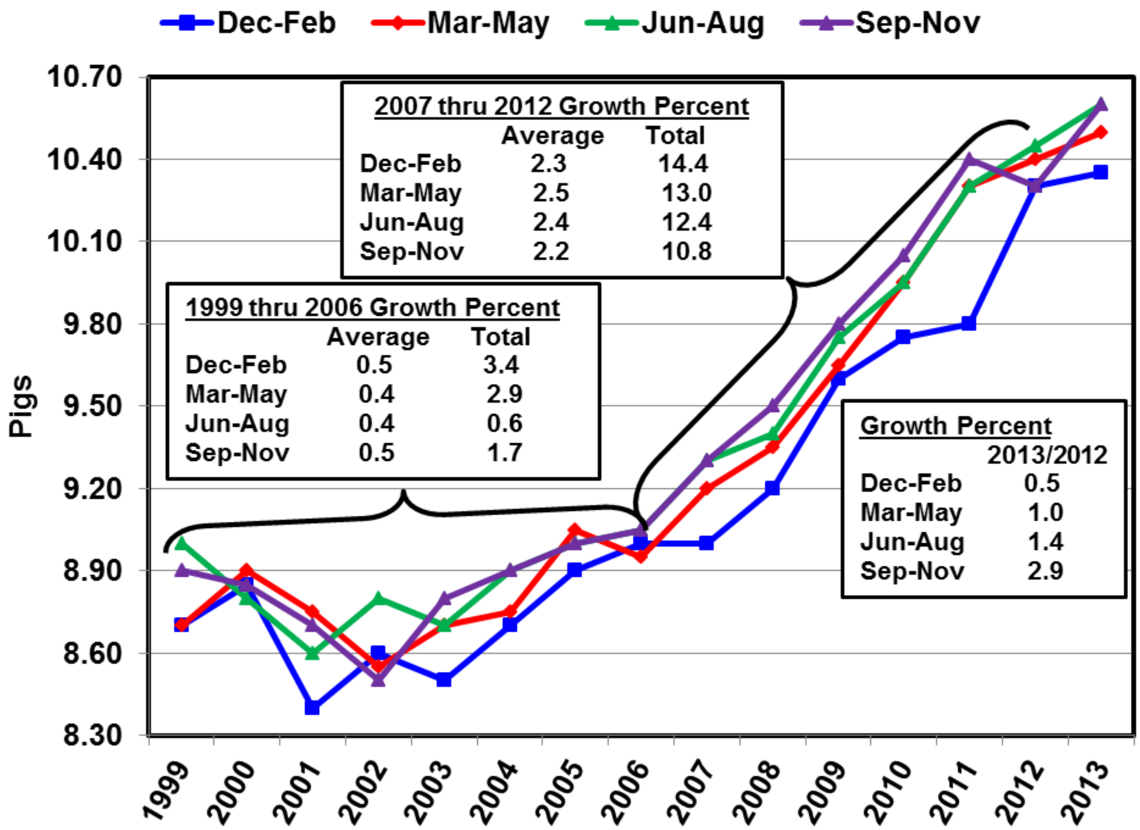
Full report: http://usda01.library.cornell.edu/usda/current/HogsPigs/HogsPigs-12-27-2013.pdf
[1/] Thousand head. [2/] Thousand litters. [3/] Dec-Feb 2012/2013 and 2013/2014.
[4/] Mar-May 2013 and 2014.

Sep-Nov sows farrowing, at 0.480 million head, was down 5.0%. The Sep-Nov pigs per litter, at 10.60 pigs, was up 2.9% compared to a year ago (figure 2). The Sep-Nov pig crop, at 5.088 million head, was down 3.2%. Producers in Iowa continued to realize tremendous progress in productivity, i.e., pigs per litter. In fact, the Sep-

Nov pigs per litter tied the record high of 10.60. This is a bit surprising when considering the flat-line growth reported by the aggregate U.S. estimates.

Producer intentions in Iowa to farrow sows in the coming months is considerably more pessimistic than is the case for the U.S. Dec-Feb 2013/14 sows farrowing, at 0.460 million head, would be down 1.1% compared to a year ago and Mar-May 2014 sows farrowing, at 0.465 million head, would be down 2.1%. These farrowing intentions align with the current size of the breeding herd, i.e., smaller breeding herd corresponds to fewer sows farrowing. However, if growth in pigs per litter remains strong as was experienced this last quarter, the decrease in pig crops could be limited in the upcoming quarters.

Figure 2. Pigs per Litter, Iowa, Quarterly (Source: USDA-NASS)



Commercial Hog Slaughter Projections and Lean Hog Price Forecasts

Table 3 contains the Iowa State University price forecasts for the next four quarters and the quarterly average futures prices based on December 30, 2013 settlement prices. The futures price forecasts are adjusted for a historic Iowa/Southern Minnesota basis. The table also contains the projected year over year changes in commercial hog slaughter.

Table 3. Commercial Hog Slaughter Projections and Lean Hog Price Forecasts, 2014

	Year over Year Change In Commercial Hog Slaughter (percent)	ISU Model Price Forecast ($/cwt)	CME Futures (12/30/13) Adjusted for Negotiated IA/So MN Basis ($/cwt)
Jan-Mar 2014	-0.16	85-90	87.50
Apr-Jun 2014	-1.06	95-100	97.90
Jul-Sep 2014	+0.92	91-96	91.25
Oct-Dec 2014	+2.51	80-85	80.88

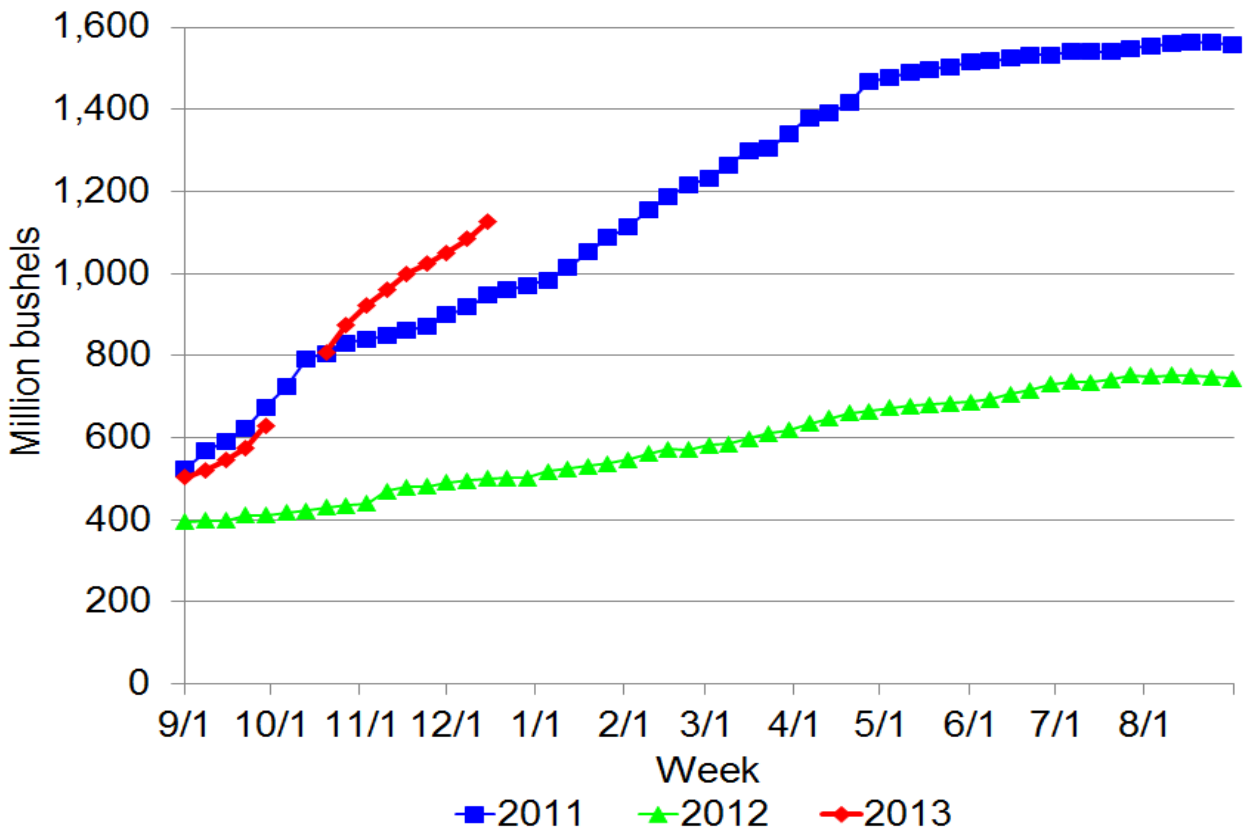
Lee Schulz

Waiting for the Final Numbers

The January crop report will put the finishing touches on corn and soybean production for 2013. No matter what changes come in the report, the markets will still be facing a record corn crop and a very strong soybean crop. To me, the key to the report will be the outlook for crop demand as we enter 2014. The demand numbers going into 2014 show fairly strong demand across the board. For corn, feed and residual use is projected to be above 5 billion bushels for the 1st time since 2009/10. Ethanol use is expected to reach nearly 5 billion bushels as many ethanol plants have geared up with the lower priced corn. Food and industrial use is projected at 1.45 billion bushels, the highest level in 5 years. For soybeans, domestic crush demand is expected to edge slightly higher. Seed and residual use of soybeans is also expected to increase this marketing year.

But the main sector in the demand recovery for both crops has been exports. As Figure 1 shows, the corn export market has continued to chug right along. Lower priced U.S. corn has been very attractive in many international markets and the current pace of corn exports is running nearly 200 million bushels ahead of the export pace we had for the 2011/12 crop. Compared to 2012/13, the corn export pace has basically doubled. And the demand has a very broad base. Last year, the top six markets for U.S. corn exports were Japan, Mexico, China, Venezuela, Taiwan, and South Korea. So far this year, exports into each of those countries are up by at least 15%. Mexico has been our largest market this year as corn exports have increased 165%. And Mexico has also been aggressive locking in some 2014/15 corn already.

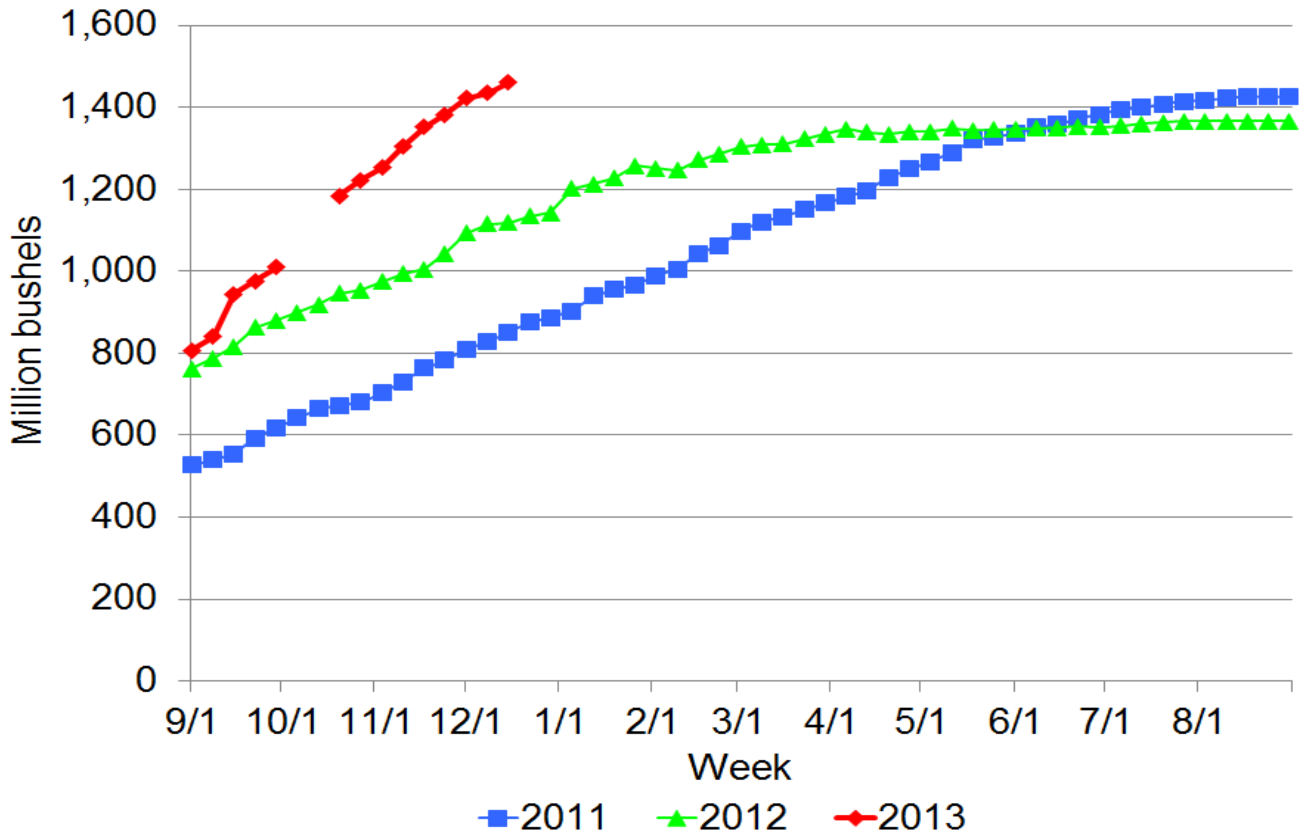
Figure 1. 2013/14 Corn Exports (Source: USDA-FAS).



Lower priced U.S. soybeans have also been very attractive in many international markets. As Figure 2 shows, the current pace of soybean exports is running 600 million bushels ahead of the export pace we had for the 2011/12 crop. Compared to 2012/13, the soybean export pace is up 300 million bushels. As with corn, the demand has a very broad base. Last year, the top six markets for U.S. soybean exports were China, the European Union, Mexico, Japan, Indonesia, and Taiwan. Out of those countries, only Japan has pulled back on soybean purchases (and only by -0.4%). In the other countries, soybean export growth is in the double digits. Mexico and Indonesia have been the largest growing markets this year as soybean exports have increased over

40% there. But the leading market remains China. China has already purchased nearly 250 million bushels of U.S. soybeans. That's up 35% from last year.

Figure 2. 2013/14 Soybean Exports (Source: USDA-FAS).



So there's been plenty of positive news on the demand side. But with the South American crops coming into focus, the crop markets have shifted down again over the past couple of weeks. Once the South American harvest begins, the good news from the export markets will be in our rear view mirror. And the markets will concentrate on 2014 planting decisions and the resulting potential for another year of strong production and building stocks.

Figure 3 displays the acreage used for the major crops in the U.S. Over the past couple of decades, the trend has been for less acreage to be used for crop production. However, within the past seven years, high crop prices have created a couple of acreage spikes, enticing land back into crop production. The experience in 2009 shows that acreage can disappear from crop production as prices slide. But there are a couple of reasons why that may not happen again for 2014. The first is that the recent rebound in crop acreage has persisted for two years, as opposed to the one year spike back in 2008. Since the new land has been worked a couple of times, it should be easier to maintain in crop production.

The second reason has to do with the 2013 crop. Many states set yield records in 2013. Based on USDA's November yield estimates, 18 states set corn yield records and 7 states set soybean yield records. That excellent production experience in 2013, especially in the Southeast where some of the recent acreage growth came from, will likely hold additional land in corn and soybean production. As Figure 4 shows, corn and soybeans have been pulling significant acreage from other crops. While the drop in corn and soybean prices should push acreage away, the prices for competing crops are not really pulling acreage towards them.

Figure 3. Principal Crop Acreage (Source: USDA-NASS).

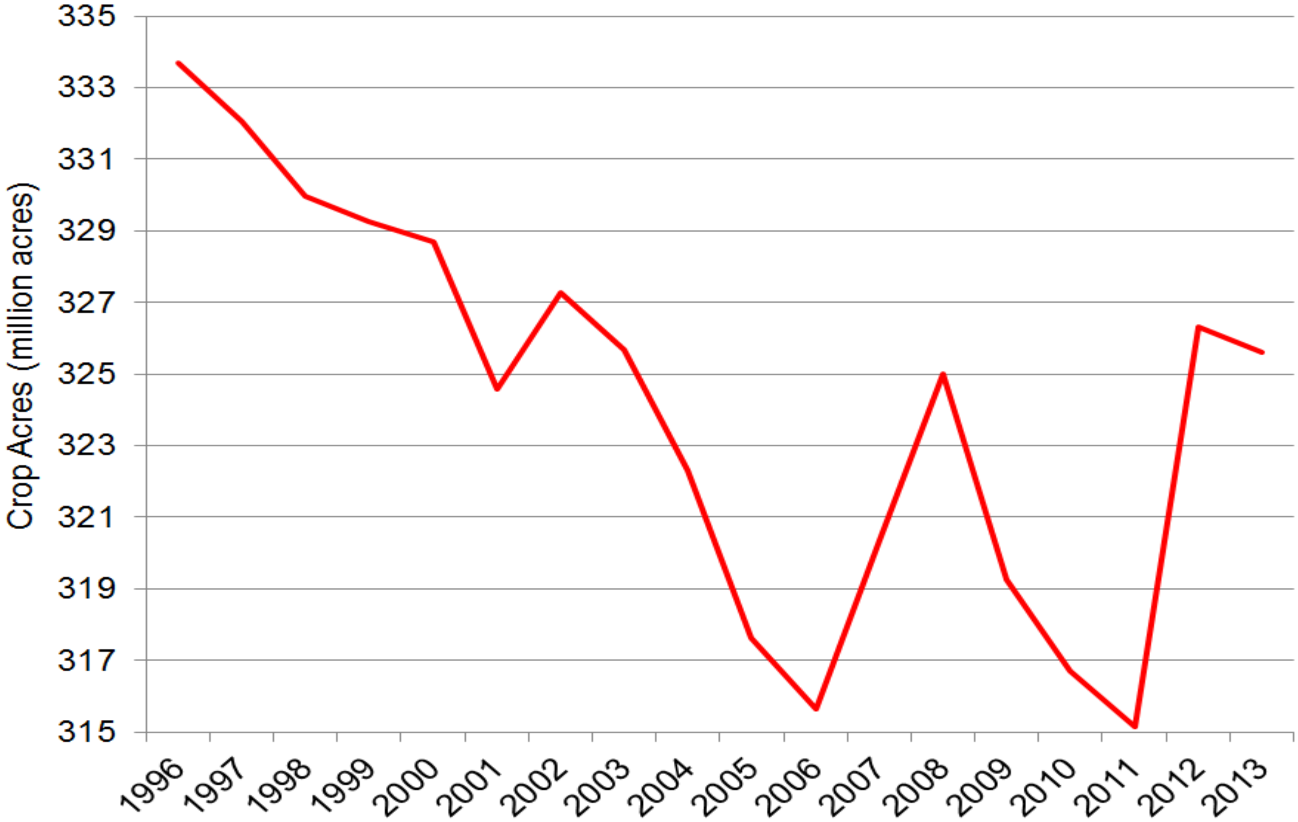
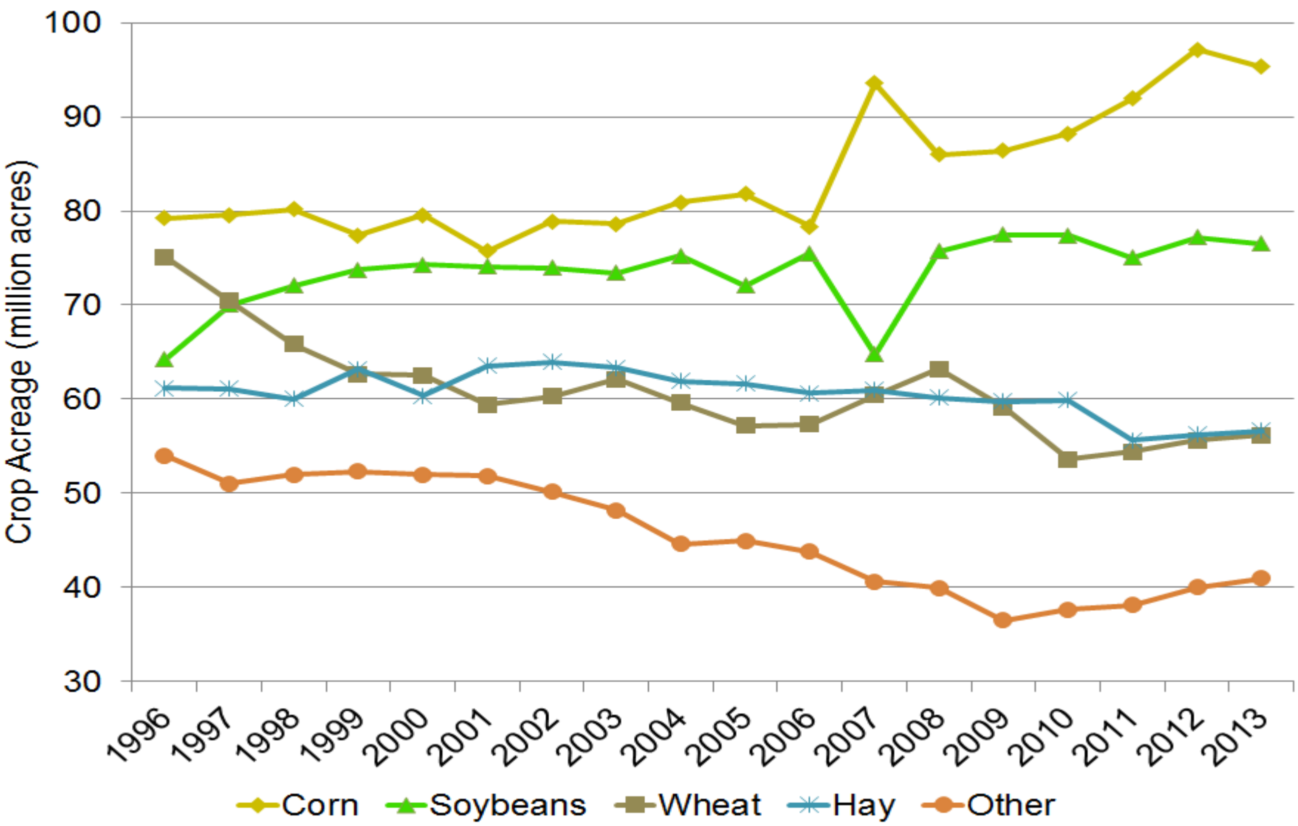
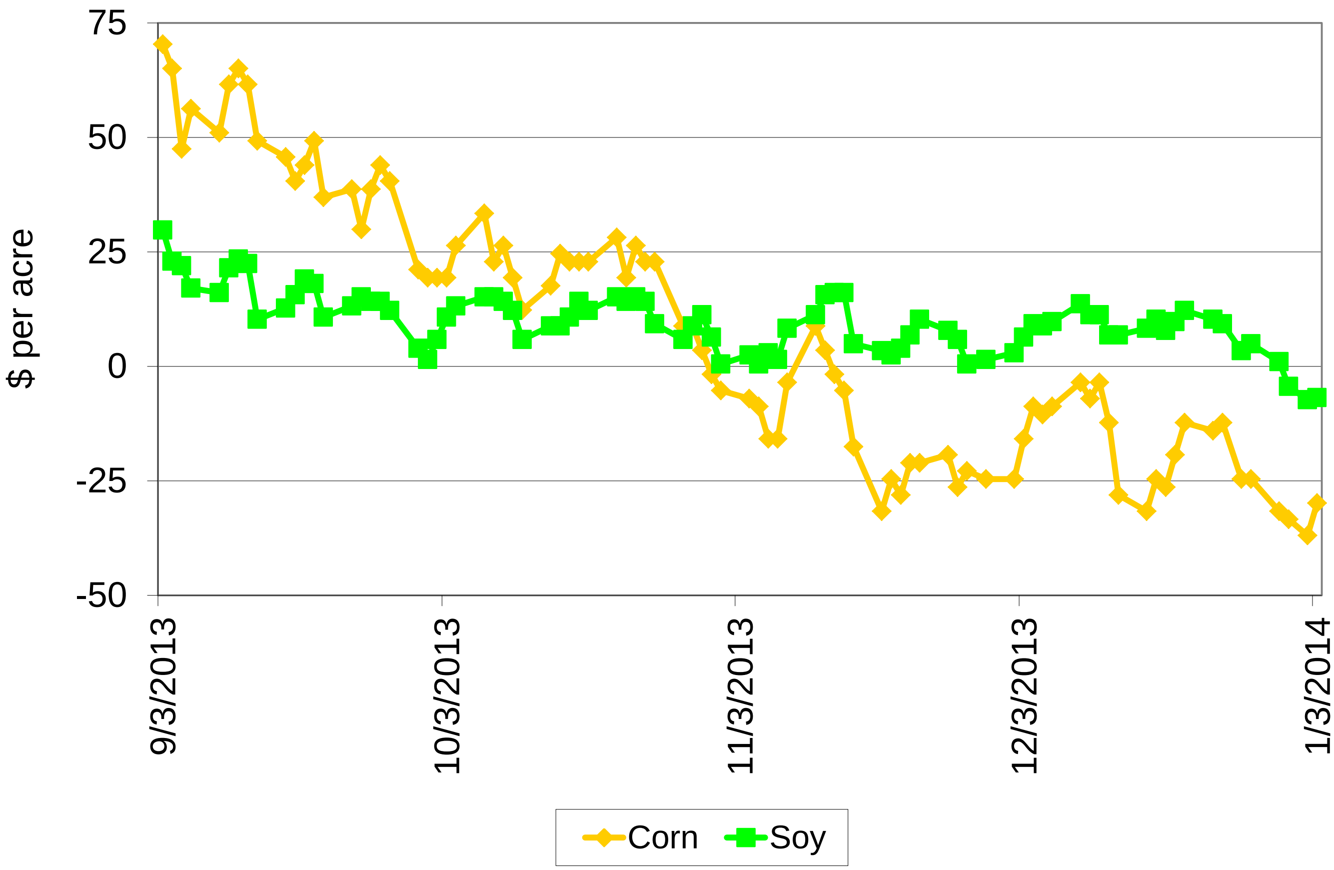


Figure 4. Individual Crop Acreage (Source: USDA-NASS).



Looking at projected crop margins in Iowa for the 2014 crops, the profit outlook has drastically changed for both crops in comparison to the last few years. For the last four years, projected crop margins at this point in the year were in the triple digits. This year, the margin projections are below breakeven. Corn has suffered the larger drop, but soybean margins have moved negative recently as well. But while Iowa margins are negative, we will likely see an increase in our crop acreage as prevented planting land, especially in north central Iowa, returns to production.

Figure 5. Projected Crop Margins based on 2014/15 Futures.



There's been a lot of chatter about corn holding in the 91-92 million acre range, with soybean acreage moving above 80 million acres. Plantings of those sizes would definitely allow for the possibility of very large corn and soybean crops in 2014. And that will keep prices lower unless Mother Nature interferes again. Given the lack of positive margins and the continuing pressure on crop prices, the crop insurance price election for 2014 will be critical. Based on rough 2014 production cost estimates of $4.50 for corn and $11 for soybeans, the potential exists for crop insurance prices to cover production costs. As we move into 2014, the December corn futures are hovering around $4.50, while the November soybean futures are over $11.25. Over the past couple of years, crop insurance usage could essentially lock in a profit. This coming year, there will be no such guarantee. Crop marketing this coming year will be more like the years 2000 to 2005 than 2006 to 2012. We're back to our normal competitive business.

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