IOWA STATE UNIVERSITY
Extension and Outreach

Iowa Farm Outlook

Department of Economics
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Pork Profit Prospects Fade

A double whammy of rising feed prices and falling hog prices point to tighter hog margins than were expected earlier this year. Projected 2018 profits in ISU's farrow to finish model dipped from $11 per head forecast in December, to $8 per head projected in February, to losses of $4 per head for 2018 projected the first week of April.

So far this year 2018 corn futures are up 27 cents per bushel, with 2018 soybean meal futures about $56 per ton higher. Further price inflation could occur with USDA's March Prospective Plantings Report predicting 2018 corn acreage at 88 million, down 2.17 million acres from last year. Soybean acreage is estimated at 89 million, down 1.14 million acres. USDA's March Grain Stocks Report pegged corn stocks 3.1% higher than a year ago and soybean stocks up 21.2%.

Both old crop and new crop feed prices could fluctuate widely. Delayed planting could boost prices. Staying priced ahead on feed could prove advantageous and add some certainty to the evolving pork profitability equation this year.

Hog price prospects dim
Carcass weight prices in 2018 are now expected to average near $63 per cwt compared to about $66.50 last year. In December we expected 2018 prices to average nearly $70 per cwt. Reasons for softness in prices are not entirely clear. Perhaps earlier expectations for spring and summer hog prices were too high. June lean hog futures, for example, traded in the $82 to $85 range in January. June futures averaged $81 in February and $77.50 in March.

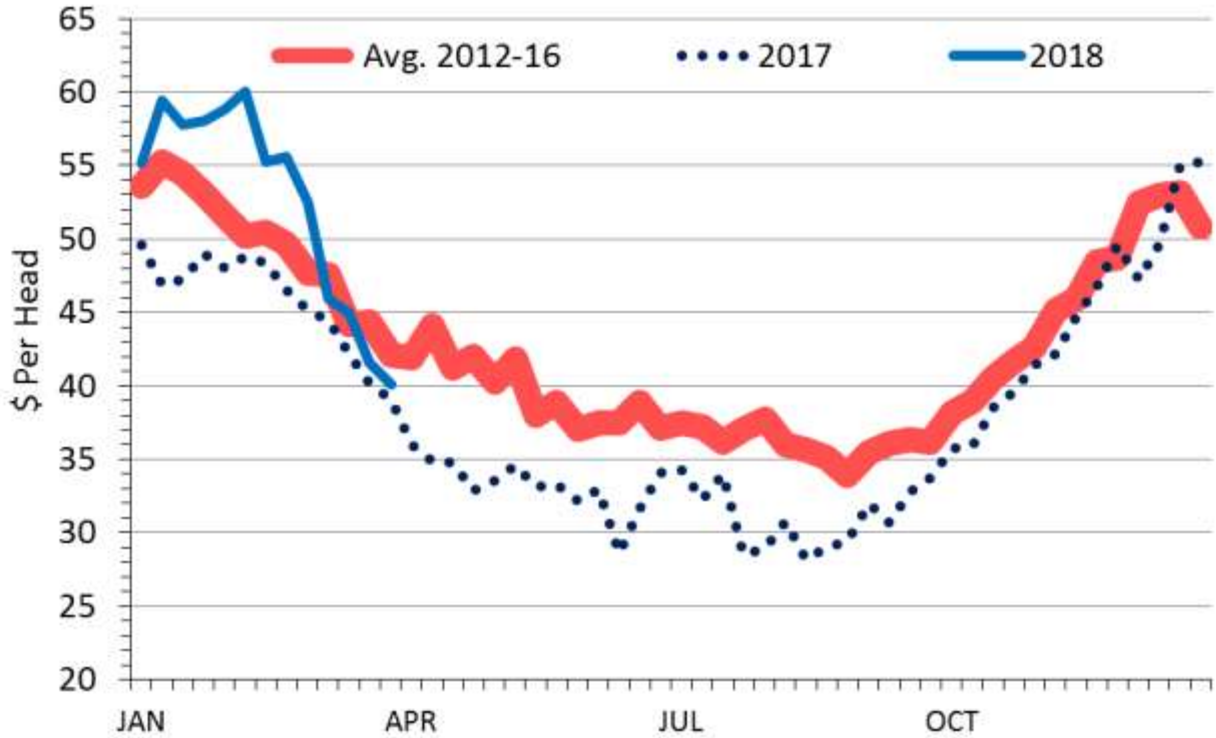
News of the Chinese government choosing to impose an additional 25 percent duty on imports of U.S. pork and pork variety meat adds additional volatility to the market. Much remains to be worked out in this trade conflict. Only time will tell how big the impact will be.

January and February 2018 farrow to finish profits averaged about $14.50 per head. The March hog price skid hammered margins, still only a small loss is projected for 2018. The currently expected breakeven proposition does not sound encouraging. But forecast prices still cover all production costs including feed, a full labor return and full depreciation recovery on buildings and equipment. This suggests farrow to finish operations can continue into the future with breakeven returns calculated in this manner.

Feeder pig finishing profits tumble
Wean to finish production with change in ownership of pigs is another story. November through February cash and formula prices averaged $52.46 per head, bolstered by strong profit prospects (Figure 1). These pigs will reach market weight roughly from May through August, with breakeven prices averaging $77 per cwt. This is $8 per cwt higher than current expectations for lean hog prices.

No production adjustments yet
The national breeding herd is 1.7% larger than a year ago based on early March producer surveys for USDA's Hogs and Pigs Report (Table 1). Breeding herd additions totaled 21,000 head from December to March. For the March through May quarter, U.S. producers intend to farrow 3.078 million sows. This is 2.1% more sows than for the same period in 2017. Intended farrowings for June through August 2018 are estimated at 3.165 million sows, up 1.4% from 2017.

Figure 1. Early Weaned Pig Prices, National, 10-12 Pounds, Delivered, Weekly



Data Source: USDA-AMS, Livestock Marketing Information Center

Table 1. USDA Quarterly Hogs and Pigs Report Summary

	U.S.				Iowa		
	2017	2018	2018 as % of '17		2017	2018	2018 as % of '17
Mar 1 inventory *							
All hogs and pigs	70,701	72,908	103.1		21,600	22,600	104.6
Kept for breeding	6,098	6,200	101.7		1,000	1,020	102.0
Market	64,603	66,708	103.3		20,600	21,580	104.8
Under 50 lbs	20,407	21,047	103.1		5,300	5,590	105.5
50-119 lbs	17,862	18,422	103.1		6,440	6,720	104.3
120-179 lbs	14,435	14,874	103.0		5,270	5,340	101.3
180 lbs and over	11,899	12,364	103.9		3,590	3,930	109.5
Sows farrowing **							
Dec – Feb [1]	2,986	3,057	102.4		510	560	109.8
Mar – May [2]	3,014	3,078	102.1		510	550	107.8
Jun – Aug [2]	3,121	3,165	101.4		530	560	105.7
Dec – Feb pigs per litter	10.43	10.58	101.4		10.75	11.00	102.3
Dec – Feb pig crop *	31,146	32,341	103.8		5,483	6,160	112.3

Full report: http://usda.mannlib.cornell.edu/usda/current/HogsPigs/HogsPigs-12-22-2017.pdf
* 1,000 head; **1,000 litters; [1] December preceding year; [2] Intentions.

A big question is will producers back off on farrowings given the change in the profitability outlook. A mid-March uptick in sow slaughter suggests they might.

Iowa remains the primary destination for weaned and feeder pigs, both from other U.S. states and Canada. Iowa has 32.3% of the kept for market inventory versus 16.5% of the breeding herd. In the latest USDA Market News

Service National Direct Delivered Feeder Pig Report, Iowa was the destination for almost 72% of the reported volume.

Impressively, Iowa producers weaned an estimated 6.61 million pigs in December through February, up 12.3% from the previous year. This came from 9.8% more sows farrowing and a 2.3% rise in pigs saved per litter. Both being very large year over year increases.

Iowa's farrowing intention estimates don't quite jibe with the current size of the breeding herd. For comparison, the national breeding herd is up 1.7% year over year and March through May and June through August farrowing intentions are up 2.1% and 1.4%, respectively. In Iowa, the breeding herd is up 2.0% and farrowing intentions are pegged at 7.8% and 5.7% higher. If large increases in litter rates continue, Iowa pig crops will be even larger. Are more breeding herd additions on the way and could Iowa become less dependent on imports of feeder pigs to fill its finishing space? These are important questions and topics worth monitoring.

Export prospects murky

Growing pork export demand had enabled the U.S. industry to continue expanding in recent years. In 2016 and 2017, rising exports required an average annual increase in U.S. production of only 2.2% per year. In 2018, USDA expects pork exports for the year to be up 5.2%. USDA's March Hogs and Pigs Report pretty much solidified a 3% to 4% uptick in 2018 hog slaughter. Pork production could be even larger if larger slaughter weights are realized.

News of the Chinese import tariff hike puts a negative tilt on export growth in 2018. Chinese market uncertainty makes expanding and diversifying export destinations for pork crucial. New and emerging markets in countries such as Colombia, Dominican Republic, and Chile, and mainstay markets such as Mexico, Japan, and South Korea were strong in 2017 and will be counted on again this year. With over 40% of U.S. pork exports going to Mexico and Canada, one could argue that a positive outcome to NAFTA is the biggest piece of the puzzle still in need of certainty.

Commercial slaughter and price forecasts

Table 2 contains the Iowa State University price forecasts for the next four quarters and the quarterly average futures prices based on March 29, 2018 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 2. Commercial Hog Slaughter Projections and Lean Hog Price Forecasts, 2018-19

	Year-over-Year Change In Commercial Hog Slaughter (percent)	ISU Model Price Forecast, Negotiated IA/So MN ($/cwt)	CME Futures (3/29/18) Adjusted for Negotiated IA/So MN Basis ($/cwt)
Apr-Jun 2018	3.17	65-69	66.45
Jul-Sep 2018	3.79	69-73	70.82
Oct-Dec 2018	4.21	56-60	57.45
Jan-Mar 2019	2.10	60-64	61.74

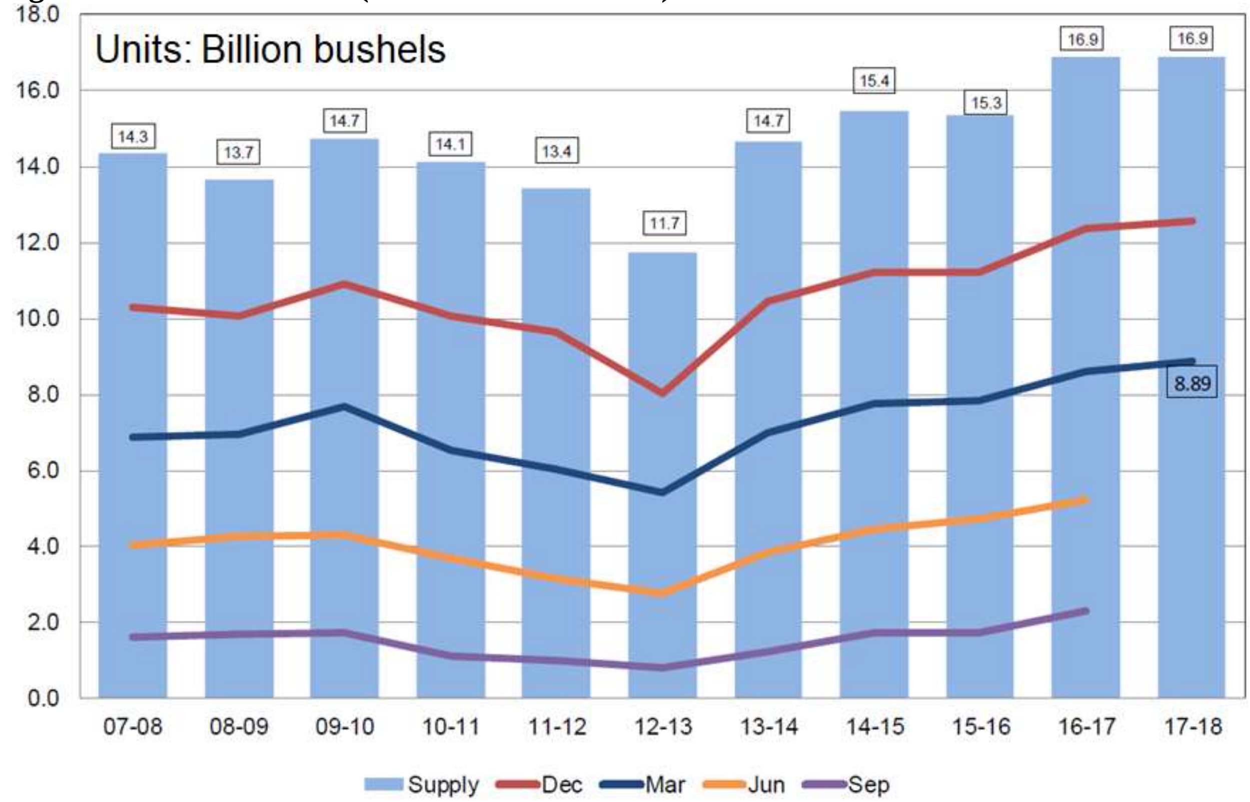
Lee Schulz

A Light Acreage Report

The crop markets left March on an upward note after the release of Grain Stocks and Prospective Plantings reports. While the stocks report showed plenty of corn and soybeans still in storage, the acreage report revealed fewer acres for both crops. And for the markets, there was much rejoicing about that. The price recovery just before Good Friday basically offset the drift-down in prices over the last half of March as traders prepared for the USDA reports. From a futures price perspective, it's almost as though March never happened.

March 1 corn stocks were estimated at 8.89 billion bushels. That's up 3 percent from last year and continues the trend of higher stock levels since 2012. Both on- and off-farm stocks grew, with relatively a few more bushels being held at the local elevators compared to last year. Corn disappearance was a little slower this year, as 3.68 billion bushels were used between December and February, but that's about 80 million bushels lower than last year's pace. So the story remains the same for corn stocks as we have had five years of strong production and six years of building stocks.

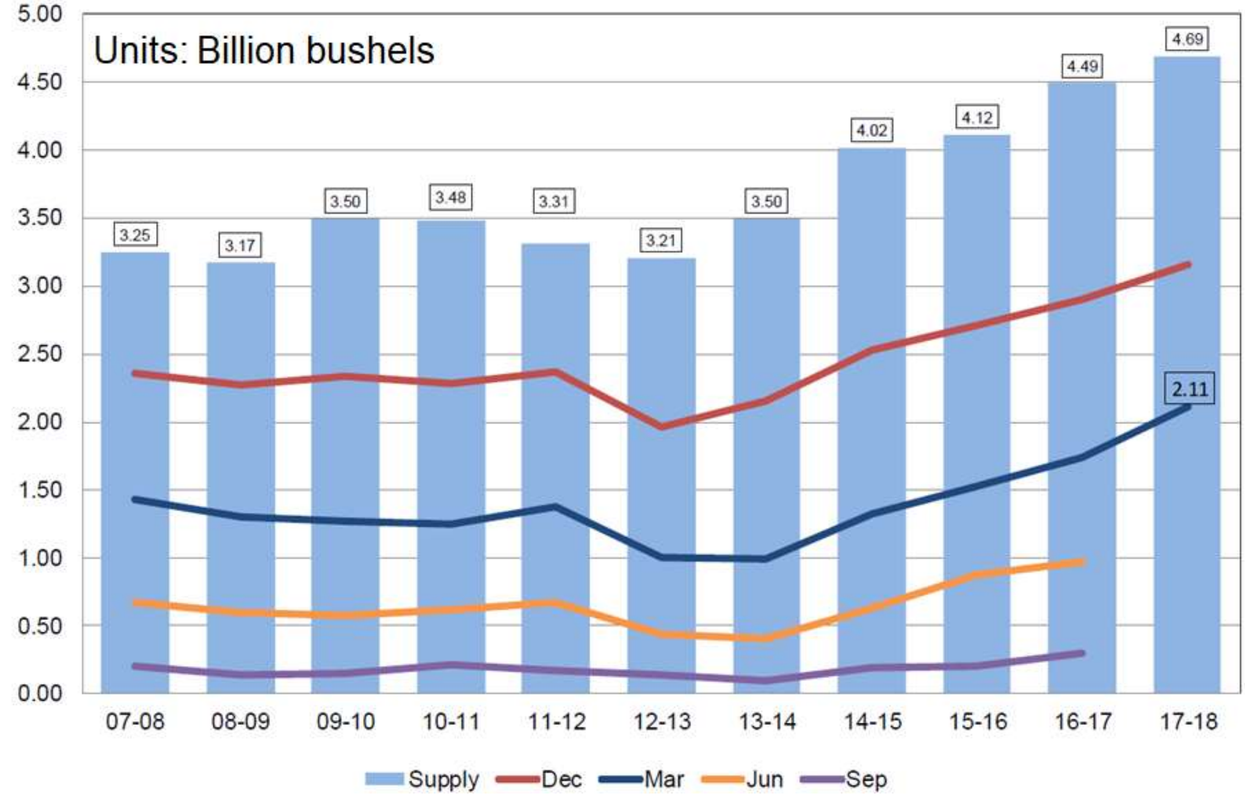
Figure 1. U.S. corn stocks (Source: USDA-NASS).



With 5 billion bushels of corn in on-farm storage, many farmers are holding on, looking for the traditional late spring rally. The stored bushels are keeping basis wider than typical, but cash prices finished March about 20 cents higher than a year ago. In Iowa, 1 billion bushels remained on the farm as March 1st, roughly the same amount as last year. Meanwhile, corn storage at Iowa's elevators and off-farm facilities decreased by 15 million bushels. So while national corn stocks are higher, Iowa's corn stocks are a little smaller.

A similar national story can be told for soybeans. March 1st national soybean stocks were estimated at 2.11 billion bushels, up 21 percent from last year. So nearly half of last year's bin-busting crop remains in storage. As was true last year, quarterly soybean usage and disappearance shrank. December to February soybean disappearance declined 9 percent year-over-year to 1.05 billion bushels. Disappearance will need to be very strong to prevent another year of building stocks.

Figure 2. U.S. soybean stocks (Source: USDA-NASS).



On-farm soybean storage jumped up by 28 percent, while off-farm storage increased by 17 percent. Iowa mirrored the national trend in that Iowa's total soybean stocks grew by 18 percent. On-farm soybean stocks in Iowa gained 35 million bushels, while off-farm stocks increased by roughly 22 million. So, in general, old crop supplies remain burdensome.

Luckily, for those looking for higher prices, the end of March also brought us the Prospective Plantings report. That report highlighted some major acreage shifts across the country. For the past several years, the story has been about how other crops gave up area for corn and soybean production. This year, it was the opposite. Spring wheat, sorghum, and cotton soaked up some additional acreage, while corn and soybeans both gave up acres. In the grand scheme of things, total crop area shrank by over 1 million acres. The lower returns of the last few years have finally triggered some re-evaluation of more marginal cropland.

As Figure 3 shows, farmers indicated a 2 million acre decline in corn plantings. Most of the Corn Belt states are reducing corn plantings. Out of the major producing states, only South Dakota, Iowa, and Missouri are not reducing corn acres. The largest reductions are occurring in the Northern and Central Plains, but Illinois and Indiana are also shrinking corn plantings. For the Northern Plains, spring wheat is replacing corn. In the Central Plains, sorghum is doing that. And for Indiana, corn made way for soybeans.

The reduced corn plantings translate into smaller corn crop projections for 2018, but the projections are still quite large. Given USDA's initial trend yield of 174 bushels per acre, 2018 corn production would be roughly 14 billion bushels. That would be about 550 million bushels less than last fall's crop, but it's also still projected to be the 4th largest corn crop we have ever had. But the corn market seized on the possibility that supplies will get smaller and added 10-15 cents on the news.

Last year, soybeans were the major land gainer. This year, only corn gave up more ground. The land pattern for soybeans is mixed. Most of the reduction is in the western soybean area, but there are significant drops in soybean area in Michigan, Ohio, Tennessee, and North Carolina. Five states will plant a record amount of land to soybeans, including North Dakota, Wisconsin, Indiana, and Kentucky. The largest declines are in Minnesota, Kansas, and Ohio, with Iowa not that far behind.

Figure 3. U.S. projected corn acreage (Source: USDA-NASS).

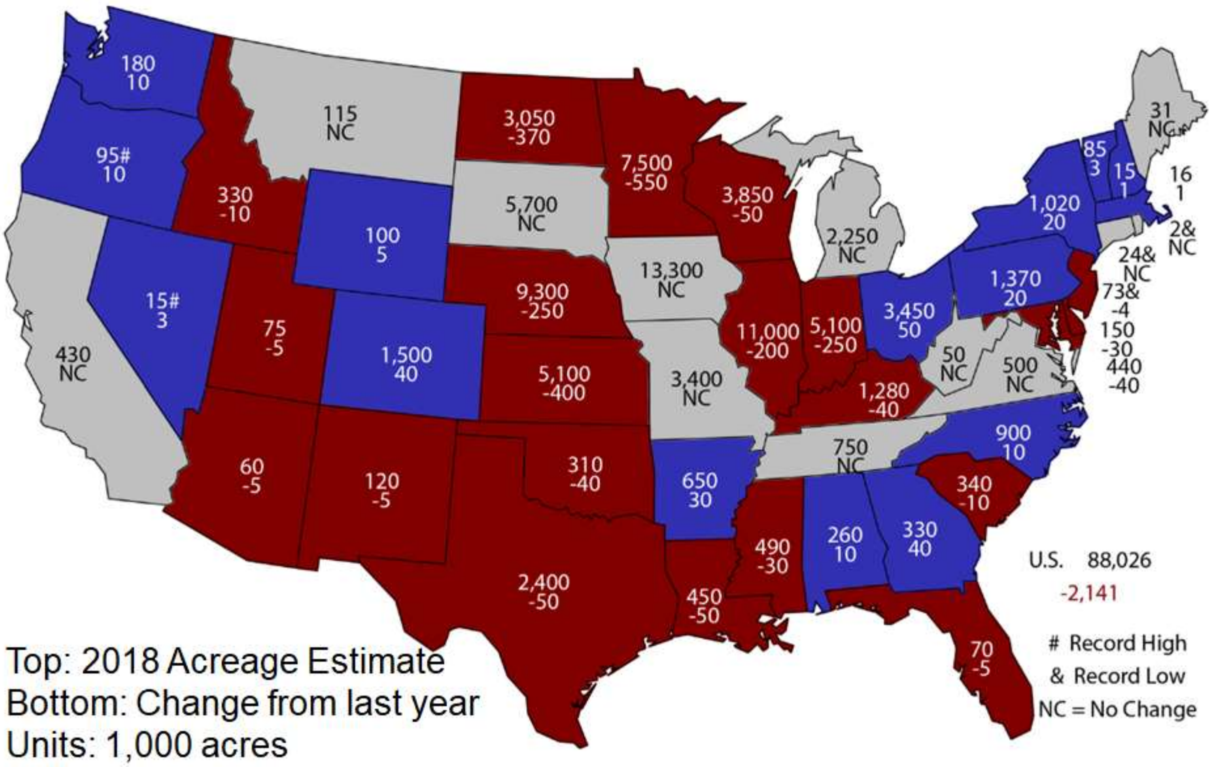
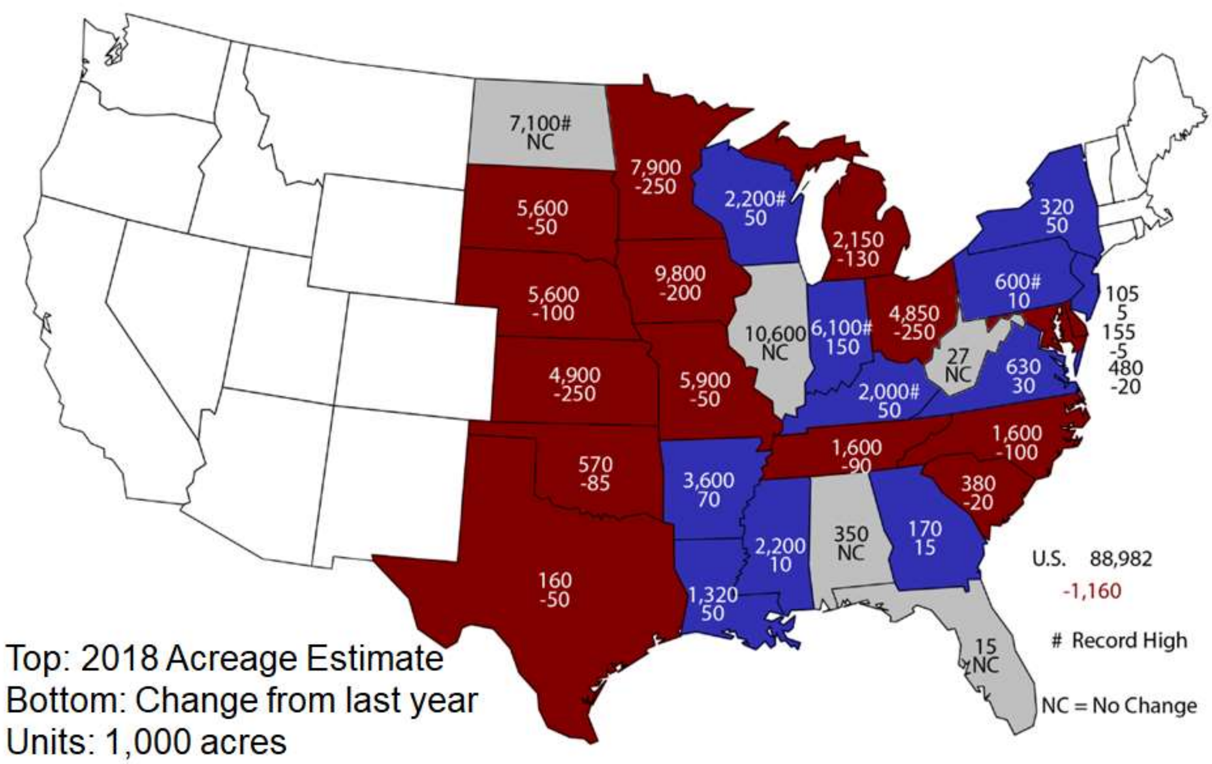


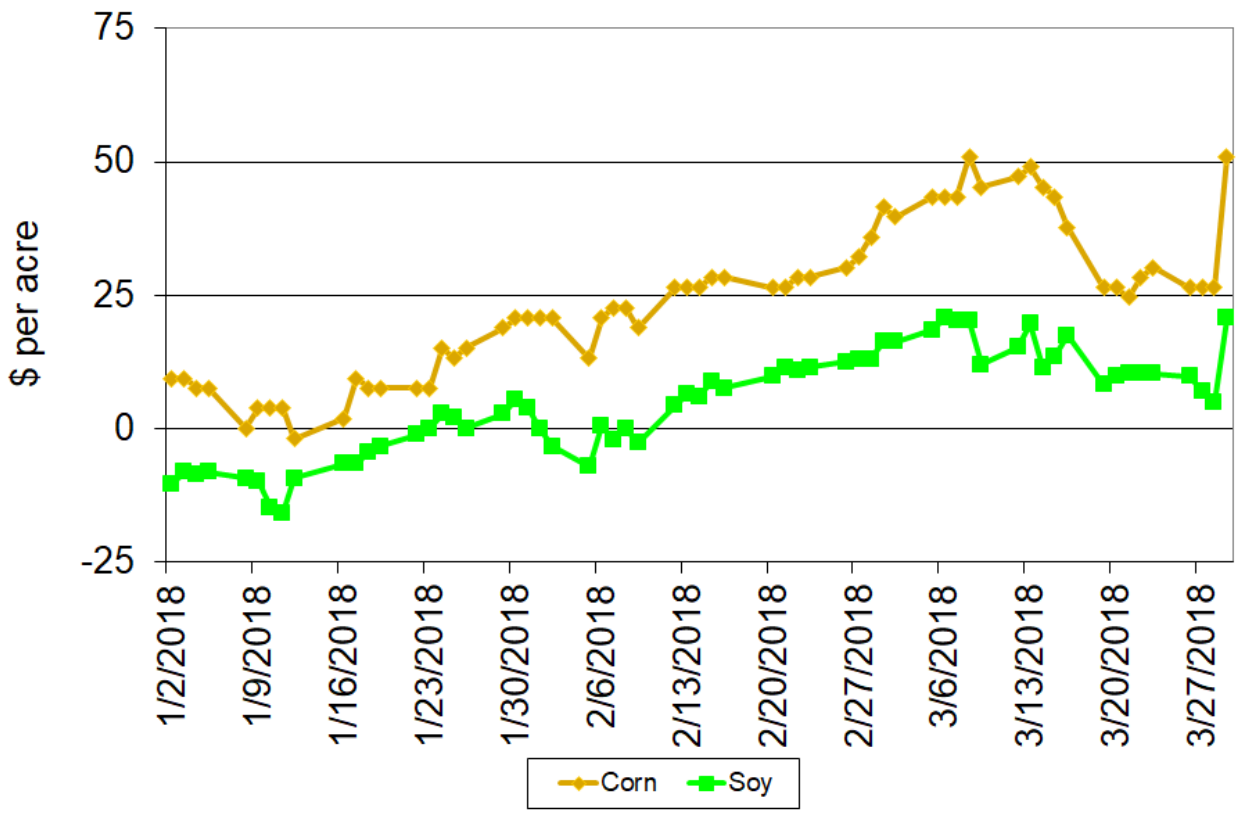
Figure 4. U.S. projected soybean acreage (Source: USDA-NASS).



The drop in acreage will lower production, but as with corn, the potential crop is still large. Given trend yields of 48.5 bushels per acre, projected 2018 soybean production would be 4.27 billion bushels. That's 120 million bushels less than last fall's crop, but still the 3rd largest soybean crop ever.

Over the past few years, input costs have moderated. And the strength in futures prices through 2018 have led to better margin projections. Since mid-February, futures prices have indicated positive crop margins for both crops. But as the markets prepared for the March reports, both crops suffered setbacks, with corn suffering a little more than soybeans. Following the release of the reports, the markets recovered to go back where they were to start in March. So our Easter basket has corn margins projected at $50 per acre, while soybean margins are near $25 per acre. These are most positive margin estimates we have had at this stage of the year since 2013.

Figure 5. 2018 projected crop margins.



Over the past few years, prices have followed a traditional spring rally, driven by strong crop demand and some planting/weather concerns. Farmers are hoping for the same type of rally later this spring. The drought continues in the Central and Southern Plains. Argentina has had significant weather issues this winter. The livestock sector has continued on its expansion run. And biofuel production hit another record. Crop demand has been significant. But there are concerns, especially on the export front with the rhetoric about trade renegotiations and tariffs. And planting conditions are yet to be determined. I would argue that the spring rally came early this year. As Figure 5 shows, both crops have enjoyed better pricing opportunities. And while I think weather uncertainty will lead to some additional upward price movement, I also think this rally is already providing some decent preharvest marketing opportunities. One of the simplest marketing strategies is to make several small sales as sort of an averaging technique. These sales in the March-July timeframe often cover the period of time when the board sets its high for the year. December corn futures are north of $4 per bushel and November soybean futures are above $10.50 per bushel. Those futures are high enough to cover the ISU estimated production costs, even with the wider basis.

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