



# AgReview

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World Perspectives, Inc.

Downhill Slide in Fertilizer Prices

Biofuels' Political Drama Continues

China's Soybean Problem

Grain Industry Risks

Should the Market Just Ignore Trump?



## ***WORLD PERSPECTIVES: AG REVIEW***

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- *WPI does an excellent job of working to assess the client's needs and tailoring their methodologies accordingly.*
- *WPI is very responsive in addressing any questions we have; they are helping the association gauge how to move forward with effective strategies in international markets. This year they have increased the level of their services and continue to help us find ways to be effective with our strategies.*
  - *WPI has been responsive and cooperative under every challenge and circumstance presented in their work for us.*
    - *WPI really provides us with a life-blood service.*

*Please contact David Gregg, Consulting Projects Manager, at (503) 467-8668 or [dgregg@agrilink.com](mailto:dgregg@agrilink.com) for more information about how WPI's consulting services can work for you.*



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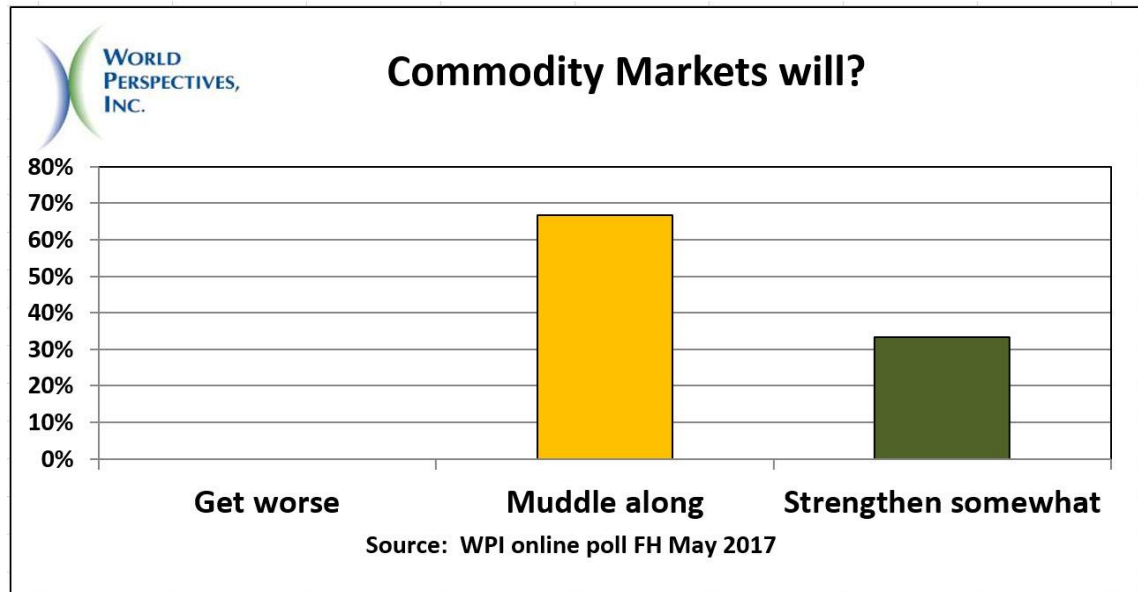
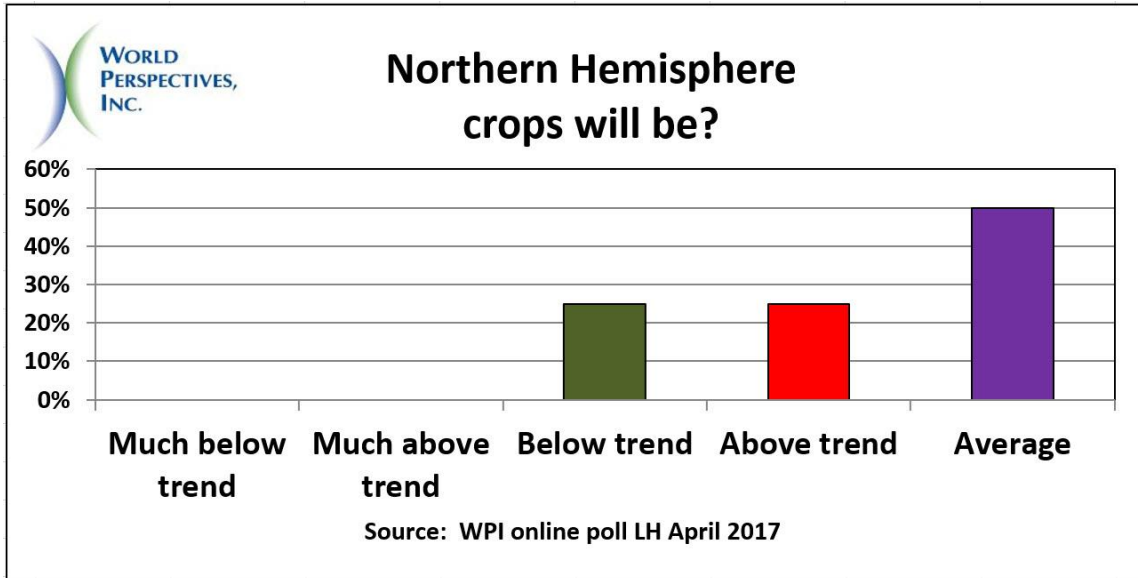
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## WPI POLLING

Below are the results of two recent WPI polls. Visit [www.worldperspectives.com](http://www.worldperspectives.com) to cast your vote in our current survey.



# WPI AGRIBUSINESS SUBSECTOR OUTLOOK

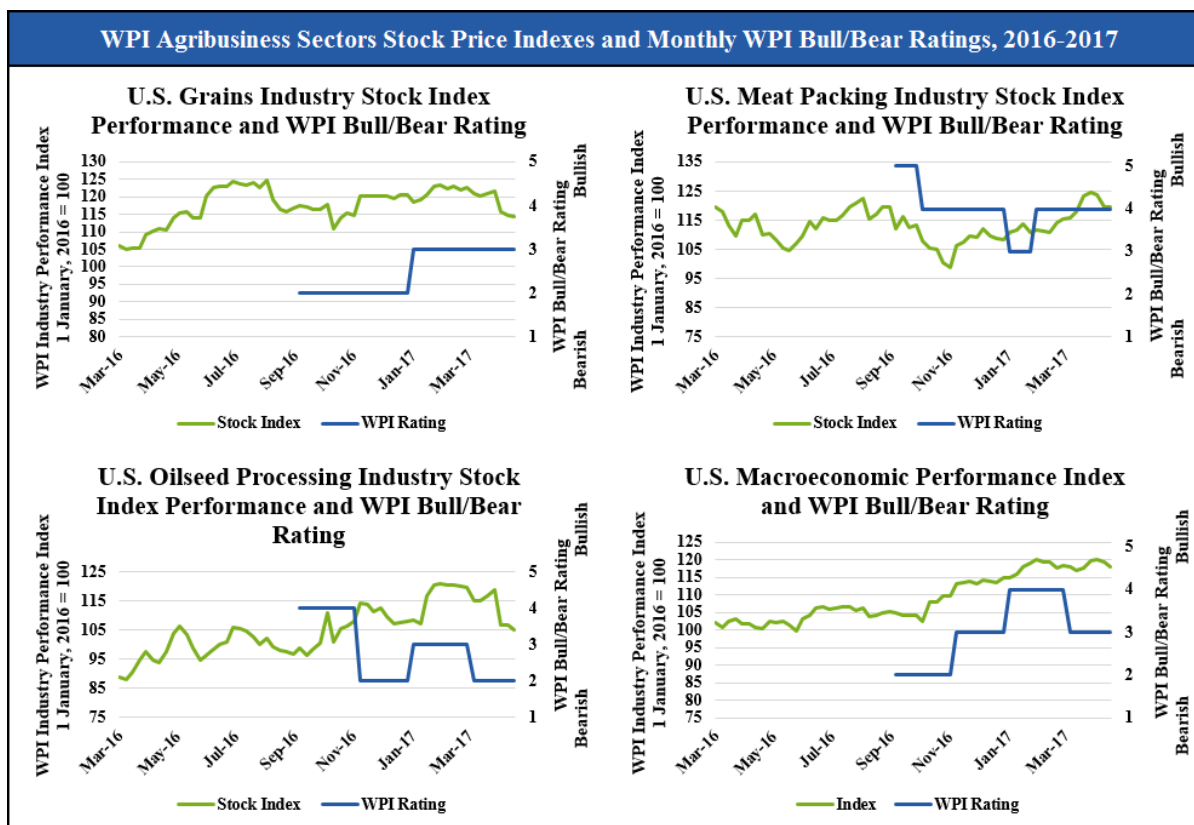
By Matt Herrington

Since the April 2017 issue of *Ag Review*, the U.S. stock market has been anemic. The S&P increased 0.5 percent while the Dow gained 0.4 percent. Until recently, market volatility was abnormally low with the CBOE volatility index (VIX) staying below 10 percent for an unusually long period.

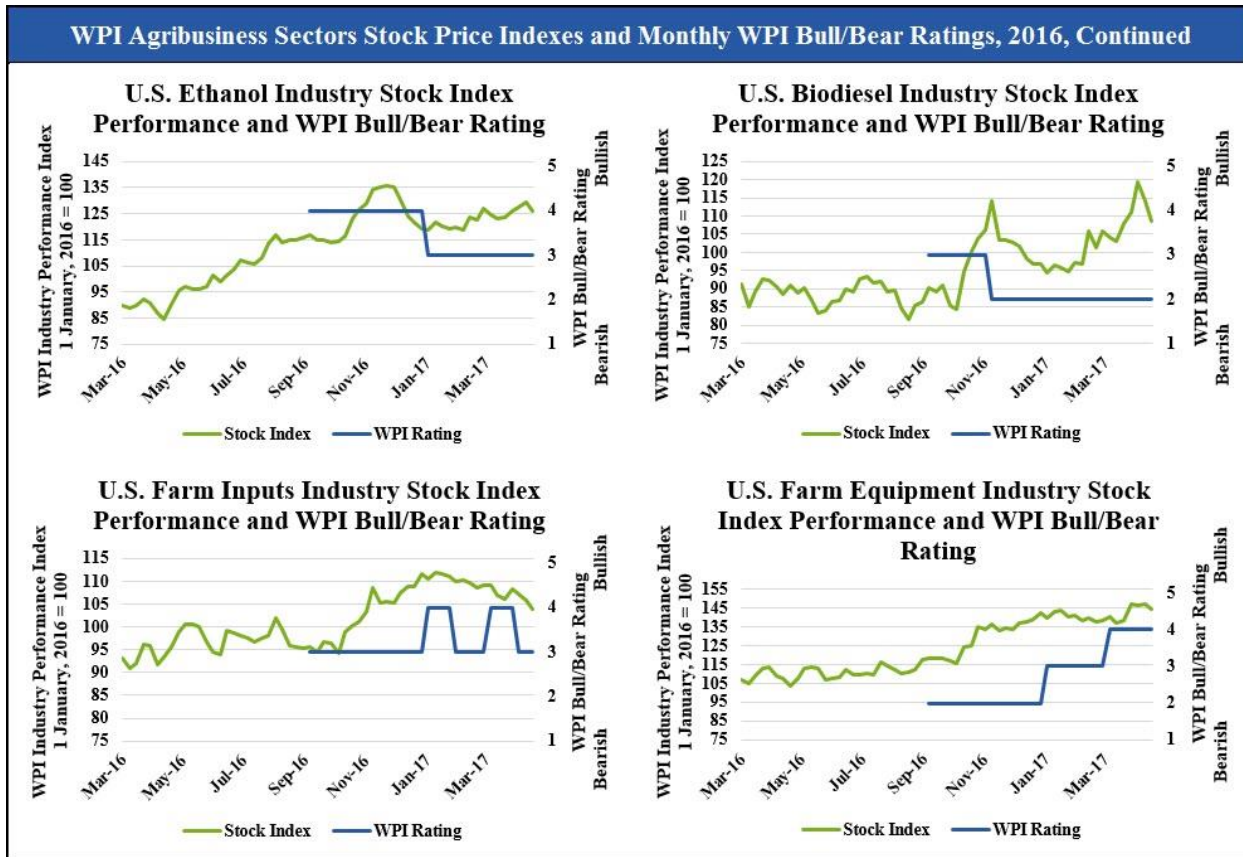
Despite low stock market growth, WPI's Agribusiness Sectors indexes have shown more life. Poor quarterly earnings sent the Grains and Oilseeds indexes lower by 5.5 and 9.6 percent, respectively. WPI's Meat Packing Sector index

fell 3.5 percent. Broader economic growth has been helpful to farm equipment manufacturers, and the WPI Farm Inputs index gained 4.5 percent from April. Finally, biofuels stocks have performed moderately well with the Ethanol index rising 2.1 percent and biodiesel 1 percent on better-than-expected quarterly earnings.

Except for a stronger U.S. dollar, the fundamentals for many agribusiness subsectors have not changed substantially from April. WPI reiterates its outlook for most sectors while lowering expectations for farm inputs firms.



Source: WPI



Source: WPI



# WPI BULL/BEAR LEANINGS FOR AGRIBUSINESS

By WPI Staff

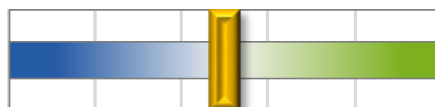
Industry	WPI Industry Bull/Bear Rating	Predominant Influencing Factors
<b>Grains</b>		<ol style="list-style-type: none"> <li>1) Volatility, and therefore trading profits, remains stubbornly low.</li> <li>2) Growing on-farm storage is forcing agribusinesses to pay more for cash grain.</li> <li>3) Despite a slow start, U.S. planting is off and running and looks to finish soon.</li> <li>4) Slow Brazilian farmer selling is extending U.S. export opportunities.</li> </ol>
<b>Chinese Oilseed Processing</b>		<ol style="list-style-type: none"> <li>1) 90 percent of China's soyoil is from imported GM-soybeans.</li> <li>2) Chinese consumers' rising anti-GMO sentiment is reducing GM soyoil demand.</li> <li>3) Government-sponsored GMO education efforts are met with mistrust.</li> <li>4) Excess crushing capacity will limit efforts to boost soymeal prices and margins.</li> </ol>
<b>Biofuels</b>		
<i>Ethanol</i>		<ol style="list-style-type: none"> <li>1) Production is 6 percent ahead of 2015 and on pace to reach 15.8 billion gallons.</li> <li>2) Domestic ethanol use should increase to 14.7 billion gallons in 2017.</li> <li>3) Ethanol imports will be crucial to reduce record-high stocks; the sector faces risks from a new tariff on Brazilian imports.</li> </ol>
<i>Biodiesel</i>		<ol style="list-style-type: none"> <li>4) Biodiesel production and margins are down compared to last year.</li> <li>5) Uncertainty surrounds the biodiesel tax credit, but an active antidumping and countervailing duty case against Argentina and Indonesia could result in new import duties by this fall.</li> </ol>
<b>Meat &amp; Livestock</b>		
<i>Packers</i>		<ol style="list-style-type: none"> <li>1) Packer throughput remains high.</li> <li>2) Consumer demand is strong and increasing into the high-demand grilling season.</li> <li>3) Exports remain a key factor to supporting all three sectors, but NAFTA renegotiations remain a risk.</li> <li>4) Feed remains affordable, especially compared to livestock prices.</li> <li>5) Cattle prices have been very strong, eroding packer margins. The Great Plain's blizzard adds uncertainty due to death loss and stress.</li> </ol>
<i>Cow/Calf Operations</i>		<ol style="list-style-type: none"> <li>1) Futures prices are currently offering excellent hedging opportunities.</li> <li>2) The rally in cattle prices should greatly boost profitability in 2017.</li> <li>3) Pasture conditions are good and little drought is present.</li> <li>4) Bad spring weather will reduce weaning percentages - and profits.</li> <li>5) Feed costs should remain low - providing drought does not inflate hay prices.</li> </ol>
<b>Farm Inputs</b>		<ol style="list-style-type: none"> <li>1) Nitrogen and DAP prices have fallen even further since March.</li> <li>2) Industry stock prices reflect fertilizer's weakness and are unlikely to rebound.</li> <li>3) Increased crude oil supplies will limit rallies in crude oil and fertilizer prices.</li> <li>4) Chinese thermal coal prices are significantly lower, and supplies will increase.</li> <li>5) Added Chinese nitrogen supplies will weigh on international markets.</li> </ol>

**Policy Factors**

- 1) Producer confidence in the agricultural economy is strong and growing.
- 2) The market may become less confident in Trump's proposed tax cuts.
- 3) Productivity in rich countries is struggling to gain momentum.
- 4) Less-developed countries have several economic factors in their favor right now.
- 5) Western agriculture needs to make difficult adjustments in a market defined by low prices and large surpluses.

*WPI Bull/Bear Ratings for Policy Factors Influencing Agribusinesses*

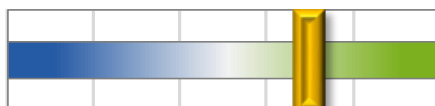
**Macroeconomics**



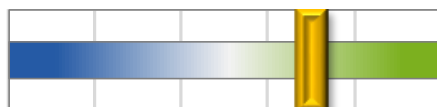
**Trade Policy**



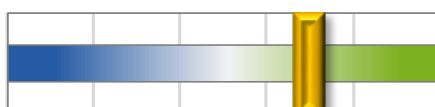
**Agricultural Policy**



**Food Policy**



**Geopolitics**



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# THE U.S. GRAIN INDUSTRY

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By Robert W. Kohlmeyer

## Top Four Reasons WPI is Neutral the U.S. Grains Industry

- Volatility, and therefore trading profits, remains stubbornly low.
- Growing on-farm storage is forcing agribusinesses to pay more for cash grain.
- Despite a slow start, U.S. planting is off and running and looks to finish soon.
- Slow Brazilian farmer selling is extending U.S. export opportunities.

**A**pril showers may bring May flowers, but untimely May showers can bring considerable angst to U.S. farmers. This unease also affects those businesses serving or dependent upon farmers. Except for the Deep South where it can begin in February, the spring planting of most U.S. field crops starts in the second half of April and extends through May, lasting into June in some cases.

Farmers like to plant as early as possible so that crops can be firmly established by the summer heat in July and August. Corn typically pollinates during the last 20 days of July, and excessive heat can interfere with that process. The more advanced the corn crop is, the earlier it will pollinate and the more likely it is to avoid July's potentially damaging heat. Soybeans are hardier than corn and better able to withstand the heat and dryness of July and August, the crop's usual reproductive period.

For much of the central U.S., April 2017 was colder and wetter than normal. It was at such a level that spring planting did not start as early as it did in 2016. As soil temperatures finally warmed enough for planting, periodic storm systems dumped copious amounts of rain, leaving only narrow windows of planting opportunity for major producing states. The precipitation culminated in a late April deluge that caused flooding over parts of the Mid-South and

southern Midwest. How many acres of cropland were washed out and must be replanted is currently unknown. Low crop prices may persuade some farmers to put flooded cropland into the USDA/FAS prevent planting insurance program rather than plant the crop.

As of 30 April, USDA estimated 34 percent of the U.S. corn crop and 10 percent of the soybean crop had been planted. The figures are lower than a year ago, but they match the five-year averages for the date. The fact these plantings were at average levels by the end of April once again shows how fast U.S. farmers can put seeds into the ground even with limited opportunities.

Aside from Midwestern planting delays, portions of the hard red winter (HRW) wheat crop in the western Plains was hit with freezing temperatures and a foot or more of snow during the last week of April. Some damage and yield loss may have occurred as much of this year's HRW was in its heading stage at the time.

Even though the world is oversupplied with wheat, corn and soybeans, grain and soy futures markets are always sensitive to any adverse U.S. and Northern Hemisphere spring weather. Colloquially, it is called the beginning of weather scare season simply because one or more such market-moving events are virtually guaranteed during the crop planting and growing season.

## Increasing Market Price Volatility

Partially due to weather scare season, there is almost always a seasonal increase in price volatility, and the spring of 2017 is no exception. It has already begun, and the level is likely to remain elevated at least until North American crops are planted and growing. The rising volatility is worth mentioning because commercial and noncommercial market participants have bemoaned the lack of any, and more of it implies greater opportunities to profit from trading, processing and exporting grains.

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*Nothing stifles grain market price volatility quite as effectively as overly-abundant supplies.*

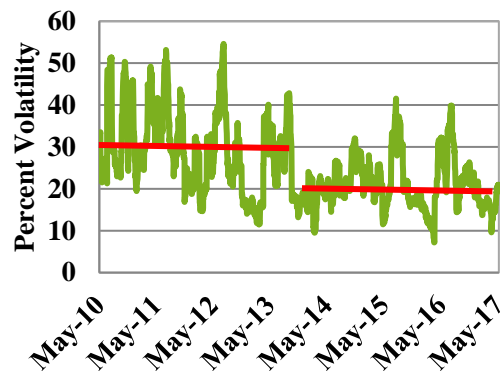
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Nothing stifles grain market price volatility quite as effectively as overly-abundant supplies of physical grain and soybeans, volumes that have been reached for at least the past three years and grow more so each year. This has limited price volatility and the opportunities it can create to a relatively low level.

When price volatility is low, crop producers have little incentive to sell their crops early as it diminishes their fear of lower prices. U.S. commercial farmers have built substantial amounts of on-farm storage for grain and oilseed crops in recent decades, while producers in other countries like Brazil, Argentina, and Russia adopted modern farming techniques and did the same. Increased storage capacity has allowed farmers to hold their crop whenever they are dissatisfied by offered prices.

The same lack of concern that prices might move substantially higher allows crop processors and other end users to buy what they need on a limited hand-to-mouth basis instead of extending purchases to cover future needs. Grain merchants and exporters thus lose potentially profitable trading opportunities at both the buying and selling ends of their activities.

Corn Futures 30-Day Volatility



Source: CME Group, WPI

The unexpectedly strong tendency for Brazilian farmers to store their recently harvested soybeans forced exporters to pay much higher prices for their needed stocks. Some multinational exporters have cited this situation as one of the reasons behind the lower-than-expected returns shown in their last quarterly reports. Tight holding by Brazilian soybean farmers and the resulting higher soybean basis values for those stocks are also the primary reasons U.S. origin has remained competitive in world trade.

Historically, the seasonal tendency has been for newly-harvested Brazilian soybeans to dominate the world market beginning in March of each year. This pattern was expected to be stronger than ever during much of 2017 since Brazil has just finished harvesting a massive soybean crop of at least 111 MMT. This huge production should ensure that country's position as the world's largest soybean exporter for the rest of the marketing year.

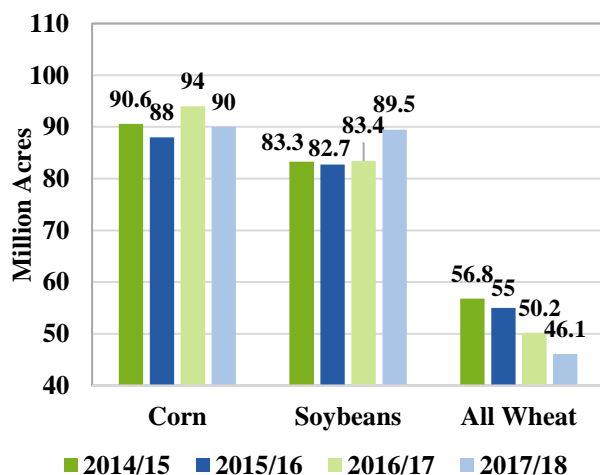
## Uncertainties Ahead

The 2016/17 crop cycle has been an amazing one. It is the fourth year in a row of favorable weather worldwide that has allowed large production of world grain and oilseed crops. In fact, record world production of wheat, corn and soybeans in 2016/17 exceeded world consumption, resulting in record-large ending stocks. Although not at record levels, U.S. stocks of wheat, corn, and soybeans at the end of the 2016/17 crop cycle are expected to be the largest in many years. This

buildup of U.S. and world grain and soybean supplies depressed prices, creating a bleak outlook for farmers everywhere. Currently, the value of crops in many parts of the world is less than the cost of production.

Crop prices and production costs will have at least some impact on planting decisions and whether some cropland is planted at all. Based on early planting intentions, U.S. farmers will plant a record-large area of soybeans in 2017. U.S. corn acreage will be reduced from a year ago, and U.S. wheat planted area will be close to the smallest in more than 100 years. Larger soybean acreage, smaller corn acreage and very small wheat acreage are the logical responses to the comparative new crop prices of each and their potential profitability or lack thereof.

### U.S. Planted Acres



Source: USDA, WPI

Can U.S. and world farmers enjoy a fifth year of favorable weather for 2017/18 crop production? Obviously, this question cannot be answered yet. However, weather conditions so far this spring have been less than favorable. If Mother Nature were to cooperate, there certainly is enough time to get the U.S. corn and soybean crops planted. U.S. farmers have a well-demonstrated ability to plant corn and soybeans with amazing speed whenever weather and soil conditions allow them to do so.

It is clear that much of the 2017 U.S. corn and soybean crops will not derive any benefits of early planting. How late they will go into the ground and whether yields will be negatively affected are questions remaining to be answered, but the crops will get planted. Also, how much flooded land must be replanted is yet to be determined as is how much will not be planted at all. U.S. wheat production for 2017/18 was destined to be quite small based on the reduced acreage, and it will probably be even smaller as yields suffer from this spring's adverse weather. Quality may be another issue as well. Conditions so far suggest that this year's crop may not contain much high protein wheat of good milling quality.

Many of these uncertainties can be resolved under favorable weather conditions that allow U.S. crops to recover from their early problems, and perhaps this will happen. However, recent weather has caused crops to begin their production cycle under stressful conditions. This has put the grain industry on edge as it faces the possibility that the 2017/18 crop cycle may be quite different than the previous four years.

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# THE CHINESE OILSEED PROCESSING INDUSTRY

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By John Baize

## Top Four Reasons WPI is Bearish the Chinese Oilseed Processing Industry

- 90 percent of China's soyoil is from imported GM-soybeans.
- Chinese consumers' rising anti-GMO sentiment is reducing GM soyoil demand.
- Government-sponsored GMO education efforts are met with mistrust.
- Excess crushing capacity will limit efforts to boost soymeal prices and margins.

The future profitability of soybean crushing operations in China will depend largely on two factors: changing Chinese consumer perceptions of genetically modified organisms (GMOs) and increasing soymeal values. Neither will be easy. Global anti-GMO activism and Chinese distrust of government-sponsored scientific claims stymie the former while excess crushing capacity hinders the latter.

Opposition to GMOs has long been a problem for the agricultural sector. Anti-GMO sentiment has primarily been instigated by activist environmental groups in Europe like Greenpeace, which claim they are hazardous for human and animal health as well as the environment. The fact no scientific studies have found any evidence that there is anything unsafe about GMOs has not kept the groups from continuing their scaremongering campaigns that are used primarily to raise funds.

Heretofore, the anti-GMO efforts have been most successful in Europe and, to some extent, in the U.S. Europe has strict mandatory labeling requirements for food containing GM ingredients. It also has made GM crop production illegal except for a corn variety that is grown in limited amounts, mostly in Spain. Imports of biotech crops are allowed, but the EU's slow approval of new such varieties has at times

prevented imports of soybeans, soymeal and other GM crops.

Anti-biotech activism in China is a growing problem for the country's soybean processors and food manufacturers. A Nielsen survey last year found 70 percent of Chinese consumers had concerns about GM food and ingredients, 57 percent believed GMOs were undesirable, and 80 percent would be willing to pay a premium for GMO-free products.

China has a GMO labeling law that requires food manufacturers, including firms selling vegetable oil, to indicate on the product label whether the crop is derived from GMOs. One product that appears to be increasingly impacted by consumer's anti-GMO concerns is soyoil. This is despite the fact that it is a well-refined soil that does not contain any DNA. Nevertheless, there is a growing number of consumers choosing to either pay more for non-GM soyoil or other non-GM vegetable oils such as sunflower oil, Chinese-origin rapeseed oil, and sesame oil. The food service firm Aramark

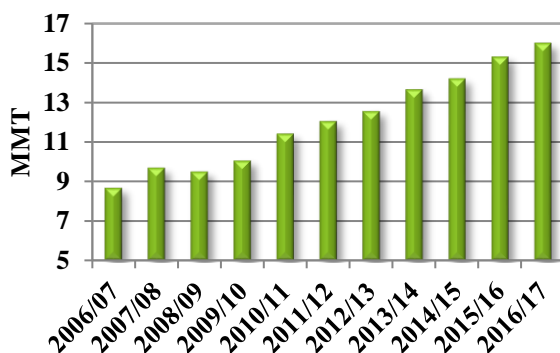
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*Chinese soybean crushing profitability will depend on two factors: perceptions of GMOs and increasing soymeal values.*

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indicates more than half of its customers want non-GM vegetable oil, up from 10–20 percent just a few years ago.

### China's Soyoil Consumption 2006/07–2015/16 and USDA 2016/17 Forecast



Source: USDA, WPI

The demand for non-GM vegetable oil is impacting soybean processors as they are seeing less demand and lower prices for their soyoil. China is by far the world's largest soybean importer with USDA forecasting those shipments will total 88 MMT in 2016/17. Almost all Chinese imports originate from the U.S., Brazil, Argentina, Paraguay and Uruguay, and more than 90 percent of those soybeans are GMOs. Therefore, it is not possible for China to source enough non-GM soybeans to meet the growing consumer demand for non-GM soyoil.

It is also not practical to produce a large quantity of non-GM soyoil there from the domestic soybean production of 13 MMT. Nearly all of China's domestic soybeans are used to make human foods such as tofu. Growing more soybeans is not a viable option as the country needs the land to produce other crops. This puts the Chinese soybean crushers in a bind because they depend on their soyoil sales to account for about a third of the revenue.

Chinese crushers will only be able to offset a loss in revenue from soyoil by receiving more for their soy meal. To achieve this, they will have to slow their crush rate to limit that supply. However, even that will be difficult because China has the

world's largest soybean processing sector, which normally operates well below its full capacity of about 130 MMT per year. The excess capacity already often results in negative soybean crush margins for extended periods.

### Chinese Imported Soybean Crush Margin



Source: JCI, WPI

China is caught between poor consumer education and a need for higher soybean production. The government has historically carried out consumer education programs on the safety and benefits of GM crops. So far, however, it appears such efforts have been unsuccessful. China wants to grow more biotech crops in the future to increase its crop yields, as evidenced by ChemChina's offer to acquire Syngenta, the large Swiss biotech firm. Therefore, it is likely the government will expand the consumer education programs noting that GMOs are safe and better

*China is caught between poor consumer education and a need for higher soybean production.*

for the environment, but this will not be easy and it will take time. The problem is that many in China distrust what their government tells them and will believe the opposite is true.

The company most affected by the growing GMO concern in China will likely be Wilmar, a large soybean processor partially owned by ADM and the country's largest refiner and marketer of soyoil. Louis Dreyfus, Cargill and Bunge, significant soybean processors there as well, will also be negatively impacted along with several other domestic crushing firms.

# THE U.S. BIOFUELS INDUSTRY

By Dave Juday

## Top Five Reasons WPI is Neutral Ethanol, Bearish Biodiesel

- Ethanol production is 6 percent ahead of last year and on pace to total 15.8 billion gallons.
- Domestic ethanol use is expected to increase to 14.7 billion gallons in 2017.
- Ethanol exports will be crucial to reduce record-high stocks; the sector faces risks from a new tariff on Brazilian imports.
- Biodiesel production and margins are down compared to last year.
- Uncertainty surrounds the biodiesel tax credit, but an active AD and CVD case against Argentina and Indonesia could result in new duties on imports by this fall.

**B**oth ethanol and biodiesel had a record year in 2016. To maintain that momentum, ethanol must continue to rely heavily on exports as stocks build up, and biodiesel is looking for new duties on imports and a tax provision to boost domestic production after a decline from last year.

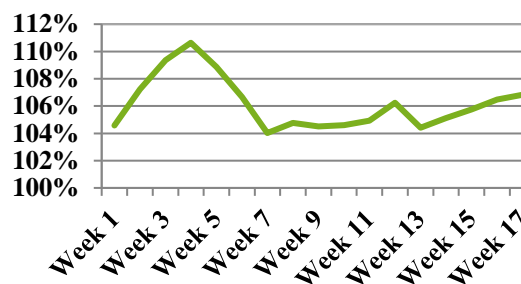
### Ethanol

During April, ethanol production fell below the 1 million barrels/day mark for the first time since the third week of October 2016, averaging 988,000 barrels/day. Such a drop is not unusual seasonally as production typically moves lower in March and April as plants start maintenance and

*During April, ethanol production dropped below the 1 million barrels/day mark for the first time since the third week of October 2016.*

the supply chain moves toward summer blends. While last month's production was 5 percent lower than March, it was still 6 percent above April 2016.

**2017 Production  
as Percent of 2016**



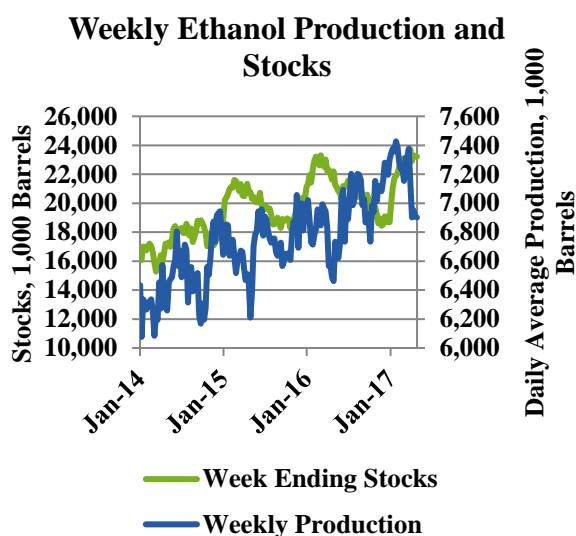
Source: EIA, WPI

Ethanol stocks at the end of April were an all-time high, at least since the U.S. Energy Information Administration (EIA) started keeping records in mid-2010. April's production pushed those stocks up 2 percent from March to 23.213 million barrels or approximately 975 million gallons.

EPA Administrator Scott Pruitt, who was opposed by the ethanol industry when he was nominated due to his perceived anti-ethanol stance, has averred that the agency is reviewing the long-blocked rule for allowing sales of E15 during the summer months. An attempt to push the rule legislatively through Congress as part of the recently passed FY 2017 omnibus appropriations bill was unsuccessful. Pruitt has



said he “hopes” the rule can be promulgated pending the outcome of the review.



Source: EIA, WPI

While ethanol’s ability to generate compliance credits, which are known as Renewable Identification Numbers (RINs), is capped at 15 billion gallons, the approval of E15 could move more ethanol through the fuel system. Monte Shaw of the Iowa Renewable Fuels Association said that if the rule is put in place, “...then it’s going to be up to market forces to move E15 into the market.” A recent study by the EIA shows that ethanol blending reached 10.3 percent in December of last year and averaged 10.04 percent for 2016, which the ethanol industry contends disproves the existence of the 10 percent blendwall.

According to the EIA’s April Short-Term Energy Outlook (STEO), fuel ethanol blending is projected to rise to 960,000 barrels/day (14.7 billion gallons) this year. Through the week ending 28 April, ethanol production is on pace to reach about 15.8 billion gallons. Therefore, expanded use and, most importantly, greater exports are critical to keep stocks from building further.

<sup>1</sup> The reason why sugarcane ethanol qualifies as an advanced biofuel in the U.S. under the RFS.

Ethanol exports are running strong so far this year. While the Chinese market was lost with the imposition of a 30 percent tariff, U.S. ethanol-makers have increased shipments to Brazil almost fivefold. According to Brazilian data, U.S. imports have hit 720 million liters (190 million gallons) to date. Brazil’s Agriculture Minister Blairo Maggi has asked that country’s foreign trade council to re-impose tariffs on ethanol imports that had been eliminated in 2010. The recommended tariff rate is 16 percent, but some in the industry are pushing for 20 percent. The Brazilian Sugarcane Industry Association has argued that since sugar ethanol has lower greenhouse gas emissions than corn ethanol<sup>1</sup>, the tariffs are justified to keep the latter U.S. stocks from displacing domestic sugar ethanol. Such displacement would force Brazil to miss its targets under the Paris climate accord. A decision could come this month.

Two factors working in favor of continued exports to Brazil are that country’s commitment to sugar production for the export

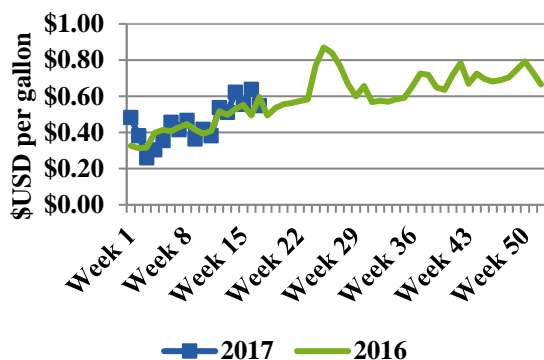
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*Fuel ethanol blending is projected to increase to 960,000 barrels/day (14.7 billion gallons) this year.*

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market (rather than for ethanol) and, perhaps more significantly, fear of retaliation from the Trump administration. A month ago, re-imposition of the ethanol import tariff seemed more likely than not. Given some recent Trump administration actions, including the antidumping duties (AD) placed on Canadian softwood lumber, officials in Brazil fear tariffs could trigger targeted retaliation on Brazilian goods.

### WPI Estimated Gross Margins for Ethanol Including Corn Oil Extraction



Source: USDA, WPI

### Biodiesel

The situation for biodiesel has not changed much yet this year, and it is now May. Policy issues, including trade and tax matters, are likely to drive the remainder of 2017.

On trade, there should be a decision from the U.S. International Trade Commission (USITC) on whether AD and countervailing duties (CVD) should be imposed on biodiesel and renewable diesel imported from Argentina and Indonesia. On 5 May, the USITC voted to move forward with the process. The final determination will likely come in April 2018, but imposition of preliminary ADs/CVDs later this year would benefit domestic biodiesel makers. However, any imposition of duties on imported biodiesel will also be bullish for soyoil, the primary feedstock. Industry estimates indicate that soyoil prices could rise 15-20 percent.

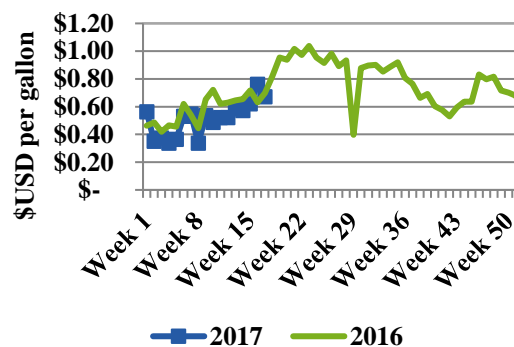
*U.S. imposition of preliminary antidumping/ countervailing duties would benefit domestic biodiesel producers this year.*

Last year biodiesel imports were more than 915 million gallons, including 693 million gallons of methyl ester biodiesel and 222 million gallons of renewable diesel. That import volume was greater than the total domestic production every year up

to 2010, and it nearly matched domestic production in 2011 and 2012.

The yet-to-be-settled issue, which could bring higher biodiesel prices, is the fate of the expired biodiesel blenders' credit. Whether it is re-instated, re-instated and reformed to be a producer credit (rather than a blenders' credit) or left expired is caught up with the congressional effort on a comprehensive tax reform bill. The other legislative vehicle for the credit's extension could be the Trump administration's infrastructure bill. At this point, though, the fate of the tax credit is unknown and difficult to predict.

### WPI Estimated Biodiesel Gross Margins (returns per gallon for soyoil methylester)



Source: USDA, WPI

Finally, the sector is awaiting the proposed Required Volume Obligations (RVOs) for 2018. While the biodiesel volume must be set 14 months in advance and has already been established at 2.1 billion gallons, the total overall advanced volume is still in question. With a shortage of other qualifying biofuels, the overall advanced volume could drive the level of biodiesel production compared with this year. Mostly, the biodiesel sector faces a waiting game.

*In the end, the biodiesel sector faces an uncertain waiting game.*

# THE U.S. MEAT AND LIVESTOCK INDUSTRY

By Dave Juday

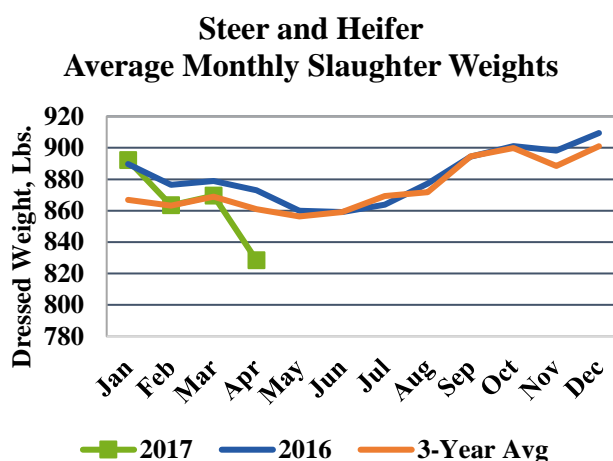
## Top Five Reasons WPI is Neutral the U.S. Meat and Livestock Industry

- Packer throughput remains high.
- Consumer demand is strong and increasing into the high-demand grilling season.
- Exports remain a key factor to supporting all three sectors, but NAFTA renegotiations remain a risk.
- Feed remains affordable, especially compared to livestock prices.
- Cattle prices have been very strong, eroding packer margins. The Great Plain's blizzard adds uncertainty due to death loss and stress.

The livestock and poultry markets turned bullish this spring. USDA reported that the prices paid and received in March showed increases for cattle and broilers as well as market eggs that more than offset decreases for hogs and milk. In addition, the livestock index of prices received was up 4.7 percent from February compared with the crop index that was only 0.9 percent higher. This trend then appeared to continue into April despite other trends that might suggest otherwise.

### Beef Sector

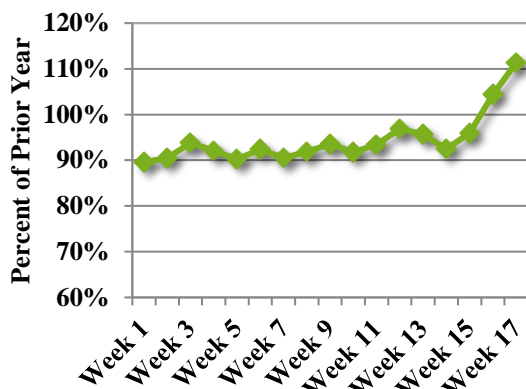
Beef production is higher, up 4.6 percent at the end of April. In a turn from recent years, that growth is coming from a greater volume of lighter weight cattle. Slaughter for the week ending 28 April was the largest since November 2016, and the average slaughter weight was 40 pounds less than the first week of the year versus a seasonal reduction of under 30 pounds over the same period last year. While that doesn't sound like a formula for a bullish cattle market, prices have been strong.



Source: USDA AMS, WPI

According to USDA's Agricultural Marketing Service (AMS), the average cash fed steer price for the last week of April was \$136.21/cwt, a week-over-week increase of \$4.61 and up \$12.43 from a year ago.

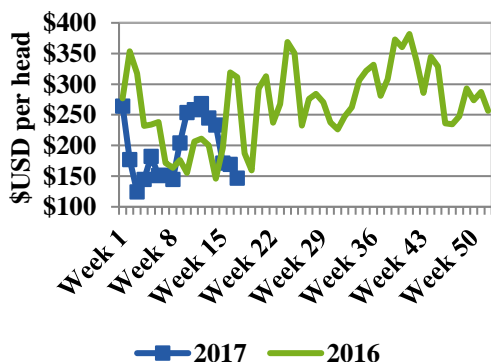
### National Negotiated Cattle Price as Percent of Prior Year



Source: USDA, WPI

Of course, cattle prices are eating into packer margins, which have fallen behind last year's levels. To date this year, the weekly average gross margin has been \$193.67/cwt compared with \$229.96/cwt a year ago.

### WPI Estimated Beef Packer Gross Margins



Source: USDA, WPI

On the positive side for packers, the beginning of the grilling season (Memorial Day to Labor Day) is rapidly approaching. This will boost what is already strong retail demand from consumers and could help cut-out prices.

For now, packers are stuck between trying to squeeze down fed cattle prices and meeting their procurement needs to supply the retail market. Very large March feedlot placements (up 11

percent over March 2016) could help moderate the prices they pay for cattle. However, the late April blizzard that hit the Great Plains may have some near-term impact as it increased death loss rates for cattle, both on pasture and in feedlots. There are no official statistics, but industry sources estimate up to 75 percent of the U.S. feeding capacity was affected by the storm. In addition to death loss, there was also significant stress and weight loss on cattle. Some feed yards estimate the per-head weight loss was 35 pounds on average, meaning more time on feed and more costs.

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*For now, beef packers are stuck between trying to squeeze down cattle prices and meeting their procurement needs.*

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On the positive side, export demand is strong. Through February, beef exports were up 13 percent in volume and 17 percent in value. They also accounted for 12.6 percent of total beef production that month. Another factor that coming data may confirm is the effect of Brazil's meat inspection scandal on the U.S. market. In April, Brazilian exports were estimated to be down nearly 19 percent.

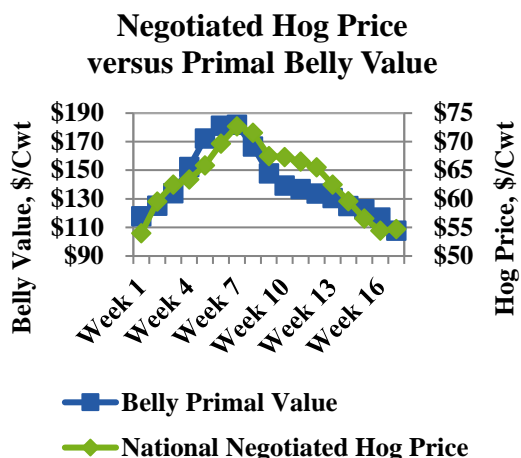
### Pork Sector

Hog prices have dropped steadily since February, following lower pork belly prices that had risen to a three-year high on a shortage of stocks this winter. The 14 million pounds of pork bellies in cold storage in January were the lowest volume for that month any year since at least 1973. With hog slaughter up this winter over last year, the shortage was of course due to strong demand, which was seasonally unusual. Typically, belly prices increase in the summer, not the winter.

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*Hog prices have dropped steadily since February, following the price of pork bellies that had risen to a near three-year high on a shortage of stocks this winter.*

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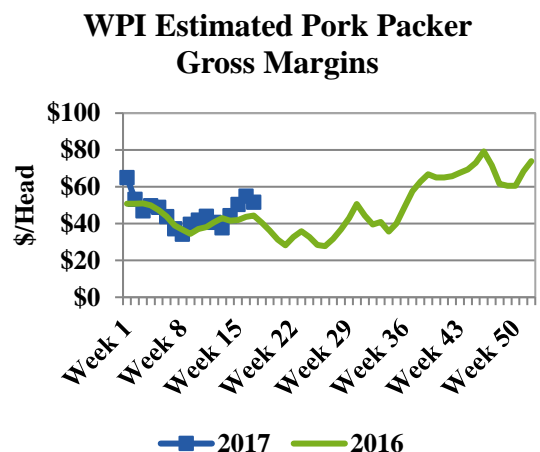


Source: USDA, WPI

Indeed, year-to-date hog slaughter is running 2.3 percent higher. Moreover, each of the past three quarters (Q3 2016, Q4 2016 and Q1 2017) have set historical slaughter records for those respective periods. Hog inventories remain robust because producers farrowed more sows every quarter from June 2014 to February 2017, according to USDA data. The average increase has been 2.67 percent against the same quarter of the previous year. Based on the most recent farrowing intentions estimate from USDA (a year-over-year increase of 1.4 percent for the June-August

quarter), total hog slaughter will certainly set another record this year.

The surfeit of hogs has helped boost packer margins, but additional packing capacity is coming on line. That will create more competition for hogs, especially in the fall. In the shorter term, however, margins will be tested by the seasonal reduction in hog supply and increase in demand, particularly for bellies. While March cold storage belly stocks were up 27 percent from February, they are still down 68 percent from last year.



Source: USDA, WPI

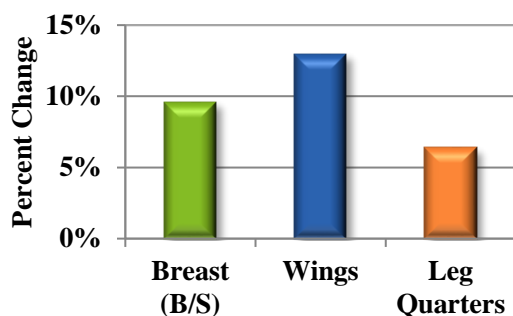
Packers will continue to benefit from the strong pace of exports, provided it can be maintained. Pork exports are up 15 percent over 2016 through February. For that month, exports accounted for 27.6 percent of total U.S. pork production. Mexico continued to be the largest customer, and its imports of U.S. pork grew 22 percent in February. NAFTA renegotiations remain the biggest risk to the export part of the pork demand equation.

*NAFTA renegotiations remain the biggest risk to the export variable in pork's demand equation.*

## Broiler Sector

Boilers are facing more competition from growing red meat supplies, but prices have been holding their own. Breast prices are up earlier than is seasonally normal, while wing prices did not fall off as much as expected after the Super Bowl and college basketball tournament. Even leg quarters are beating expectations.

### Broiler Part Price Change from One Year Ago



Source: USDA, WPI

Scares about a few isolated Highly Pathogenic Avian influenza (HPAI) cases have been a non-event for production and demand. Brazil's meat scandal news, which sent its poultry exports plummeting 22.5 percent in April, did not phase the U.S. market. American and Brazilian poultry don't typically share the same markets, either geographically or product-wise. Brazil exports whole birds, and the U.S. exports dark meat parts. However, there is anecdotal evidence that more U.S. chicken may have gone to Mexico because of the Brazil situation.

The industry estimates broiler meat production growth will be less than 2 percent this year instead of the previously forecast 2-2.5 percent. This is still due to pressure on bird size to avoid the "woody breast" syndrome that has plagued the quality of that meat in larger birds. To date, average weights are down about 1 percent from last year. This stabilized production will prevent intra-industry

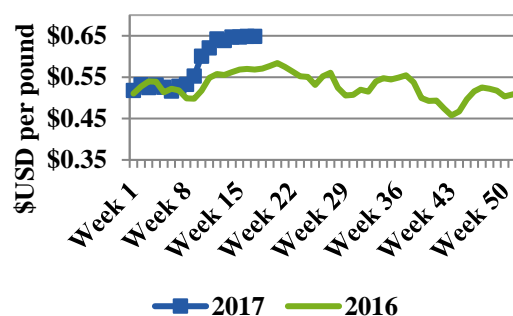
downward pressure on prices even in the face of growing competition from red meat supplies.

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*Broiler meat production growth is revised down to 2 percent for 2017.*

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### WPI Estimated Gross Broiler Feed Margin



Source: USDA, WPI

Note: Margin excludes chick cost and grower payments.

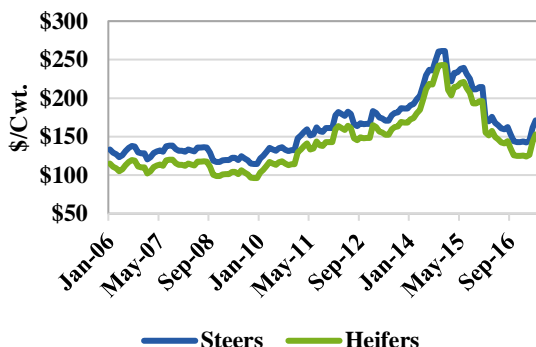
### Updated Cow/Calf Profitability

By Matt Herrington

Expectations for higher calf prices and modestly lower feed costs drove upward revisions in expected 2017 cow/calf profits from the March 2017 issue of *Ag Review*. However, the severe spring storms that hit much of the southern Plains and Midwest states prompted reductions in weaning percentages, which partially offset calf revenue gains. Currently, 2017 looks to offer near-breakeven profitability for much of the U.S. cow/calf sector. Efficient operations can produce solidly positive margins while less efficient ranches may see negative returns.

Feeder calf prices have risen sharply this spring, gaining over \$20/cwt since the March issue of this publication. Aggressive feedlot marketings (and above-average placement rates) buoyed prices as did the calf loss caused by bad spring weather. August feeder cattle futures hit a high of \$163/cwt in early May before pulling back \$15/cwt. The corrective price action looks to be relatively short-lived, and the long-term trend is still for higher prices. **Current futures prices offer excellent hedging opportunities and producers should aggressively investigate hedging their fall calf crop.**

### Expected October 2017 500-550 Lb. Calf Prices



Source: USDA AMS, CME, WPI  
 Note: Expected prices are based on current futures prices plus predicted basis.

Feed prices have been a mixed bag this spring. Corn, soymeal, and DDGS prices have all worked their way lower as hay prices have increased marginally. With a large South American corn crop on its way to ports and near-record production expected in the U.S., feed costs should remain stable for the rest of 2017 and into 2018. The wild card is the summer weather and what it will imply for hay costs, though these will become more relevant into the fall and winter.

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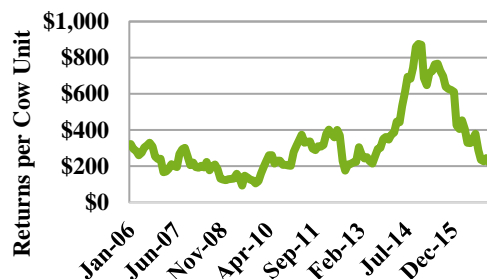
*With a large South American corn crop on its way to ports and near-record production expected in the U.S., feed costs should remain stable for the rest of 2017 and into 2018.*

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While the cool, wet spring weather has delayed corn and soybean plantings for Midwest farms, the weather has been helpful for pastures. Currently, the U.S. drought monitor shows little substantive drought for the major cow/calf areas which bodes well for summer pasture conditions. Broadly, the current weather looks to support excellent pastures and reduce supplement costs for the summer. Of course, regional differences exist, and some areas will require greater supplementation than others. However, the broader picture is for good pasture and low feed costs. The combination of higher calf prices and

lower feed costs will push returns over feed costs to \$300/cow unit this year.

### Returns over Feed Costs

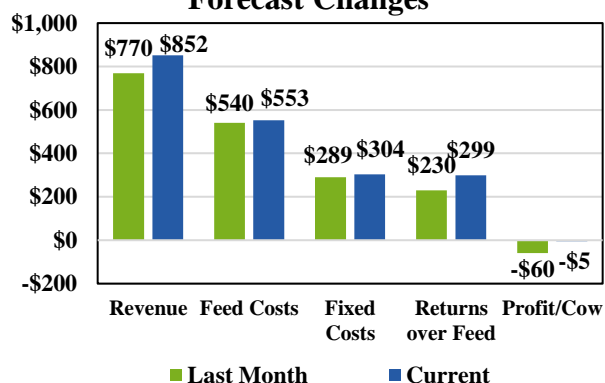


Source: Kansas State University, USDA AMS, USDA ERS, and WPI

Consistent with higher calf prices, accounting costs for replacement heifers have risen as well. Current models suggest replacement heifer costs increased \$15/cow unit from March 2017. Other non-feed costs, including energy and labor, have remained stable. Accordingly, non-feed costs are estimated at \$303/cow unit this year, slightly higher than forecast in March.

Cow/calf profits are still expected to cyclically decline, though to a lesser extent. The average Kansas cow/calf operation is currently forecast to net -\$5/cow unit this year, down from \$46 in 2016 but up from WPI's March projection of -\$60.

### WPI Cow/Calf Economics Forecast Changes



Source: WPI

Given the improved profitability outlook, WPI strongly encourages cow/calf producers to hedge or forward sell part of the 2017 calf crop. While technical indicators for futures prices show an uptrend, fundamental data do not suggest another move substantially higher. Accordingly, producers should consider locking in breakeven or modest profits on a portion of their calf crop. WPI argues this is no time to turn greedy. Sometimes, economics and poker teach the same lesson: the best thing is to take your chips and walk away.



# FARM INPUTS

By Joost Hazelhoff

## Top Five Reasons WPI is Neutral the Farm Inputs Industry

- Nitrogen and DAP prices have fallen even further since March.
- Industry stock prices reflect fertilizer's weakness and are unlikely to rebound.
- Increased crude oil supplies will limit rallies in crude oil and fertilizer prices.
- Chinese thermal coal prices are significantly lower, and supplies will increase.
- Added Chinese nitrogen supplies will weigh on international markets.

Fertilizer prices fell further in April and took fertilizer company share prices with them. In the April 2017 issue of *Ag Review*, it was noted that after March's lower prices, prices would be near or at their bottom. Given the down trend in prices and the past month's move lower, fertilizer prices are not expected to rebound materially from their current near-bottom levels. New production (U.S. nitrogen) capacity will be coming online later in 2017, limiting upward price potential.

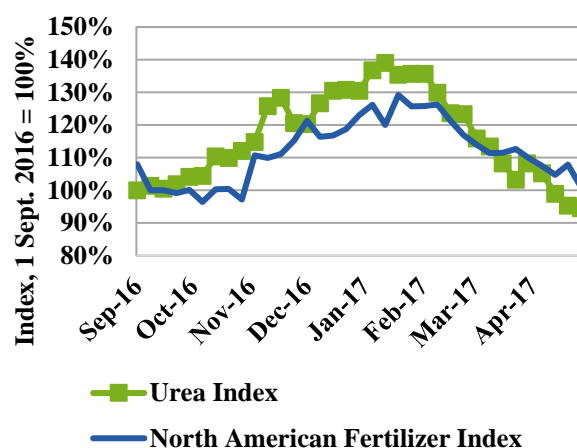
Industry share prices also moved lower in April with losses accelerating after several players reported disappointing quarterly earnings. The outlook for fertilizer industry share prices is reiterated: fertilizer prices that are at/near their lows will stabilize share prices in the coming quarter.

In nitrogen, urea's price outlook on export markets remains weak. Demand continues to be slow in various major markets, including the U.S., Brazil and Europe. Weather conditions are

*Systems everywhere are reportedly near capacity, and as hope for any near-term rally fades, traders and distributors will be liquidating positions.*

slowing down application work in some markets (e.g., the U.S.), while dry conditions are negatively impacting corn acreage in others (e.g., south of Europe).

### Fertilizer Prices versus Industry Stock Price Index Performance



Source: CSI data systems, WPI analysis

Note: The North American Fertilizer Index is the unweighted average of PCS, Agrium, Mosaic and CF.

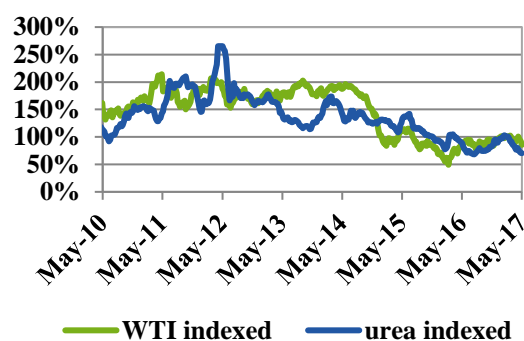
In turn, that is keeping a lid on importing additional fertilizer volumes. Systems everywhere are reportedly near capacity, and as hope for any near-term rally fades, traders and distributors will be liquidating positions.

In phosphates, prices on international export markets continue to fall with simply too much supply chasing insufficient demand. Turnarounds and other voluntary supply cuts (e.g., by OCP/Morocco) have not been able to lift prices so far. Except for South Asia, most buyers are not willing to enter the market in anticipation of further price softening. U.S. exports will have a difficult time finding a home as the U.S. moves out of season with Latin America unlikely to enter the market in any significant way. The Indian market is one of the few, if not the only, bright spot in demand, and it is primarily with Chinese and Saudi Arabian product.

### Crude Oil versus Fertilizers

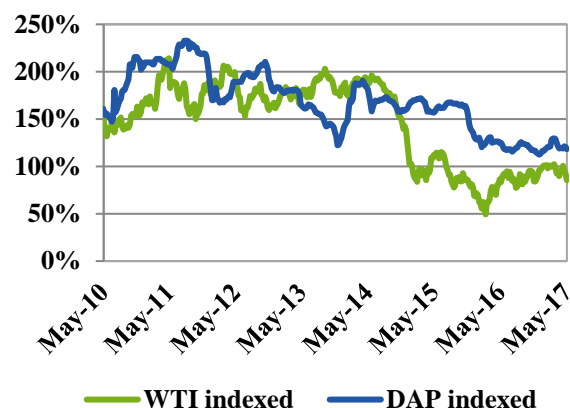
Last month urea prices slipped south of the historical price band between crude oil and urea, while DAP values remained relatively high despite recent weakness. Crude oil prices benefitted from supply cuts in both OPEC and non-OPEC origins but seem to have hit a ceiling. While global supply and demand are much closer to balance than they were for most of 2016, supply projections have been revised up recently. Among cited reasons are U.S. shale oil ramping up and high U.S. inventory levels, seasonally lower Chinese crude imports and higher Brazilian crude production. Crude oil is not anticipated to make a significant move in either direction, and therefore fertilizers should not expect any 'directional input' from that sector.

### Crude Oil versus Urea Price Index



Source: UA Dataservice, WPI analysis (NB: 1 May 2009=100%)

### Crude Oil versus DAP Price Index



Source: UA Dataservice, WPI analysis (NB: 1 May 2009=100%)

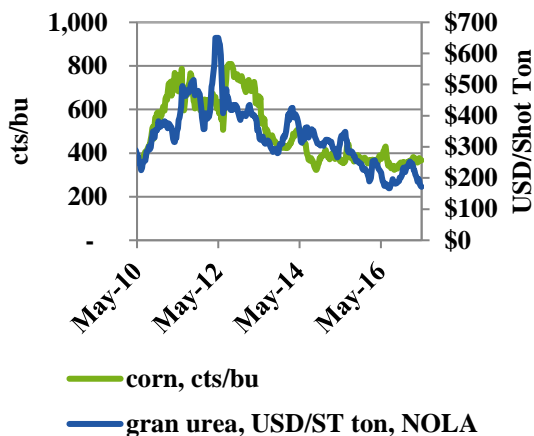
### Near-Term Grains versus Fertilizers

Nitrogen prices' recent slip does not seem warranted by relatively steady corn prices. Having said that, while the corn balance sheet for MY 2017/18 is set to tighten somewhat from MY 2016/17, the first USDA projections don't point at a change material enough to provide significant upside pressure for fertilizer prices that the April 2017 *Ag Review* noted:

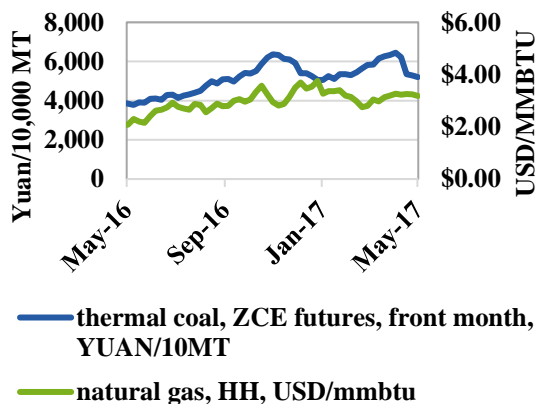
*This may change closer to the end of our three-month forecast period as the usual weather scare comes along. Come summer, a combination of lower acreage and less favorable weather would seriously alter the price outlook, not only for grains but for fertilizers as well.*

Developments during the past month do not give enough reason to change that stance. If anything, very early pockets of weather issues only further reconfirm the outlook.

### Corn Futures versus Urea Prices



### Coal versus Natural Gas Prices



Source: CME, CSI data, WPI analysis

### Nitrogen Cost of Production: Gas-Based Versus Coal-Based

For several months now, *Ag Review* has pointed to differences in U.S. versus Chinese nitrogen fertilizer production costs. U.S. nitrogen production margins, have benefitted from lower natural gas prices, whereas coal-based (Chinese) production has been dealing with ever-increasing thermal coal prices. Since last month, however, the latter have come down significantly in China. If this trend persists, Chinese capacity and, in turn, utilization rates will grow. This will put considerable pressure on international urea markets.

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*Thermal coal prices in China have come down significantly. If this trend persists, Chinese capacity and, in turn, utilization rates will grow. This will put considerable pressure on international urea markets.*

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# POLICY TRENDS

By Gary Blumenthal

## Top Five Reasons WPI is Neutral Macroeconomic Trends for Agribusiness

- Producer confidence in the agricultural economy is strong and growing.
- The market may become less confident in Trump's proposed tax cuts.
- Productivity in rich countries is struggling to gain momentum.
- Less-developed countries have several economic factors in their favor right now.
- Western agriculture needs to make difficult adjustments in a market defined by low prices and large surpluses.

### Ignore the Donald

In Washington, the old adage is that “the President proposes, Congress disposes,” which is to say that the bulk of the governing responsibility rests with the legislature. This means there should be little surprise that the congressionally-approved omnibus funding agreement for the remainder of the fiscal year largely leaves current agency functions intact. Instead of Trump’s proposed \$5 billion (20.7 percent) cut in USDA funding, the Supplemental Nutrition Assistance Program (SNAP) program will be reduced by \$2.5 million due to declining enrollment. Otherwise, there are increases for several other functions.

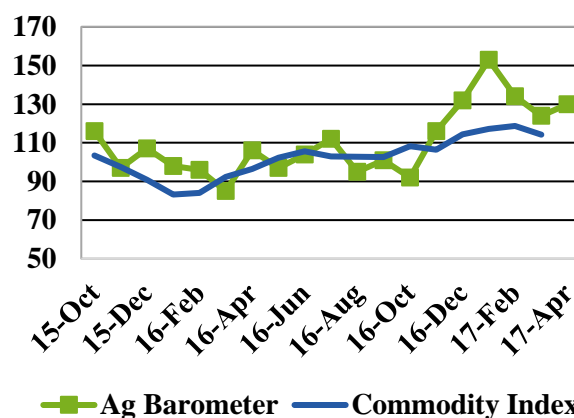
The market has learned to be less fearful of his tweets, but it may need to become less confident in his proposed tax cuts. The lack of bipartisanship in the tax policy reform effort means that procedural limitations will cause the result to be less ambitious. The economy will sustain its growth, but it will not have a breakout moment.

### Unfounded Optimism

Farmers epitomize the notion of “prepare for the worst and hope for the best.” It is said that they envision the loss of their crops several times during a single growing season. The trend has

been generally down for agricultural commodities over the past few months, and yet the Purdue University/CME Group Agriculture Economy Barometer indicates producer confidence in the agricultural economy remains strong. Perhaps prices have not sunk as low as feared and there is still the chance to make lemonade out of lemons, but it is still true that the optimism is out of its historical alignment with commodity prices.

**Producer Confidence and Commodity Prices**



Source: CME Purdue University, IMF

## Gloom Tune

Europe's economy has somewhat improved, and the election of Emmanuel Macron over Marine Le Pen in France has calmed political fears, but there is continuing risk on the Continent. The youth unemployment rate is stubbornly high with the worst-affected countries ranging from over 23 percent in France to 45 percent in Greece. As a result, Le Pen managed to gain more support from young people than would typically be expected. In a backhanded compliment, Le Pen characterized the election outcome as a vote for "continuity." If Macron rules as a status quo politician, which seems likely, the populist movement will not go away and could return in a stronger fashion.

Meanwhile, first quarter growth in the U.S. was unimpressive, although that has become the pattern in recent years with expectations that the initial 0.7 percent gross domestic product (GDP) rate will be revised upward when more data becomes available. The April jobs report beat market expectations, and Berkshire Hathaway CEO Warren Buffet announced his confidence in the economy, albeit at a 2 percent growth rate.

Morgan Stanley's Ruchir Sharma blames the world's slower economic growth on three factors: reduced birth rates, lower debt ratios and slower growth in international trade. The dependency ratio (those too young or old relative to the number of working age adults) continues to rise in the West. There are other troubling metrics that also weigh heavily on the economy.



Source: WTO

The productivity rate in rich countries cannot get out of first gear. Also, the velocity of money has continued to decline since the Great Recession, perhaps chastened by increased regulatory requirements. Capital spending remains weak, and lower labor mobility leaves employers wanting.

*Merchandise trade flows have slowed, but international data flows have grown from 60 terabits per second to 225 terabits per second in just four years.*

~ McKinsey & Company

Some see the slowing rate of productivity as simply a lagging indicator that will burst to the positive once the current wave of digital technologies get appropriately tapped and quantified. Unlike the industrial revolution, the current rapid uptake in information and communications

technology (ICT) is occurring across all sectors, not just in manufacturing. It does not take unique insight to envision where the collision of data, computational power and artificial intelligence is headed. The concern is its impact on people and thus politics and policy.

ICT will have its impacts, but agriculture is a prime example of the larger effects of automation. In less than four decades' time (1935-1974), the deployment of modern machinery took the number of U.S. farms down from 7 million to 2 million. MIT economists Daron Acemoglu and Pascual Restrepo looked at wage and employment data in geographic areas where the use of robotics expanded versus those where it did not and found larger negative impacts than those associated with increased imports, ICT utilization or outsourcing.

*ICT will have its impacts, but agriculture is a prime example of the larger effects of automation.*

### Change in Employment and Wages from Addition of One More Robot per 1,000 Workers 1990-2007



Source: Acemoglu and Pasual, WPI

Governments spent a great deal of money to ease the transition away from an agrarian economy, and there were jobs in the cities for those leaving the farm. However, until training and entrepreneurship facilitate employment in the new cyber-society, transitioning people in this third industrial revolution will be much more difficult.

### Price of Equilibration

While the affluent West wrestles with uncertainties and challenges, the developing world is eating better, living healthier and expanding its knowledge and capacity. This equilibration is ultimately beneficial to everyone, but there are inequities along the way. It is better to be a rich country, but developing countries have the following dynamics in their favor:

- Utilization of more border measures to keep out the products and services of the rich countries
- Increasing usage of subsidies to support their agriculture
- Demand and receipt of asynchronous trade benefits such as the Generalized System of Preferences (GSP), the African Growth and Opportunity Act (AGOA), Economic Partnership Agreements, etc.
- Acquisition of Most Favored Nation (MFN) treatment for their exports without having made any reciprocal import concessions
- Designated Special and Differential Treatment under the WTO's Uruguay Round Agreement
- Primary beneficiaries of the major international aid and lending programs

### Western Adjustments

Western agriculture and its multinational agribusiness interlocutors need to make adjustments in a world now defined by surpluses and low prices. Policymakers can help via rationalization of regulations and taxes as well as expanded trade liberalization. Industry itself must increase specialization, consolidation and innovation. None of these steps will be easy as there are no shortcuts and the whole value chain is impacted.

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*At the Nexus of Markets and Policy*