

The logo for AgReview, featuring a stylized green and blue arc to the left of the text.

# AgReview

July 2017

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World Perspectives, Inc.

A satellite-style map of the Black Sea region, showing the sea in dark blue and the surrounding land in shades of green and brown. The text is overlaid on the map.

Geopolitics and the Black Sea

Canada's Booming Oilseeds Sector

Diversification Aids Farm Equipment Makers

Economic Risk, Political Deadlock, and Chipotle's Irony

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

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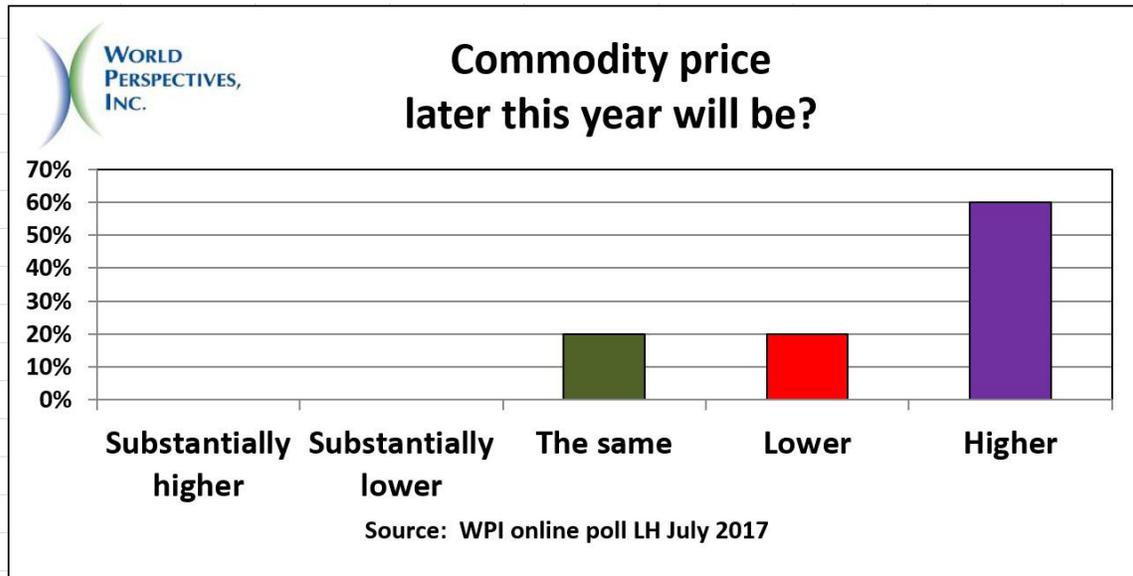
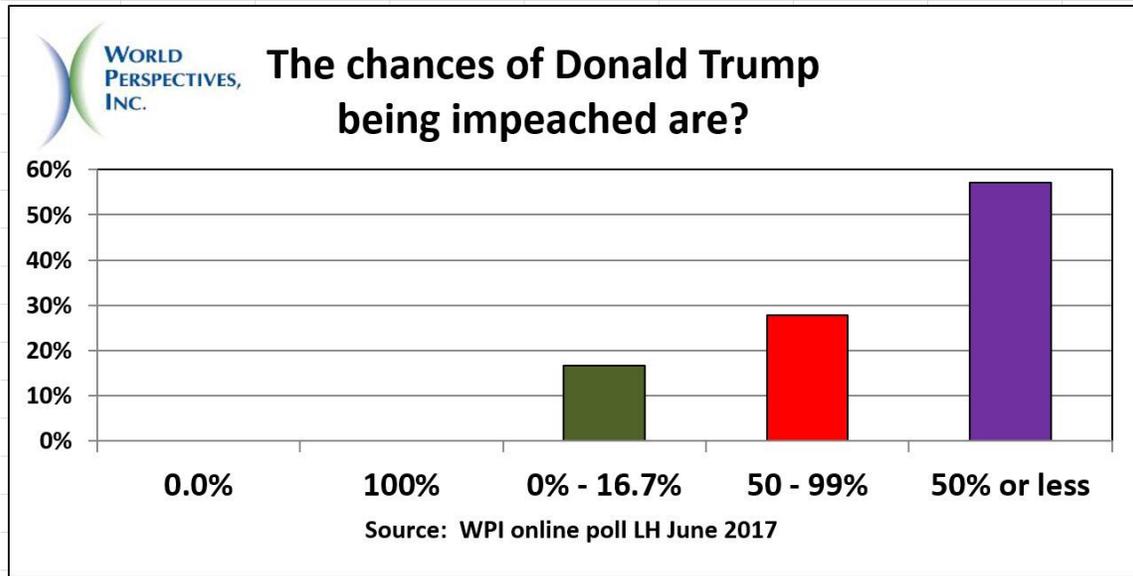
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## WPI POLLING

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

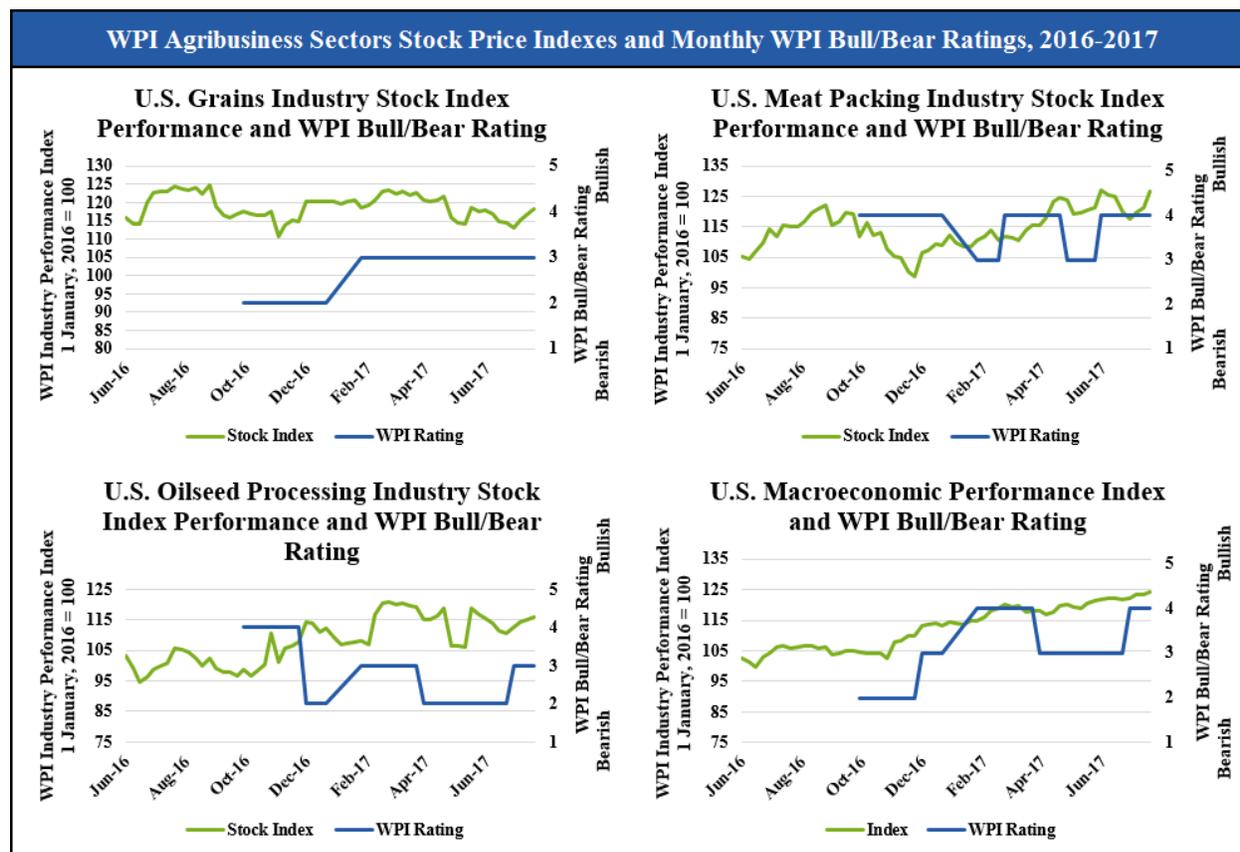
By Matt Herrington

Despite stock market bears pointing to overvalued equity prices, stock indexes keep working higher. Since the June issue of *Ag Review*, the S&P 500 is up 1.6 percent while the Dow gained 1.5 percent.

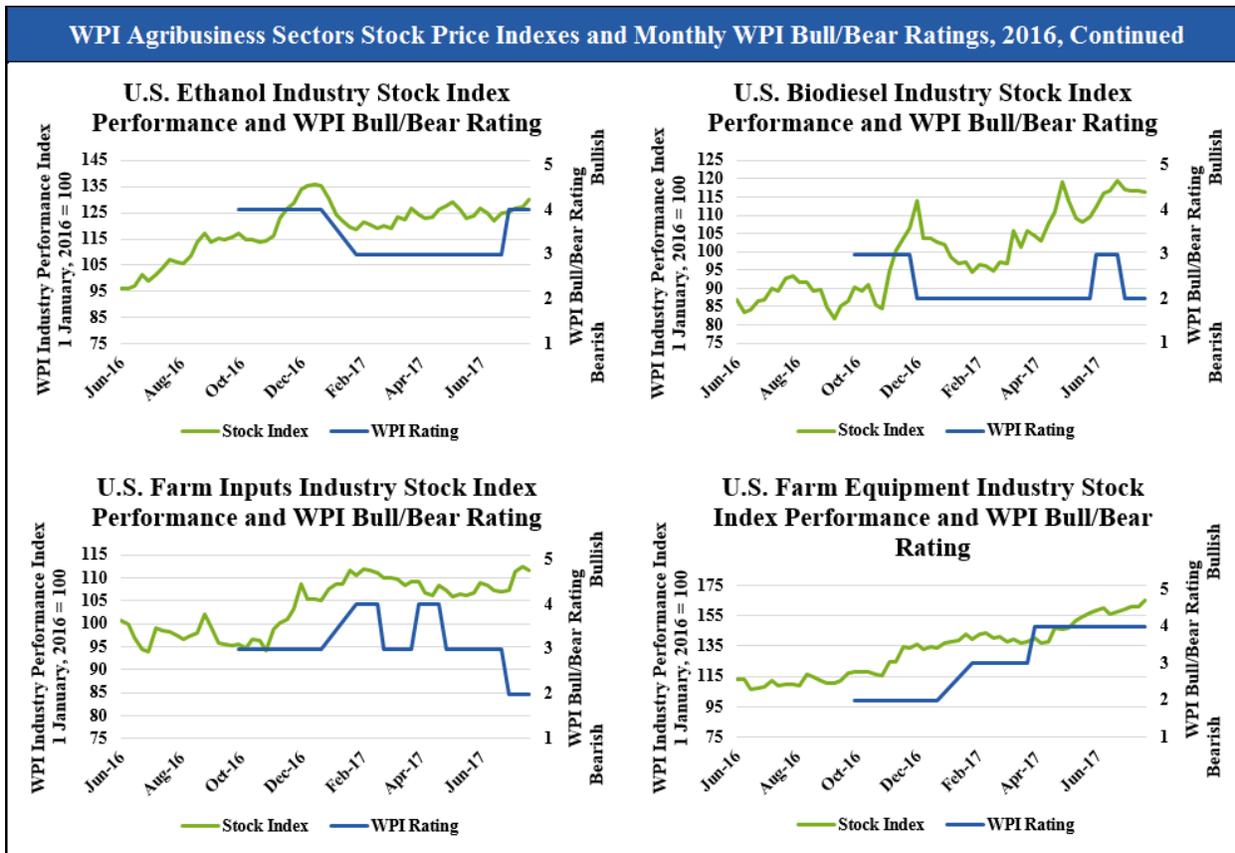
WPI's Agribusiness Sectors indexes have been largely positive since June. The WPI Grains industry index rose 2.9 percent on the back of better-than-expected earnings, while the oilseeds industry jumped 4.1 percent. Farm equipment makers share prices have risen on concentrated diversification efforts, pushing WPI's index 6.1 percent higher.

WPI's Macroeconomy Index kept pace with the broader stock market, gaining 1.5 percent last month. Crude oil prices have risen, which may slow down economic activity, but the U.S. dollar's 3.9 percent fall should buoy exports.

WPI sees political *risks* increasing (think Congress' inability to pass various reforms) but still maintains a positive outlook. However, some amount of caution is warranted when things have been going well for an extended period.



Source: WPI

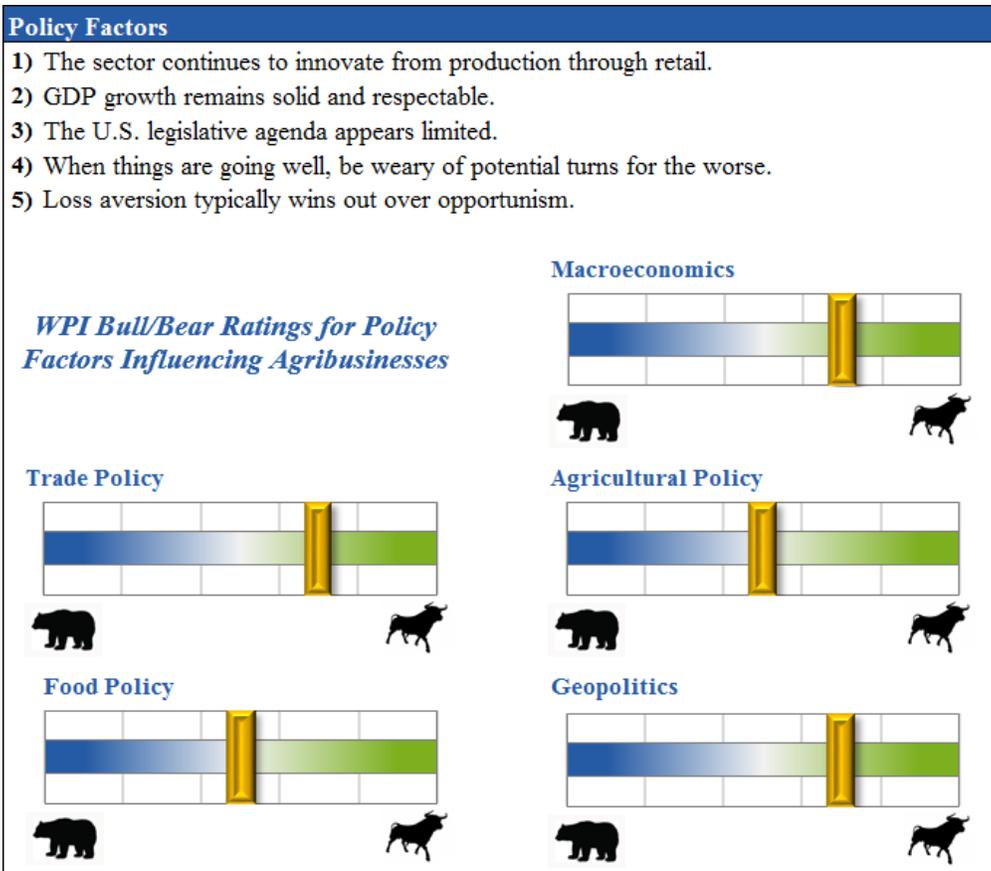


Source: WPI

# WPI BULL/BEAR LEANINGS FOR AGRIBUSINESS

By WPI Staff

| Industry                    | WPI Industry Bull/Bear Rating | Predominant Influencing Factors   |
|-----------------------------|-------------------------------|---|
| Grains                      |                               | <ol style="list-style-type: none"> <li>1) Lack of market volatility has reduced trading revenues for multinational grain companies.</li> <li>2) Much of the risk in today's markets comes from the weather – which cannot be hedged.</li> <li>3) The grain industry is facing a supply situation vastly different from recent years. How individual firms manage the situation will determine their success.</li> </ol>   |
| Canada's Oilseed Processing |                               | <ol style="list-style-type: none"> <li>1) Canola acreage exceeds that of wheat for the first time in history.</li> <li>2) Canadian soybean production is soaring, particularly in Manitoba and Saskatchewan.</li> <li>3) Increased oilseed production promises to benefit processing and exporting firms.</li> <li>4) Agribusinesses in the biotech and life sciences industries will also see profitable expansion opportunities.</li> </ol>   |
| Biofuels                    |                               |   |
| Ethanol                     |                               | <ol style="list-style-type: none"> <li>1) Ethanol production is slowing, but blending should grow in the second half of 2017.</li> <li>2) Ethanol exports were strong for the first half of the year; there is some risk facing the sector in the form of a new tariff on imports in Brazil where U.S. shipments have been expanding.</li> </ol>  |
| Biodiesel                   |                               | <ol style="list-style-type: none"> <li>1) Biodiesel production and margins are down compared with last year.</li> <li>2) Trump's "America First" dictum led the EPA to propose lower advanced biofuel volumes, which will cap biodiesel growth.</li> <li>3) Uncertainty surrounds the biodiesel tax credit and the U.S. antidumping/countervailing duty case against Argentina and Indonesia. Either could result in lower final 2018 advanced biofuels volumes.</li> </ol>   |
| Farm Inputs                 |                               | <ol style="list-style-type: none"> <li>1) Nitrogen and DAP prices have nearly stabilized since our May outlook.</li> <li>2) Industry share prices don't appear to have traded down with fertilizers. Upcoming earnings reports will likely reflect the persistent weakness in fertilizer prices.</li> <li>3) This bearish near-term outlook may be mitigated by a further improvement in grain prices, which may in turn give support for fertilizer prices closer to September. The impact of improving grain prices may not be as big as in previous years as nitrogen supply additions continue.</li> <li>4) Excess crude supply and consequent rangebound (read: cheap) oil help to keep natural gas cheap. North American nitrogen producers' resultant cost of production for gas is still positive.</li> </ol> |
| Farm Machinery              |                               | <ol style="list-style-type: none"> <li>1) Farm incomes are stabilizing and should improve in 2017, supporting sales.</li> <li>2) Efforts to diversify from core agricultural focuses offer revenue stability.</li> <li>3) International acquisitions will further diversification efforts and expand market opportunities.</li> <li>4) Share prices are approaching overvalued levels, which may limit further price appreciation.</li> </ol>   |



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# THE U.S. GRAIN INDUSTRY

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By Robert W. Kohlmeyer

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

- Lack of market volatility has reduced trading revenues for multinational grain companies.
- Much of the risk in today's markets comes from the weather – which cannot be hedged.
- The grain industry is facing a supply situation vastly different from recent years. How individual firms manage the situation will determine their success.

Even during years when weather provided ideal growth and development conditions for spring-planted U.S. crops, there have always been periods of uncertainty and concern about potential weather problems. In addition, crops are grown over such large areas of the U.S. that some variability in weather conditions is inevitable.

Starting with the 2013/14 crop cycle, U.S. grain and soybean farmers enjoyed four years of weather that was generally favorable for crop production. Improving yields and increased production have been the result, culminating in the new U.S. national average yield records achieved for corn, soybeans and wheat in the 2016/17 crop cycle. That year marked the first time such records occurred simultaneously for all three crops. During each of the last four years, though, there were periods when fear of potentially unfavorable weather caused traders to buy futures contracts out of concern such conditions might reduce potential crop production – a classic weather scare for the markets that pushed crop futures prices higher for a short time. It is commonly said during those periods that the futures markets are adding a “weather premium.” When adverse weather either did not develop or did not last long enough to have a negative effect on crops, futures markets quickly shed any weather premium from their prices.

There is a feeling that the string of consecutive years of excellent crop-producing weather in the U.S. may be ending for the 2017/18 crop cycle, which was bound to happen at some point. Weather conditions over much of the central U.S. during April and May were noticeably less than ideal and, in some cases, extreme. It started out too dry over the western Corn Belt, but the rains that came to relieve that arrived in the form of huge deluges. The result was flooding and delayed or prevented planting. Meanwhile, the eastern Corn Belt endured its own persistent rains that postponed planting and impeded early crop development.

### The Wheat Outlook

Since May, the northern Plains states of North and South Dakota and Montana, which produce nearly all of the U.S. hard red spring wheat (HRS), have been hit with a drought that is becoming increasingly severe. It is devastating that crop in the western Dakotas and eastern Montana while spreading eastward. Many farmers are cutting stunted spring wheat and baling it for hay since it would not yield enough to justify the cost of fuel needed to run a combine through their fields. It is impossible to quantify how much potential production has been lost since crop damage is still occurring, but some observers project that the total is a third or more. U.S. HRS production for 2017/18 seems likely to fall at least 150 million bushels below that of 2016/17. Drought is also affecting the Canadian

HRS crop in southern Saskatchewan and southern Manitoba.

As a result, high protein, milling quality spring wheat supplies are tightening in North America. The impending shortage caused end users and speculators to buy wheat futures contracts. Taking delivery of HRS contracts traded at the Minneapolis Grain Exchange (MGEX) ensured that the taker would receive stocks with a minimum 13.0 percent protein. MGEX spring wheat contracts are by far the most lightly traded of the U.S. wheat futures. The rush to buy those contracts has caused MGEX wheat prices to rocket higher, most recently closing well above \$8.00/bushel and at their highest in more than three years. In the past five weeks, they have gained more than \$2.40/bushel. The strength of MGEX spring wheat has pulled Chicago and Kansas City wheat futures up, and both have hit the highest levels in two years.

It is impossible to say how far the steep MGEX wheat futures rally prices will run. Technically speaking, the next price target for the new crop September contract is just over \$9.00. Whenever futures prices react so violently to sudden changes in supply and/or demand, they almost invariably go too high or too low and later adjust to an equilibrium range. A more important fundamental question is how high prices must go to curtail demand for what will be a limited U.S. supply of HRS. The answer will depend on numerous factors, many of which are still in motion. In truth, only in hindsight will we be able to determine the price level at which demand rationing began.

The northern Plains drought has come along while U.S. farmers are harvesting winter wheat from the smallest planted area in 100 years. The result is that the U.S. will very likely wind up with its smallest wheat crop in at least 15 years, leading to a sharp reduction in ending wheat stocks.

Wheat crops in other countries are facing weather-related problems as well. Hot, dry conditions in France, Spain, Germany and Poland are causing market analysts in the EU to lower their wheat production estimates. Similar

conditions have taken the top off potential wheat yields in Ukraine, and the Russian winter wheat harvest will not be as large as earlier anticipated. The problems in the southern Canadian Prairies have already been noted.

The global weather challenges imply that record world wheat production and ending wheat stocks of the past few years will fall in 2017/18. Although high quality milling wheat supplies are becoming tighter, the world is not in danger of running out of wheat. However, there will likely be a different tone to the market in 2017/18. Prices will be higher than during the last few years, and it will not be the buyers' market that it has been.

U.S. flour millers will have to scramble to find the qualities of wheat that they need, and the opportunities to blend cheaper classes with higher-priced milling quality stocks will be more limited. Moreover, the price spreads among various protein levels (and other quality factors) will no doubt be volatile and unusually wide. Millers can hedge the basic price risks for standard wheat qualities, but there is no way for them to adequately hedge against adverse changes in protein premium scales. They are looking at a year of higher raw materials costs (especially for wheat), and their margins will depend on how successful they are in passing those on to their customers.

## **The Outlook for Corn and Soybeans**

U.S. corn and soybean crops had a slow and checkered start this spring. Conditions improved somewhat during the first half of June, but USDA's weekly crop condition ratings for both are significantly lower than at the same point last year. This raises the theoretical question as to whether these crops can reach trend line yields even if they enjoy the best of weather circumstances henceforward. The theoretical answer is they probably could under a perfect mixture of sun, temperatures and rain during July and August. However, a more practical question might be whether the corn and soybean crops will face additional weather problems moving forward.

There are signs that the northern Plains drought may expand southward and eastward into the western Corn Belt. It should also be remembered that the Dakotas are important producers of corn and soybeans, and those crops are now being severely stressed by drought. There is also another issue of the strong high-pressure ridge centered over the Intermountain West, which longer-range weather modeling shows will periodically migrate eastward as far as the western Corn Belt, bringing with it extremely hot temperatures and blocking chances of rain. This has led weather forecasters to predict that the Corn Belt west of the Mississippi River will experience abnormally high temperatures and limited rainfall during the second half of July.

If this weather forecast is accurate, the hot, dry spell will catch a great deal of corn in the reproductive stage when excessive heat can harm yield potential. This prospect triggered a strong rally in corn and soybean futures prices just before the 4th of July holiday. A good part of the price rally was caused by managed money funds covering speculative short positions. The late June/early July weather market caught managed funds holding, in aggregate, their largest speculative short position in soybeans, soy meal and soy oil on record, one that they are now struggling to cover.

Accurately predicting weather weeks in advance seems as much art as science, computerized weather models notwithstanding. However, it seems safe to say the consecutive string of favorable crop-producing weather years in the U.S. has ended. This is not to say that we are predicting something like the Midwest drought of 2012 that devastated U.S. field crops. It is further doubtful the 2017 corn and soybean crops will suffer like the U.S. spring wheat crop has. However, it does seem that this weather so far and the impending warm, dry period foreseen for the western parts of the Midwest will pare down national average yields to no better than trend. Consequently, U.S. 2017/18 corn and soybean production 2017/18 will be less than total demand. Fortunately, the large carryover stocks of both from 2016/17 will cushion the impact.

The grain industry will join wheat buyers in facing a supply situation that is different from recent years. Overall supplies of each should be adequate to meet demand, but they will not be nearly as abundant as in the past. Futures prices for corn and soybeans are not likely to run away as spring wheat prices are doing, but they are likely to establish new higher trading ranges with greater volatility than in recent years. Domestic users are likely to experience more consistent competition from overseas buyers during 2017/18. Smaller U.S. crops will place added significance on crop prospects for other exporting countries, especially the 2017/18 corn and soybean crops to be planted in Brazil and Argentina.

Some in the industry have complained that the early 2017 lack of price volatility has reduced trading opportunities. They cite this as one of the reasons why grain companies, including the large multinationals, produced only mediocre profits during the last few years. There are of course many other reasons such as the impact of currency relationships on international farmers' planting and marketing decisions. It will be interesting to watch how the grain industry deals with a different set of circumstances in 2017/18 and how earnings are affected.

# CANADA'S BOOMING OILSEEDS SECTOR

By John Baize

## Top Four Reasons WPI is Bullish the Canadian Oilseed Industry

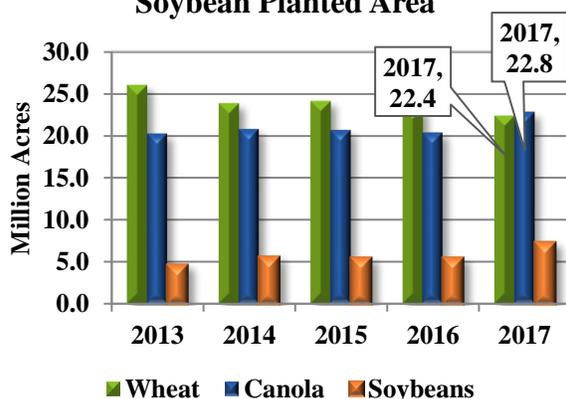
- Canola acreage in 2017 exceeded that of wheat for the first time in history.
- Canadian soybean production is soaring, particularly in Manitoba and Saskatchewan.
- Increased oilseed production promises to benefit several processing and export companies.
- Agribusinesses in the biotech and life sciences industries will also see profitable expansion opportunities.

Canada has long been known as one of the world's key wheat-producing countries. Its wheat is prized around the world for its quality, especially for use as flour in bread production. For the first time in history, however, Statistics Canada indicates wheat has been supplanted by canola (rapeseed) as the top crop in terms of planted area. Meanwhile, Canada's soybean plantings are also booming. The dynamic only makes sense because global demand for canola and soybeans is growing faster than for wheat as the Black Sea region's wheat production and exports have increased rapidly.

## Canola

Canada has long been a major producer of canola, which was first developed by two of its agricultural scientists in the 1970s by modifying rapeseed to reduce the toxic levels of erucic acid and glucosinolate to make it safe for human and animal consumption. The name is an acronym of "Canadian oil low acid." It is considered to be a very healthy oil, and canola meal is a high-protein meal used in beef cattle, dairy and swine feeds. Most of the canola grown in Canada is from GM varieties that are herbicide-tolerant.

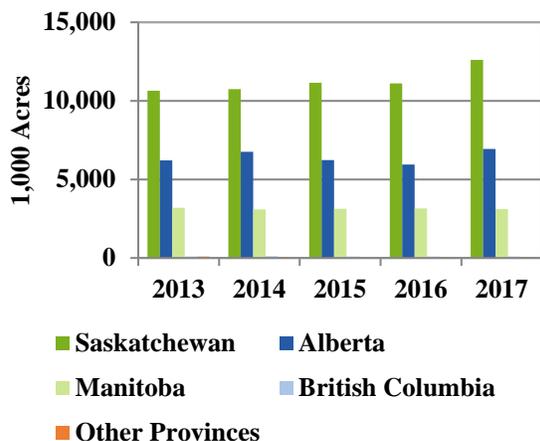
**Canadian Wheat, Canola and Soybean Planted Area**



Today Canada is the world's largest canola-producing country. Canola also is widely grown in Europe, Australia, China and parts of the former Soviet Union. Canadian canola production totaled 18.5 MMT in 2016, and USDA is forecasting an increase to 21 MMT in 2017 based on expanded plantings. Most of it is produced in the Prairie Provinces of Alberta, Saskatchewan and Manitoba, but small amounts are grown in eastern Canada. Saskatchewan is by far the largest producing province, planting 55 percent of the country's total 2017 canola area.

Source: Statistics Canada, WPI

### Canada's Canola Planted Area by Province



Source: Statistics Canada, WPI

Canola has expanded in Canada primarily because farmers found it to be a more profitable and predictable crop than wheat, barley, etc. The U.S. government's action requiring the labeling of trans fats content in food beginning in 2017 greatly reduced the use of hydrogenated soy oil in foods. The move also significantly increased food manufacturers' use of canola oil as a replacement since it contains no trans fats. In addition, Canada developed a large export market for canola seed in China and elsewhere in Asia. USDA forecasts that over 56 percent of its canola output will be exported in MY 2016/17. Canada is also forecast to export 3.15 MMT of canola oil during the same year, most of it to the U.S.

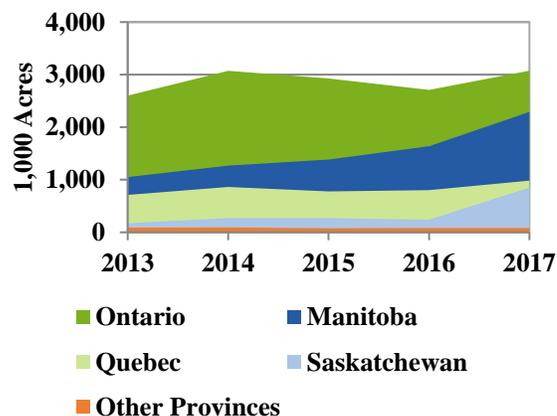
### Soybeans

Soybeans have been grown in Canada for decades, mostly in southern Ontario and Quebec at latitudes similar to that of Michigan, Wisconsin, Minnesota and the Dakotas. The country's 2016 soybean production totaled approximately 6.55 MMT, up from 5.36 MMT in 2013.

What has changed in recent years is the rapid growth in soybean plantings and production in the Prairie Provinces. Soybean plantings in Manitoba have been rising rapidly for the past decade as varieties were developed that could

mature in the province's short growing season. Farmers there have been achieving yields similar to those of their counterparts in northern Minnesota and the Dakotas, and the high soybean prices that prevailed for most of the past decade made the crop more profitable for them.

### Canada's Soybean Planted Area by Province



Source: Statistics Canada, WPI

Soybean plantings have now have expanded rapidly into neighboring Saskatchewan. Statistic Canada indicates farmers in that province planted 850,000 acres of soybeans in 2017, a 254 percent increase over 2016 and five times the area planted in 2013. Poor wheat prices and good soybean prices are credited for the rise.

Soybeans are also beginning to be produced in southern Alberta. Statistics Canada does not yet report the area planted to the crop there, but it is known that several thousand acres were planted in 2017. Many farmers are experimenting with growing the crop and will plant more if they are successful. Most of the production in Alberta, Saskatchewan, and Manitoba will be exported to Asia via West Coast ports due to a lack of local processing capacity.

Some officials at Monsanto expect that the Canadian Prairie Provinces will plant 10 million acres in a few years, provided the weather and climate cooperate. That would undoubtedly result in nearby soybean processing facilities being built supply regional soymeal demand. Most of

the additional production will continue to be exported as western Canada does not have a sufficiently large animal sector to use the amount of soymeal that would be produced. Strong soybean and soy product demand growth in Asia will be more than sufficient to utilize the increase.

The expansion of Canada's oilseeds sector will need to be positive for several firms. Life sciences companies such as Bayer/Monsanto, DuPont/Dow, and Syngenta should see higher demand for their biotech rapeseed and soybean varieties that are adapted to Canada. James Richardson & Sons, Ltd, a Canadian agribusiness firm involved in processing canola, is likely to benefit from growing canola supplies. The same is true for Cargill, Bunge, and ADM as all three are involved in oilseed processing in Canada. Glencore also stands to gain through its Viterra subsidiary, which processes both canola and soybeans in Canada. Several trading firms are likely to gain from increased supplies of canola and soybeans as well.

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# OPPORTUNITIES AND GEOPOLITICS IN THE AZOV SEA

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By Yuriy Alatorsev

## Top Four Reasons WPI is Bullish the Black Sea Grain Industry

- Agribusinesses, including Bunge and Louis Dreyfus, have been expanding their operations in the region.
- While Russia may have the dominant hand politically, it is unlikely to take actions that would restrict Ukrainian vessels as doing so would also hurt its own economic interests.
- Russia plans to double its grain exports which cannot happen without additional grain storage capacity and expanding Azov Sea ports.
- Conflict in the Donetsk region may hamper Ukraine's ability to export from the Azov Sea.

**F**or a long time, the Sea of Azov was considered the internal waters of one state – the Soviet Union or USSR. This changed around 25 year ago when it broke up, and Ukraine and Russia have been sharing that sea peacefully as a result. During the first years after the USSR's dissolution, all grain terminals belonged to their respective, newly-created governments. However, those were privatized years later and attracted investor companies with global recognition such as Cargill, Louis Dreyfus, and Bunge.

The only way out of the Azov Sea is the Kerch Strait, which belongs to both Ukraine and Russia. This arrangement was formalized by the December 2004 signing of the Azov Treaty in Kerch. Despite Russia's invasion of Crimea and the ongoing military actions between that country and Ukraine around the Sea of Azov basin (Donetsk Oblast), the ports remain working with vessels transiting the strait to enable the global trade of Black Sea grains.

The Azof Treaty needs to be reviewed at some point due to the temporarily occupied territories

of Ukraine. This issue is quite complicated, though, and not likely to be legally settled in the near future. In 2014, the Russian foreign ministry declared that because Crimea was under its domain, the Kerch Strait belongs to it exclusively. Announcing such is one thing, but unilaterally changing international treaties is another. Thus, the grain business will continue to ship and trade as it has been doing, making careful note of the war risk clauses in charter agreements. As it would do under any increased risk, the freight market has responded by raising its rates.

Luckily, no major incidents have been recorded since the annexation of Crimea in 2014. The only exceptions are one wreck and the 2017 drowning of the "Arsenal Heroes," a dry bulk grain vessel that was impacted by bad weather around Crimea 14 miles from shore while traveling from the Russian port of Azov to Turkey via the Kerch Strait. Russia currently has control and management over the strait for both Russian and Ukrainian vessels as well as international fleets.

While Russia and Ukraine remain in a state of conflict, which has not officially been declared but is considered one that is “frozen on the agenda, the international grain trading community continues to operate in the Azov and Black Seas. Moreover, the grain industry continues to invest in grain terminals in both locations. Many believe the Azov Sea is a strategic location since it can receive grain by river and, if necessary, reload barges into bigger vessels at sea. It will likely become even more important to have a location at an Azov port as the Kerch Strait might develop a deep vessel port in the near future (i.e.,Taman).

## Azov Sea Background

At the Russian port of Azov, a new 700,000 MT grain terminal is being built at the Don River, around 10.5 km from the river’s mouth. The terminal will facilitate grain exports via barges from the river and the sea. So far, the deadweight will be limited to 5,000 MT. However, this size fits well with the current trading sizes and geography. A grain storage facility of 50,000 MT is also scheduled.

In May 2017, Louis Dreyfus opened its first grain terminal (50,000 MT capacity) in Rostov. The facility included 12 hectares of land with a potential to export 800,000 MT annually, and the company has plans to expand that capacity to 1 MMT. This terminal will also load river barges and reload bigger vessels at sea, including the Mediterranean. Investors spent \$35 million, which they believe will be returned within the next decade.

## Ukrainian Azov Ports Overview

When Russia invaded Crimea, Ukraine lost around 4 MMT of storage capacity for grain exports via the Black Sea. These exports traditionally came directly from Crimea and eastern Ukraine but will now use Azov Sea ports like Mariupol, Berdyansk and, to a lesser extent, the Black Sea ports of Mykolayiv and Kherson. This challenge will only force Ukraine to quickly expand throughput capacity at Black Sea ports and, possibly, that at Azov Sea ports as well. Mariupol and Berdyansk, Azov ports, will continue focusing on grain exports as they represent 50 percent of their function. As conflict in the Donetsk area remains, the metallurgical industry will remain shut down and offer additional space for grain trading in Azov. That is not the only industry to encounter problems in Donetsk as Cargill lost control of its sunflower oil crushing plant in 2014. The facility is now controlled by Russian-backed separatists and has a 1 MMT annual crushing capacity.

During the past few years, the Berdyansk port picked up grain handling volumes, but Mariupol lost volume due to its proximity to the conflict zone. According to the Ukrainian port authority, both ports accounted for 16 percent of all exports in 2013 (before the conflict) and only 8 percent in 2016. However, it is not only the conflict that drives the market as deep water Black Sea ports expand faster and become increasingly attractive for grain traders. Year over year, Ukraine has increased its grain exports, and additional space will be badly needed. Interestingly, while grain handling dropped, exports of products such as wheat bran, oilcake, etc. rose dramatically. Those accounted for 9 percent of all exports in 2012, and that figure had doubled by 2014.

Ukraine’s Azov ports account for around 5 percent of all its grain exports on average, mostly wheat and barley. Corn exports are showing potential to expand beyond their current 1 percent share, however. The competition from the Russian Azov ports is quite strong, and Ukrainian ports need to discover how to lower handling costs as they are some of the most expensive in the country.

## Russian Azov Sea Ports Overview

The so called small-size Azov Sea ports in Russia handle over 10 MMT of grain for export, and half of this volume is the reloading of small barges into bigger vessels. Given this and expected Russian grain exports of 30 MMT worth around \$5.5 billion for MY 2016/17, the small-size ports handle one third of those exports at an approximate value of \$2 billion. The reloading business of these ports accounts for roughly \$1 billion. For reference, the cost of loading grain into a barge or smaller vessel is cheaper than loading a Panamax.

The Russian ports of Azov and Yeisk will continue their expansion as they face no risk of the Kerch Strait closing since Russia will control it from now onward. For example, Yeisk alone can load out 2,500 MT daily, and this port is located at the neck of Yeisk Spit in the southeast part of the Azov Sea's Taganrog Bay.

The Russian government expects to double grain exports to 40 MMT and increase grain storage capacity up to 50 MMT. This will not happen without expanding Azov Sea ports as well as adjacent river ports and terminals. The Southern Federal District, Volga Valley and Central Federal District need Azov ports for further shipments to the Middle East and North Africa. Russia's competition is of course worried that Azov Sea ports will only boost competition in the Black Sea from reloading barges and small vessels into larger ones in the Kerch Strait's neutral waters. However, reloading will continue, whether in neutral waters or the Russian port of Kavkaz, which will give Russian operators more favorable status.

The political situation in the Black Sea region has an effect on Azov Sea trading as well. For example, when a Russian military airplane was shot down over Turkish territory during the Syrian conflict, Turkey and Russia started mutual embargoes. This immediately panicked grain traders and freight forwarders as the majority of grain from the Azov Sea traditionally goes to Turkey. That country has been one of Russia's biggest buyers in the past few years, and 70 percent of its grain imports come from there.

Accordingly, Russia will be very careful and is unlikely to embargo grain exports to Turkey, which also has safety stocks managed by the Turkish Grain Board. Lastly, Russia will be careful with its embargoes because Ukraine can quickly fill Turkish needs from the Azov Sea or Black Sea ports.

The Ukrainian Azov Sea ports of Berdyansk and Mariupol continue shipping grains to the world markets. During 2016/17, those exports from Berdyansk totaled around 1 MMT with 31 percent destined to Egypt, 24 percent to other Middle East and North Africa countries (Lebanon, Libya, Tunisia, Algeria), 15 percent to the EU (Italy, Greece, Cyprus), 14 percent to Turkey, 14 percent to Israel and 2 percent to Ecuador. The key export commodity was wheat, which accounted for 78 percent of all grain exports, followed by barley at 13 percent and a combination of peas, corn and sorghum at 8 percent. What if Russia were to exclude Ukrainian vessels from passing through the Strait of Kerch, and how would that affect trade? Russia is unlikely to do so because this would go against its own economic interests.

Russia is building a badly-needed bridge between its inland territory and Crimea, the construction of which may necessitate the temporary blocking of free vessel movement in the strait. If that occurs, however, Russian vessels will also be blocked. For Russia, this would be the economic equivalent of shooting itself in the leg! The ports that will be impacted include all Azov ports in Ukraine (Berdyansk, Henichesk and Mariupol) and Russia (Yeisk, Kavkaz, Azov, Taganrod and Temryuk). Russia's Transport Ministry already warned Taman, Kerch, Kavkaz and Crimean authorities about safety measures during construction and that all movement of vessels will be blocked, excluding those in the Kerch-Yenikalskiy Canal.

Many traders followed mass media, which failed to mention the exclusion. If the Kerch-Yenikalskiy Canal remains open, business will continue as usual because it was dredged to improve the navigational capabilities of the strait. The canal can accommodate vessels up to 215

meters long with a draft of up to 8 meters and compulsory pilot assistance.

## Conclusion

Russia is unlikely to block Ukraine from grain trading in Azov ports because the vessels used to move its grain are rarely (if ever) fly its flag. Instead, they fly Panamanian, African or any other country's flag. Therefore, false reporting that Ukraine will lose its right or option to trade via the Strait of Kerch is solely propaganda. At the moment, however, this is favoring Russia's grain trading community and its government.

## For Reference:

**Sea of Azov** – The Sea of Azov is in Eastern Europe and links on its southern end south to the Black Sea by the narrow Strait of Kerch. The sea is sometimes regarded as a northern extension of the Black Sea and is bounded on the north by mainland Ukraine, on the east by Russia and on the west by the Crimean Peninsula. The Don and Kuban Rivers are the major waterways that feed the Azov Sea. This sea is the shallowest one in the world with a depth variance of 0.9-14 meters (2 feet.11 inches-45 feet.11 inches). There is a constant outflow of water from the Sea of Azov into the Black Sea.

**Strait of Kerch** – The Kerch Strait connects the Black Sea and the Sea of Azov, separating the Kerch Peninsula of Crimea in the west from the Taman Peninsula of Russia's Krasnodar Krai in the east. The strait is 3.1-15 kilometers (1.9-9.3 miles) wide and up to 18 meters (59 feet) deep.

# THE U.S. BIOFUELS INDUSTRY

By Dave Juday

## Top Five Reasons WPI is Bullish the Biofuels Sector

- Ethanol production is slowing, but blending should grow in the second half of the year.
- Ethanol exports were strong for the first half of the year; there is some risk facing the sector in the form of a new tariff on imports in Brazil where U.S. shipments have been expanding.
- Biodiesel production and margins are down compared with last year.
- Trump's "America First" dictum led the EPA to propose lower advanced biofuel volumes, which will cap biodiesel growth.
- Uncertainty surrounds the biodiesel tax credit and the U.S. antidumping/countervailing duty case against Argentina and Indonesia. Either could result in lower final 2018 advanced biofuels volumes.

On 5 July, the U.S. EPA released its proposed 2018 Required Volume Obligations (RVOs) for biofuels. Under the proposal rule, the overall level of biofuels would be reduced by 40 million gallons from the 2017 final volume or 0.21 percent. Compared with the statutory volumes prescribed under the 2007 Energy Independence and Security Act (EISA), however, the EPA's proposal is down 26 percent.

### Ethanol Proposed Volumes for 2018

The EPA kept the conventional biofuel RVO at its statutory maximum of 15 billion gallons per year. In doing so, it estimated conventional corn ethanol would reach a volume of 14.479 billion gallons or 10.13 percent of the U.S. Energy Information Administration's (EIA) projection of 143 billion gallons per year of finished motor fuel use. The difference between the 15 billion gallon mandate and the estimated 14.479 billion gallon utilization would be made up of other non-advanced biofuels that generate a D6 renewable identification number (RIN).

| RVOs under the RFS<br>(billion gallons) |       |       |       |       |
|---|-------|-------|-------|-------|
|   | 2015  | 2016  | 2017  | 2018  |
| <b>Total Renewable</b>                  |       |       |       |       |
| Statutory                               | 20.50 | 22.25 | 24.00 | 26.00 |
| Proposed                                | 16.30 | 17.40 | 18.90 | 19.24 |
| Final                                   | 16.93 | 18.11 | 19.28 | N/A   |
| <b>Conventional (implied corn)</b>      |       |       |       |       |
| Statutory                               | 15.00 | 15.00 | 15.00 | 15.00 |
| Proposed                                | 13.40 | 14.00 | 14.80 | 15.00 |
| Final                                   | 14.05 | 14.50 | 15.00 | N/A   |
| <b>Total Advanced</b>                   |       |       |       |       |
| Statutory                               | 5.50  | 7.25  | 9.00  | 11.00 |
| Proposed                                | 2.90  | 3.40  | 4.00  | 4.24  |
| Final                                   | 2.88  | 3.61  | 4.28  | N/A   |
| <b>Undifferentiated Advanced</b>        |       |       |       |       |
| Statutory                               | 1.50  | 2.00  | 2.50  | 3.00  |
| Proposed                                | 0.18  | 0.43  | .059  | .775  |
| Final                                   | 0.22  | 0.70  | .0895 | N/A   |
| <b>Cellulosic</b>                       |       |       |       |       |
| Statutory                               | 3.00  | 4.25  | 5.50  | 7.25  |
| Proposed                                | 0.11  | 0.21  | 0.311 | 0.238 |
| Final                                   | 0.123 | 0.230 | 0.311 | N/A   |
| <b>Biodiesel</b>                        |       |       |       |       |
| Statutory                               | ≥1.00 | ≥1.00 | ≥1.00 | ≥1.00 |
| Proposed                                | 1.70  | 1.80  | 2.00  | N/A   |
| Final                                   | 1.73  | 1.90  | 2.00  | 2.10* |

Source: EPA, WPI

\*This is the final 2018 volume for biodiesel under the RFS

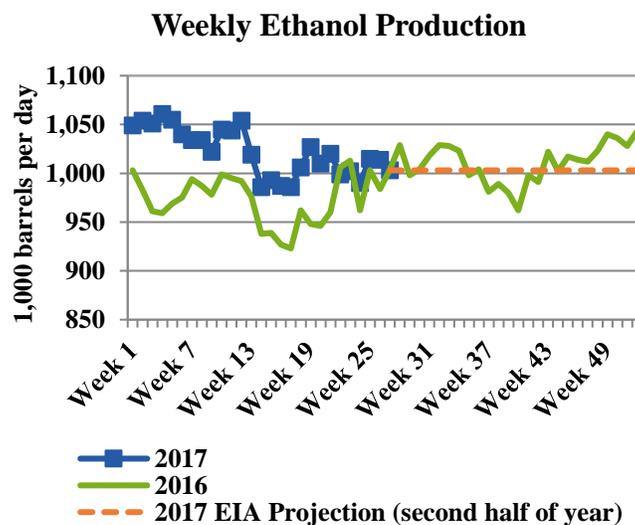
From those assumed volumes, an implied 710 million gallons would come in the form of higher blends such as E15 or E85, although the EPA considered several scenarios with the following assumptions:

- E15 ranging from a low of 600 million gallons to a high of 1.2 billion gallons
- E85 ranging from a low of 200 million gallons to a high of 350 million gallons
- E0 or straight gasoline ranging from a low of 200 million gallons to a high of 500 million gallons
- Imported sugarcane advanced ethanol under four scenarios, including 0, 100 million, 300 million, and 500 million gallons

Assuming the lowest amount of straight gasoline use, the highest estimated use of E15 and E85 and no use of sugarcane ethanol, the highest volume of conventional corn ethanol would be 14.560 billion gallons. Based on the maximum assumed volume of straight gasoline use and sugarcane ethanol, and low use of E15 and E85, however, the lowest volume of conventional corn ethanol would be 14.399 billion gallons. The spread between the two is 161 million gallons of ethanol or the equivalent of about 57.5 million bushels of corn.

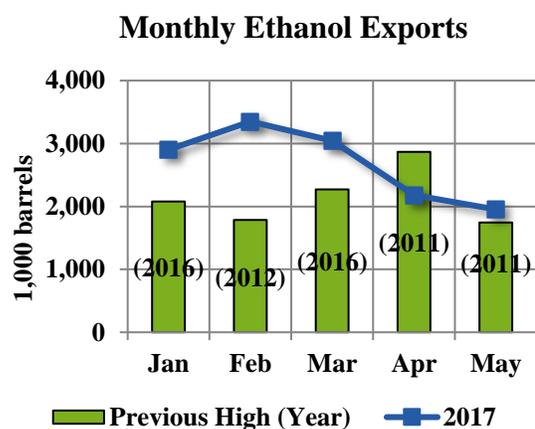
### A Mid-Year Look at 2017

With the year half over as of 30 June, corn ethanol production has been on pace to hit 15.68 billion gallons in 2017, but that is starting to slow. Ethanol production typically has seasonal slowdowns at the end of winter and in early fall, but production at mid-year is now trailing the previous year for the first time. It reached 15.2 billion gallons last year and would finish at 15.45 billion gallons in 2017 if the same trend were to be followed. That would be equivalent to 5.5 billion bushels of corn, which is USDA's estimate for ethanol utilization of corn in its June WASDE report. The EIA, however, is projecting ethanol production will pick back up and average 1.03 million barrels per day for the third and fourth quarters, which would put the year-end total at 16.1 billion gallons and corn consumption at 5.75 billion bushels.



Source: EIA, USDA

This year's ethanol exports are ahead of 2016 so far, which is surprising given the new import tariffs imposed by China. Brazil is importing record amounts from the U.S., but it is also contemplating a new tariff on those imports. To date, U.S. ethanol exports have set a new monthly record in four of 2017's first five months. If the current pace continues, which would be a tall order, total shipments could far exceed last year's 1-billion-gallon total and reach 1.35 billion gallons.

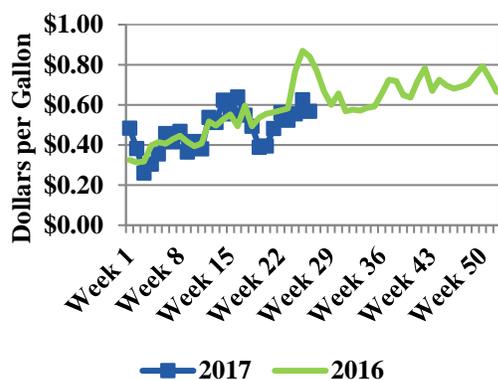


Source: EIA, WPI

As for domestic consumption, the EIA is projecting an increase in ethanol blending for the second half of 2017 versus last year when 14.399 billion gallons of ethanol were used. This year's total could approach 14.45 billion gallons, which

is still less than the EPA's forecast for 2018 of 14.479 billion gallons. Assuming the rather robust trends in production, blending and exports continue along with a bullish RVO proposed by the EPA for 2018, this year's third quarter should continue to be bullish for ethanol producers.

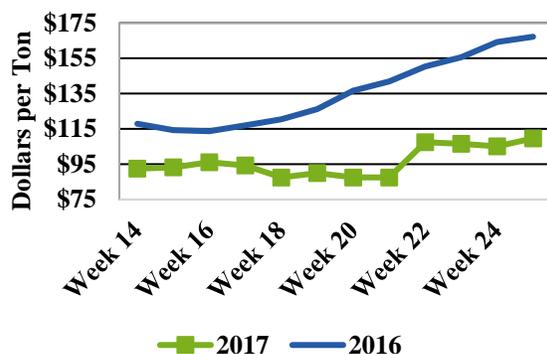
### WPI Estimated Gross Margins for Ethanol Including Corn Oil Extraction



Source: USDA, WPI

Although margins have not hit the summer peak experienced last year, returns should be solid going into the second half of 2017 even if feedstock prices (i.e., corn and, to a lesser extent, sorghum) increase with a weather-driven market this summer. The big difference in ethanol mills' gross margins this year compared with 2016 is the lower price of DDGS.

### 2Q DDGS Prices 2016 versus 2017



Source: USDA, WPI

## Reduction in 2018 Advanced Volumes Cap Biodiesel

The 2018 proposed volume for the overall advanced biofuel category was reduced by 40 million gallons from the final 2017 level, which will cap biodiesel to a similar volume as this year. Indeed, biodiesel has been the primary fuel to meet the advanced mandates for three reasons:

1. No commercial development of cellulosic ethanol to date
2. A lack of Brazilian sugarcane ethanol entering the U.S.
3. The EPA's reliance on an aggressive increase in advanced biofuels under the RFS until this year under the new Trump administration

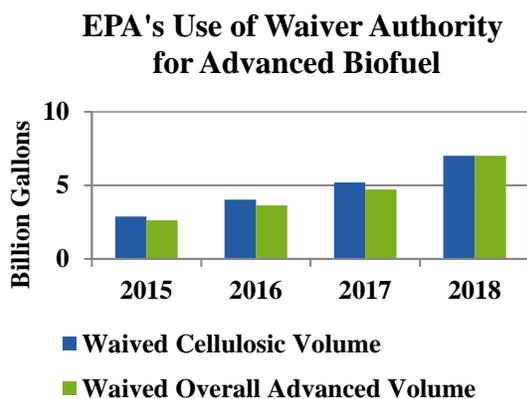
Specifically, the EPA reduced the cellulosic volume to 238 million gallons for next year from the 311 million gallons set for 2017. Indeed, based on 2017 RIN generation data through May, cellulosic production is on track to reach no more than 200 million gallons. The agency also cut the undifferentiated advanced category, which is a residual volume, to 775 million gallons versus 895 million gallons in 2017. Combined, the reductions total 193 million gallons. By increasing the biodiesel category by 100 million wet gallons, however, the ethanol equivalent volume (for RINs compliance) was raised 153 million, leaving a net reduction in total advanced biofuels volume of 40 million gallons.

| Final 2017 RVOs versus 2018 Proposal<br>(million gallons) |               |                  |        |
|---|---------------|------------------|--------|
|   | 2017<br>Final | 2018<br>Proposed | Change |
| Cellulosic  | 311           | 238              | -73    |
| Undifferentiated<br>Advanced                              | 895           | 775              | -120   |
| Biodiesel<br>Ethanol<br>Equivalent                        | 3,074         | 3,227            | 153    |
| Overall<br>Advanced                                       | 4,280         | 4,240            | -40    |

Source: EPA, WPI

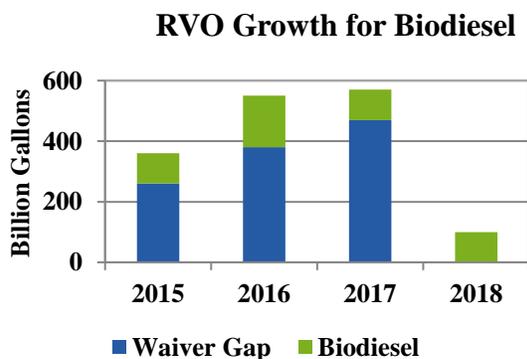
## New Methodology for 2018

Previously, the EPA has reduced the overall advanced category by an amount less than that of the cellulosic waiver. For the 2018 proposed rule, though, the overall advanced and total biofuel volumes are decreased by the same amount as the cellulosic waiver; this is a new methodology ushered in by the Trump administration that will change the trajectory of biodiesel utilization over the longer run.



Source: EPA, WPI

The chart above illustrates the cellulosic-advanced “waiver gap” under the annual RVOs set by the EPA. Along with a lack of other qualifying advanced biofuels like Brazilian sugarcane ethanol, this gap has created an additional marginal demand for biodiesel that is above the increases provided in biodiesel’s own category – until the 2018 RVO.



Source: EPA, WPI

Part of the reason for this new approach is the Trump administration’s “America First” policy. The administration expressed concern over the trend toward imported biodiesel to meet the RVOs, which (as the proposed rule noted) is not in keeping with the goal of “greater energy independence and security.” This is a key concept “embedded in statutory provisions” of the Energy Independence and Security Act (EISA) of 2007 that mandates statutory volumes under the RFS. Last year advanced biodiesel and renewable diesel imports totaled 731 million gallons or 47 percent of U.S. production.

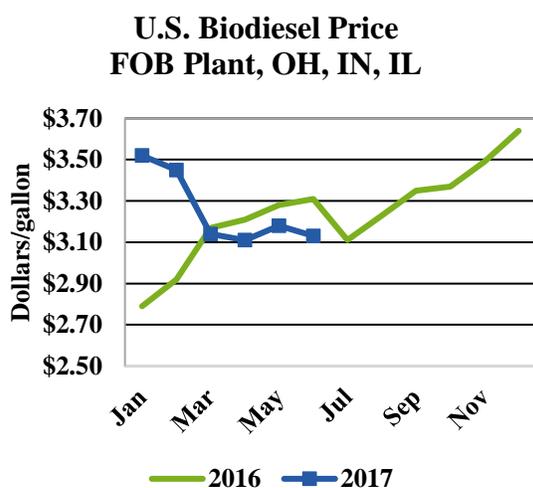
Looking ahead to 2018, the amount of feedstock needed, particularly of soyoil (still approximately 55 percent of the total), will ultimately depend on the level of biodiesel imports. The real determination of imports relies on:

- Administrative action: The Department of Commerce decision regarding both antidumping and countervailing duties on Argentine and Indonesian biodiesel that is due by 21 August
- Legislative action: Congressional decision on whether to include the biodiesel tax credit (Congress is considering changing it from a blenders’ credit to a producers’ credit, which would act as a *de facto* tariff on imported biodiesel if part of any type of tax reform or other legislative package prior to 30 November, the deadline for the final RVO rule.)

Either of these actions could lead to a reduction in the advanced volume established in the final rule for 2018 or the proposed amount for 2019, both set last year at 2.1 billion gallons. (Under the RFS, biodiesel volumes must be proposed 14 months in advance.) Further, the EPA has specifically requested comments on its authority to restrict the use of imported biofuels to meet the mandates.

## Second Half of 2017

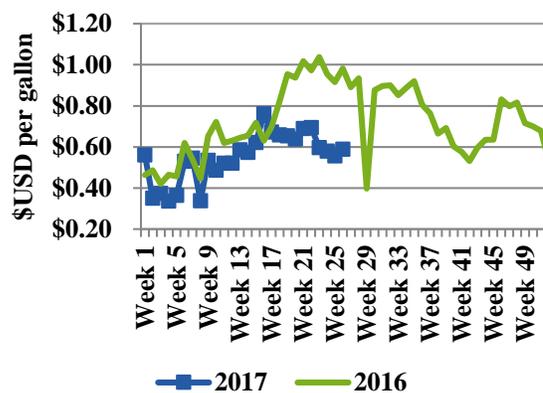
Early in the year, biodiesel imports fell dramatically. The expiration of the biodiesel blenders' tax credit is undoubtedly part of the reason as is the effect of the Department of Commerce investigating allegations of the dumping of Brazilian and Indonesian biodiesel. However, imports started to pick up in April and pressured domestic biodiesel prices.



Source: USDA, EIA, WPI

In 2016, approximately 2.45 billion gallons of advanced biodiesel and advanced renewable diesel were used. WPI expects 2.49 billion gallons to be used this year and 2.5 billion gallons in 2018 as biodiesel growth plateaus.

### WPI Estimated Biodiesel Gross Margins for Soyoil Methylester (returns per gallon)



Source: USDA, WPI

# THE U.S. FARM EQUIPMENT INDUSTRY

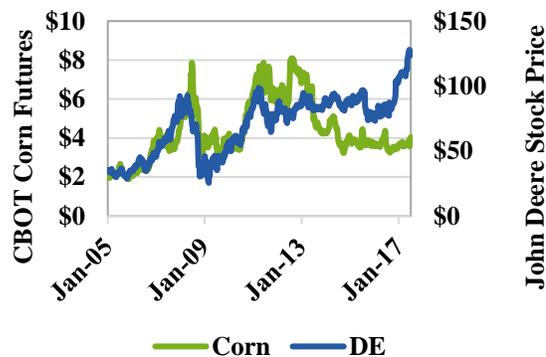
By Matt Herrington and David Gregg

## Top Four Reasons WPI is Bullish the Farm Equipment Sector

- Farm incomes are stabilizing and should improve in 2017, supporting sales.
- The industry's efforts to diversify from core agricultural focuses offer revenue stability.
- International acquisitions will further diversification efforts and expand market opportunities.
- Share prices are approaching overvalued levels, which may limit further price appreciation.

Historically, farm equipment manufacturers' stock prices were correlated with nearby corn futures. From 2005 to 2014, John Deere & Co.'s stock had a 0.83 correlation with front-month corn futures while AGCO's stock correlated at 0.64. For equity analysts, this was convenient as forecasting these stock prices basically involved forecasting corn prices. However, the market began to change in 2014, and farm equipment stock prices held their own against falling or sideways grain markets. The industry has aggressively pursued diversification on multiple fronts (from product lines to global sales), making the industry stock price performance and future growth prospects different from historic norms.

**Correlation between CBOT Corn Futures and John Deere (DE) Stock Prices**



Source: ProphetX, WPI

## John Deere & Co.

John Deere's diversification efforts are evident in its recent purchase of a construction equipment-maker. The deal marks the first time in Deere's history that it has acquired a company outside its core agricultural and turf industry. Deere said it would purchase the German Wirtgen Group for \$4.89 billion in June, a move that fits well with the company's geographic and industry diversification strategy.

**Correlation Coefficients Between Farm Equipment Company Share Prices and CBOT Corn/Soybean Futures**

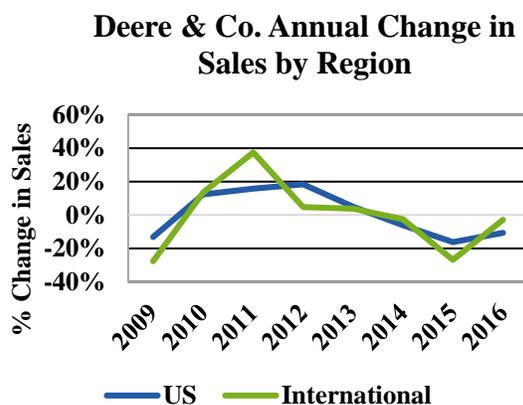
|           | Corn/DE | Corn/AGCO | Soybean/DE | Soybean/AGCO |
|-----------|---------|-----------|------------|--------------|
| 2005-2017 | 0.696   | 0.648     | 0.787      | 0.767        |
| 2005-2014 | 0.8394  | 0.7172    | 0.859      | 0.859        |
| 2014-2017 | 0.0462  | 0.1735    | 0.619      | 0.619        |

Source: WPI

The move will likely prove positive for Deere. Last year, its construction-machinery business had sales of \$4.9 billion with a pretax margin of 3.7 percent. In contrast, Writgen's sales reached \$2.6 billion with a pretax profit margin of 13 percent.

Deere's core agriculture and turf business will see improvement this year as well. Farmers in the U.S. and Canada will find farm incomes comparable with last year's, indicating the farm financial hemorrhaging has stopped. Deere's sales in the U.S. are projected to fall 5-10 percent in 2017, although the recent wheat market rally along with higher corn and soybean prices may lead to higher-than-expected equipment purchases. Sales of smaller tractors from Deere's ag and turf line have been robust in recent years, and this segment will help support its revenues. However, sales of new model year, large-scale farming equipment remains comparatively slow with the glut of lightly-used equipment still being worked through.

Brazil and Argentina's expanding crop production will continue to support Deere's international sales. Traditionally, those sales have been more variable for the company, but the rising importance of crop production in South America and other international locations will help stabilize these revenues. Argentine wheat farmers should invest more in their crop this year, and Brazil's higher-than-expected local prices for corn and soybeans will also support Deere's international sales.



Source: Deere & Co., WPI

Deere's Construction and Forestry Division has stabilized in recent quarters, and its outlook remains bright. Improvements in U.S. gross domestic product (GDP), employment rates and housing starts are all supportive from a macroeconomic perspective. U.S. housing starts were 5.5 percent lower in May versus the prior year, but the year-over-year change may be misleading given the large number that occurred in May 2016. The U.S. recorded 222,000 jobs created in June 2017, a sign of continued economic recovery and a bullish signal for U.S. businesses. Deere's business will also benefit from modest recoveries in machinery rental rates, although the global used equipment market remains oversupplied, and the rate will not move significantly higher.

To date, Deere's stock price is up 56.4 percent from one year earlier, and its price-to-earnings ratio is near 23.4. Investors have clearly viewed Deere's diversification efforts as successful, and expanding international sales have rewarded the company's share price accordingly. While its outlook is improving, share prices seem fairly valued and will see modest annual appreciation. Some private analysts peg the Deere's stock growth prospects at 4-8 percent annually for the coming three years. Given improving farm financial prospects in the U.S. and internationally, WPI sees a more positive outlook and puts the range near 6-10 percent annual price appreciation.

## AGCO

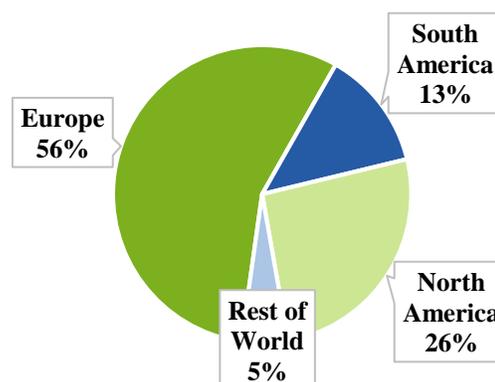
Additional upside is possible. AGCO missed its earnings mark in Q1 2017 as cost-cutting efforts yielded less-than-expected improvement. The company generated year-over-year sales growth, an impressive feat with the poor market conditions in Europe and the U.S., and will continue to build upon this success. Europe's farm financial situation is improving (slowly) and should support sales in AGCO's core market.

Sales in South America should be substantially better in the coming years. Political uncertainty in the region plagued sales for years, but a (mostly) improved and more stable political environment

will support AGCO's sales, especially in Argentina. Highlighting the company's South American focus is its tender offer for Brazil's Kepler Weber S.A. The deal (\$185 million or \$7.03 per share) would increase AGCO's presence in the grain storage equipment market – in a region where grain storage desperately needs improvement. The move seems ripe with opportunity as both the region and the global agricultural economy are poised for recovery.

AGCO's earnings should see improvement from two fronts. The company is scheduled to introduce new products featuring more standardized parts. The move will help suppress cost growth and should build upon existing cost-cutting efforts. Additionally, AGCO's lower production rates in recent quarters combined with dealer inventory liquidation programs should boost demand through the supply channel. However, AGCO sales representatives report that fleet leases are becoming less popular among farmers who own/operate large acreages.

### AGCO Sales by Region



Source: Valueline, WPI

From a valuation perspective, AGCO's stock is up 43.3 percent from July 2016, and trades (at a share price of \$68.38) at a 39 price-to-earnings ratio. The stock seems overvalued, but it still offers solid price appreciation potential. In light of the company's opportunities in Brazil and cost-cutting measures, the stock is expected to match pace with the broader stock market, yielding 11 percent gain annually for the next three-five years.

# FARM INPUTS

By Joost Hazelhoff

## Top Four Reasons WPI Is Neutral-to-Bearish the Farm Inputs Industry

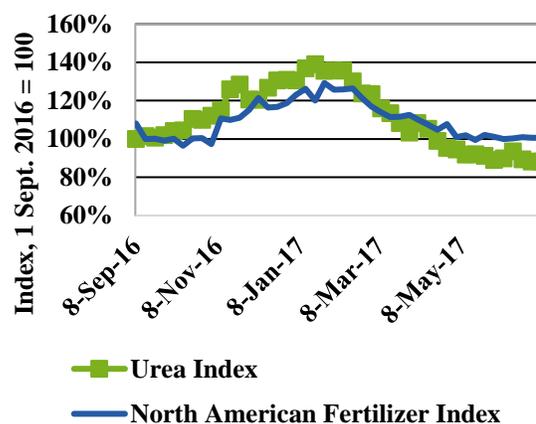
- Nitrogen and DAP prices have nearly stabilized since our May outlook.
- Industry share prices don't appear to have traded down with fertilizers. Upcoming earnings reports will likely reflect the persistent fertilizer prices weakness.
- This bearish near-term outlook may be mitigated by a further improvement in grain prices, which may in turn give support for fertilizer prices closer to September. The impact of improving grain prices may not be as big as in previous years as nitrogen supply additions continue.
- Excess crude supply and consequent rangebound (read: cheap) oil help to keep natural gas cheap. North American nitrogen producers' resultant cost of production for gas is still positive.

In the May 2017 issue of *Ag Review*, it was noted that urea fertilizer prices were at or near their bottoms and were not expected to significantly rebound with new production (e.g., U.S. nitrogen capacity) coming online later this year. So far, this near-term outlook has played out as they did not bounce back despite improving grain prices.

The price outlook for fertilizers on export markets remains weak. The season is coming to an end in the U.S., and demand in markets like Brazil is weak as well. While prices barely manage to stay at current levels, there is enough time for the supply chain to get organized for when farm-level demand picks up two months from now. In India, the market is still awaiting any news/announcement on the next tender.

Relative to the lower fertilizer prices, shares of the industry remained relatively stable. Their ability to continue this pattern will be tested with the next set of quarterly earnings (starting in early August) as will the extent they reflect a continuing weak product price environment.

### Fertilizer Prices versus Industry Performance

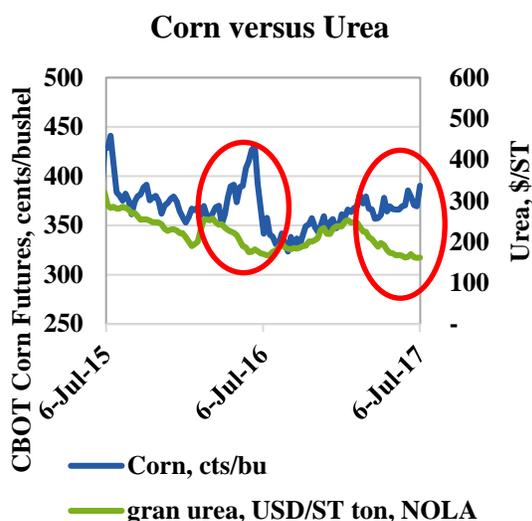


Source: CSI datasystems, WPI analysis. The Index is the unweighted average of PCS, Agrium, Mosaic and CF.

### Near-Term Grains versus Fertilizers

In years past, fertilizers would pretty much rally with each grain rally. So far, that's not happening this season with corn, soybean and wheat prices steadily improving on the back of unfavorable weather conditions and a tightening balance

sheet, especially for wheat. Some sources in the fertilizer industry aren't convinced this grain-fertilizer correlation will come back as strongly as it has before with the surplus in nitrogen (coming) online in the U.S. and globally. World capacity in all nitrogen products has increased substantially over the last several years, and it has caused many to take a fundamentally bearish stance toward the fertilizer industry's near-term outlook.



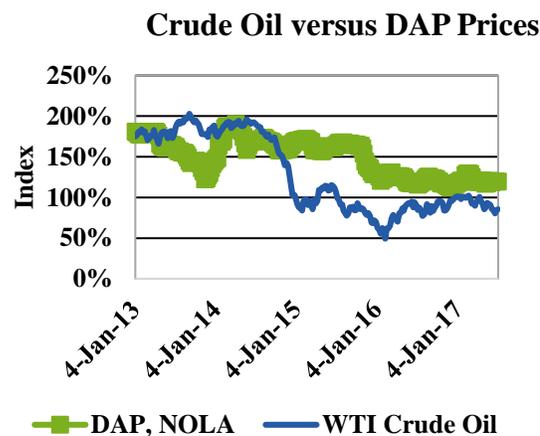
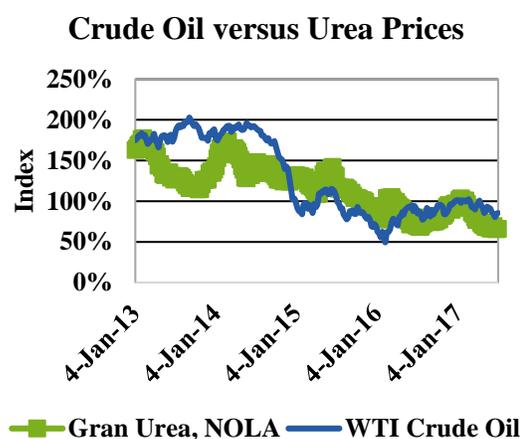
Source: CME, CSI data, WPI analysis

The very same “urea versus corn price-divergence” occurred last year. As corn jumped briefly to peak in mid-June 2016, urea drifted lower. They resumed their relationship by the end of August. It could be said that urea prices did not and still don't care for weather scares in corn and are only willing to move along if corn's move higher proves to be more than just a four-week blip. If this were to happen again, prices may rise in four-six weeks.

### Crude Oil versus Fertilizer

The crude oil market found a floor and has bounced back somewhat since then. Although several major financials firms, including Goldman and SocGen, recently cut their three-

month targets for WTI, they all seem to anticipate more upside and have it ending around \$50. This would be supportive for fertilizers. At the same time, however, the relatively stable crude price that the market has had for more than a year will do its part to keep natural gas and nitrogen production costs low. Using an oversimplified example for the sake of illustration; natural gas at \$3 would put cash production costs for urea at \$100/ST, thereby encouraging North American nitrogen manufacturers to keep producing at current fertilizer price levels. Margins may be contracting, but they are still far from red.



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

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# POLICY TRENDS

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By Gary Blumenthal

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

- The sector continues to innovate from production through retail.
- GDP growth remains solid and respectable.
- The U.S. legislative agenda appears limited.
- When things are going well, be wary of potential turns for the worse.
- Loss aversion typically wins out over opportunism.

### Economic Risk

**T**he *Wall Street Journal* reports on someone who has placed a \$260 million bet that the volatility options index (VIX) will increase above its current historic lows sometime in the next few months. From a bear perspective, it is not difficult to imagine this is a correct scenario. The collapse of the health care reform effort by the Republican-controlled Congress creates doubt about the potential for other large policy reforms. Tax reform in particular should be a concern for the market. The recent reduction in the U.S. gross domestic product (GDP) growth forecast by the International Monetary Fund (IMF) was predicated on the unlikelihood that tax reform and infrastructure investment will become law in Washington. Even more consequential would be a failure by the Republican-led Congress to raise the nation's debt borrowing ceiling by the deadline of early to mid-October.

There are also countless global risks. Venezuelan President Nicolás Maduro's removal of opponents from the Constituent Assembly is likely to spark violence in a nation with the world's largest oil reserves. Elsewhere, there are countless opportunities for miscalculation by political leaders, including Vladimir Putin, Xi Jinping and Donald Trump. Even areas where the IMF seems content (i.e., economic growth in Europe) could easily lose their luster. Gene

Frieda of PIMCO argues that the current scenario of low consumption growth in Germany and the Netherlands coupled with the burden of slow growth and high debt by the eurozone's peripheral members is unsustainable.

Then there is the bullish view that the world will continue as it has been with world GDP at a respectable 3.5-3.6 percent annual pace amidst relatively manageable kinetic conflicts. Republicans were divided on health care, but they could show more unity on tax reform and push through at least modest restructuring via the planned backdoor method (using a simple majority vote to attach it to the reconciliation measure that conforms spending with the budget).

If nothing significant arises out of the U.S. Congress in the next few months, markets will become more anxious. The Democrats will be favored in the 2018 mid-term elections, and even the liberal *Washington Post* was dismissive of the party's most recent legislative agenda. According to the newspaper's editorial board, the Democrats' new plan to "delegitimize" capitalism "seems better calculated to placate the party's ascendant left than to start a serious policy conversation." They rehash ideas that Donald Trump has embraced and ultimately say nothing about trade.

## Farm Policy

A key question is whether a dysfunctional U.S. Congress can handle next year's reauthorization of farm programs any better than it has other matters. Notably, the effort to pass a farm bill in 2012 failed in the House amidst an effort to separate domestic food assistance (SNAP) from farm programs. As a result, the 2008 Farm Bill was extended to 30 September 2013, but the House then again failed to pass a bill that year. Finally, a new farm law was successfully enacted on 20 February 2014.

Congressional leaders have vowed not to repeat that time-consuming and unproductive experience. They started discussing a 2018 bill in 2016 and have held nearly 20 hearings this year (combined House and Senate) in preparation for actual legislation. The bottom line is no loss of crop insurance benefits, but farm groups and their proponents on Capitol Hill have higher aspirations than that – they want increases.

To meet budget limits, the existing subsidies under the Price Loss Coverage and Agriculture Risk Coverage programs adjust with the market over time. The current bear market will thus squeeze the subsidies smaller, and producers are seeking formula adjustments to reverse the trend. There is also the goal of improving protections for dairy and cotton. The fact that the latter two commodities could obtain relief via the current appropriations process might signal favorable terms next year in the farm bill authorizing process, although that is not absolute. Part may depend on whether higher order legislative vehicles (e.g., tax reform, health care, infrastructure) are still sucking up all the political oxygen.

Notably, the effort to increase U.S. farm subsidies runs completely counter to efforts by the EU, Brazil and others to impose more disciplines at the upcoming WTO ministerial in Buenos Aires. The demand for more American subsidies also comes during a U.S. complaint against China in the WTO that Beijing excessively subsidizes its farmers.

More subsidies at the production level will unlikely mean much to intermediate firms. Amid the bear market, they are scrambling to restructure by cutting staff, travel and entertainment budgets. Robert Moscow of Credit Suisse warns that there is no evidence that the grain trade industry can cut its way to success. He warns against sacrificing its core advantages involving “management talent and deep geographic coverage to leverage their information advantages globally and manage risk.”

## Food Market Risk

Developments downstream in the food market are even more rapid and interesting than those at the commodity level. Mega online retailer Amazon would likely be shut down in Europe as monopolistic for its current effort to become the largest of the so-called grocerants. First it purchased the bricks-and-mortar, high-end food retailer Whole Foods, and now it is set to launch its new meal-kit delivery service with the trademarked tag line, “We do the prep. You be the chef.”

Conventional food retailers are sour bets as the same dynamic that propelled the craft beer market to double-digit annual growth and a nearly 15 percent market share cascaded next to spirits and now to food. The conclusion based on the Blue Apron initial public offering and now Amazon's investment is that the meal-kit movement is a trend and not just a fad. This means it will grow well beyond the current \$5 billion in sales. It offers two seemingly contradictory things that consumers crave – convenience and control. Still unclear is how it will deliver on two other demanded factors - food safety and transparency (labeling).

Appealing to consumers' professed wants versus their proven needs is not without risk. Recall that consumers said they are concerned about animal welfare and wanted cage-free eggs. Food retailers said they would offer them. However, there is now a bloodbath for producers as consumers show their unwillingness to pay the \$1.25- 1.50 premium per dozen over regular eggs that it costs

to produce them. According to a survey conducted by ORC International, consumers are concerned about how chickens are raised but price, taste and freshness all rank well ahead of that among the attributes considered important when buying poultry products at restaurants and in grocery stores.

## **Food Safety**

The fast food chain Chipotle Mexican Grill captured market share from rivals by claiming to be “Food with Integrity,” which implies that other restaurants are dishonest. Thus, there was much gloating by competitors when it once again suffered a foodborne illness problem (norovirus), and its stock took a resulting drop in value. Then there were claims of rats in a Dallas Chipotle restaurant, and the stock fell further.

The restaurant industry is squeezed between fickle consumers, political demands for healthier food fare and higher wages. However, these demands are loaded with potential pitfalls. Research by Subir K. Chakrabarti (Indian University), Srikant Devaraj (Ball State University) and Pankaj C. Patel (Villanova University) examined the effect of minimum wage levels on foodborne illness rates at restaurants. They found that for every \$0.10/hour increase in the mandatory wage, there is a corresponding 11.45 percent rise in the incidence of hygiene violations. To contain costs, restaurant managers are increasing the number of chores on fewer staff and thus raising the error rates.



*At the Nexus of Markets and Policy*