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U.S. Meat Exports – Macroeconomic Opportunities and Political Risks

U.S. Soybean Crushing Outlook

Fertilizer Prices and Company Stock Prices Rally

The Growing Investment in the Agrifood Industry

WORLD PERSPECTIVES: AG REVIEW

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CONTENTS

WPI AGRIBUSINESS SUBSECTOR OUTLOOK..1
A brief review of WPI's past Bull/Bear calls and industry stock price performance.

WPI BULL/BEAR LEANINGS FOR AGRIBUSINESS 3
A summary and graphical depictions of WPI's expectations for future agribusiness performance.

THE U.S. GRAIN INDUSTRY...5
Grain prices remain stubbornly low and without volatility, making trading opportunities few.

U.S. OILSEEDS PROCESSING OUTLOOK..9
Soybean crush margins face support from low soybean prices but pressure from falling product values.

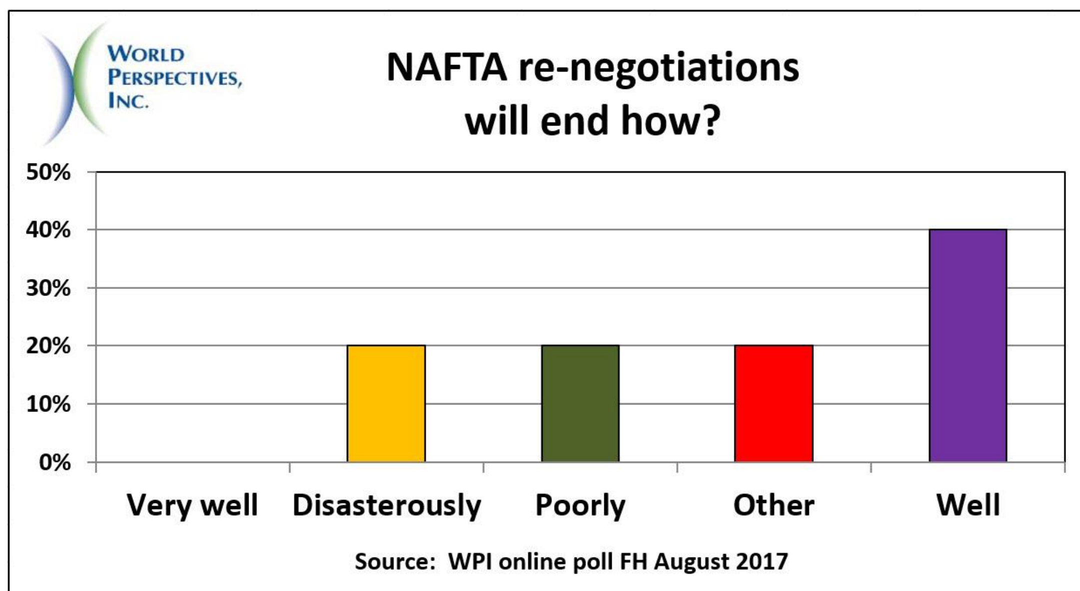
THE U.S. MEAT PACKING INDUSTRY 12
Export sales are more important than ever for meat packers and poultry companies, but will they survive trade policy risks?

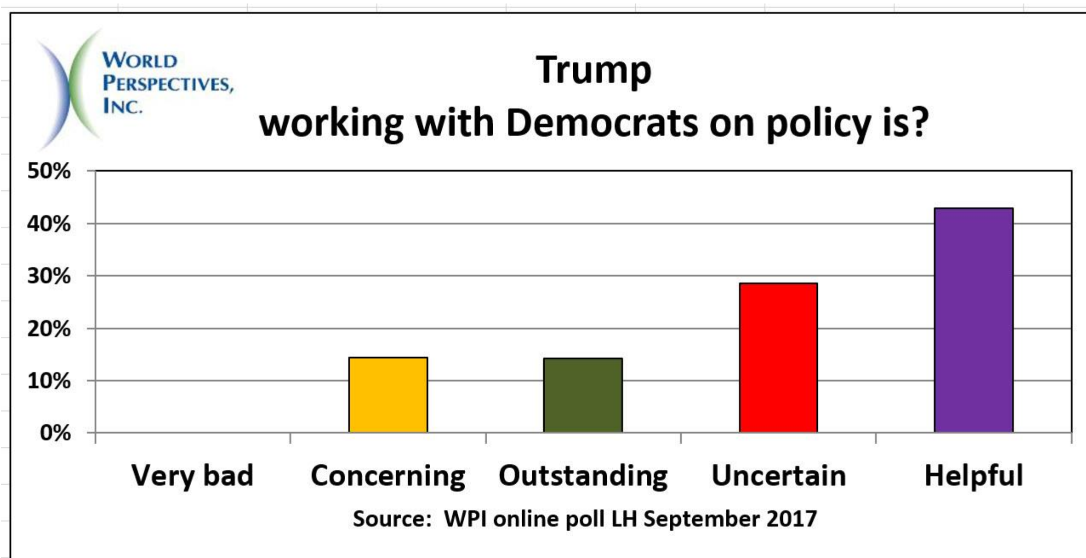
FARM INPUTS...20
Improvement in fertilizer prices will bring higher earnings for companies in the industry.

POLICY TRENDS..23
Agrifood is attracting technology investment despite low commodity prices, and it is notable where the efforts are headed.

WPI POLLING

Below are the results of two recent WPI polls. Visit www.worldperspectives.com to cast your vote in our current survey.





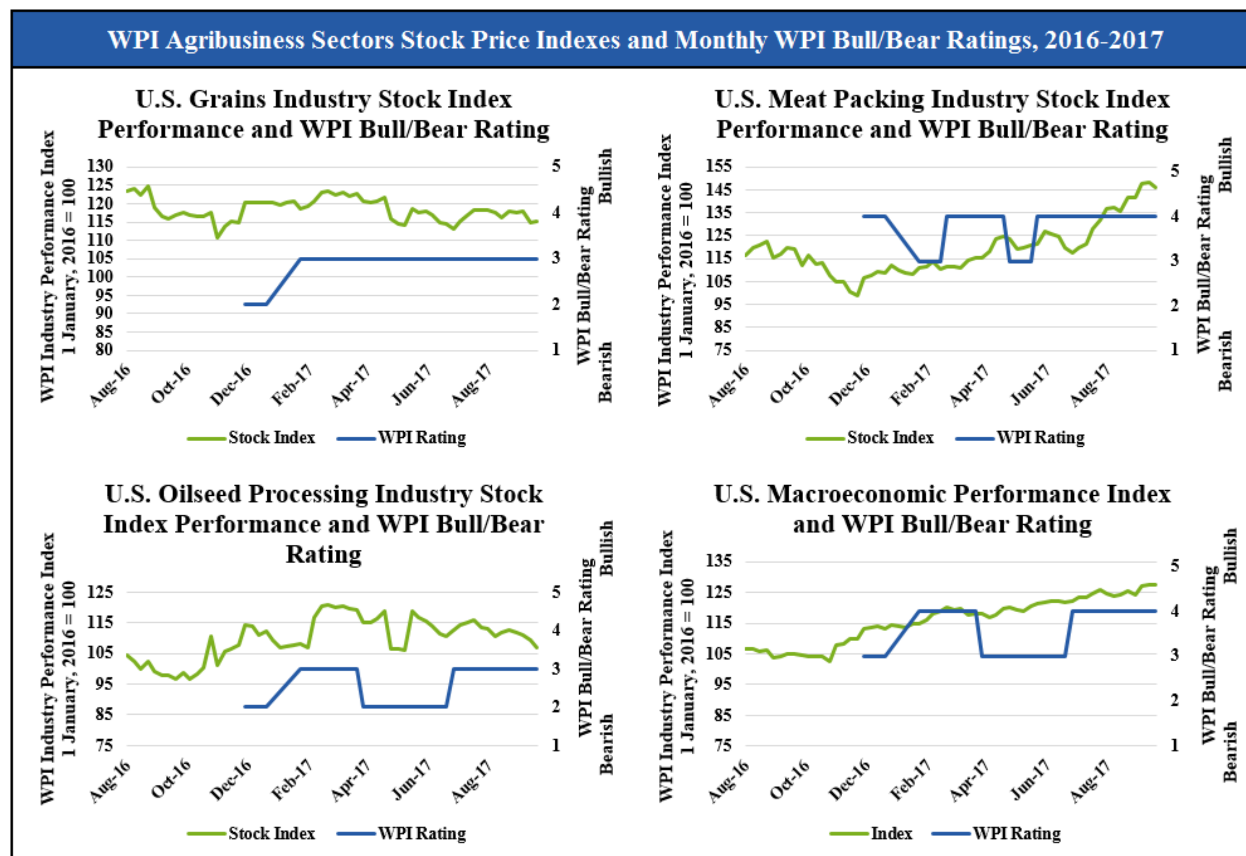
WPI AGRIBUSINESS SUBSECTOR OUTLOOK

By Matt Herrington

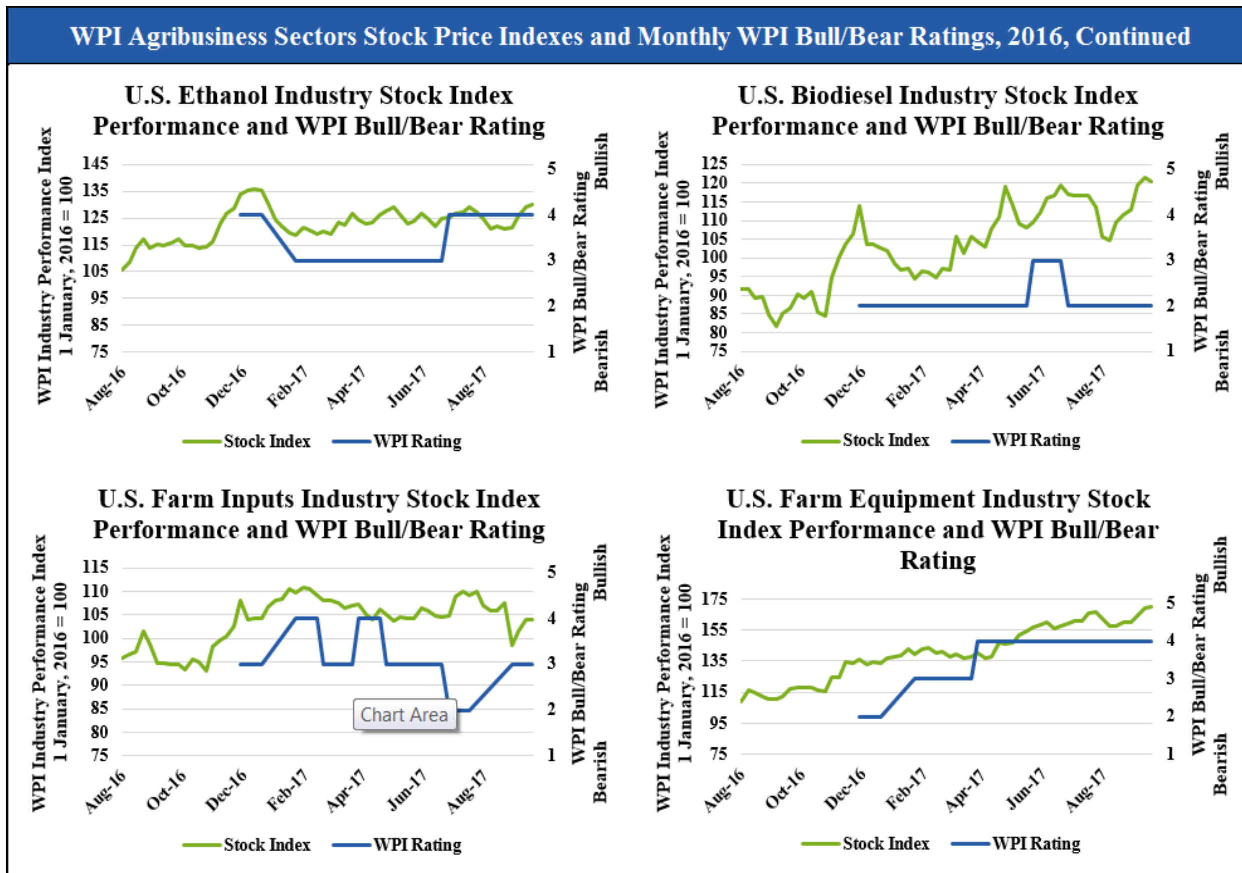
The global economy continues to improve, and equity prices have gone higher despite high valuation. Since the July issue of *Ag Review*, the S&P 500 is up nearly 3 percent while the Dow Jones 30 is up 4.6 percent. Political dynamics around the world have been testy, to say the least, and the U.S. dollar index is off 4.3 percent.

WPI's Agribusiness Sectors Indexes have been largely positive since July. The WPI Meat Packing Industry Index rose 16.8 percent on the back of better-than-expected earnings, and the Ethanol Industry Index industry jumped 6.9 percent. Farm equipment makers share prices have risen on concentrated diversification efforts, pushing WPI's index 9.3 percent higher.

WPI is still cautious regarding political risks, both foreign and domestics. President Trump maintains a semi-combative relationship with Congress despite his recent "deal" with the Democrats, and the Republicans seem unable to repeal and replace Obamacare. Internationally, North Korea seem to get bolder every day, but markets seem to have shrugged this off until real action (positive or negative) occurs.



Source: WPI



Source: WPI

WPI BULL/BEAR LEANINGS FOR AGRIBUSINESS

By WPI Staff

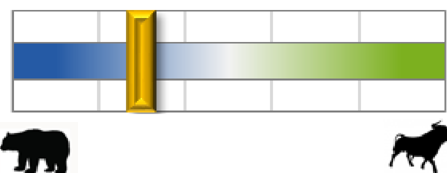
Industry	WPI Industry Bull/Bear Rating	Predominant Influencing Factors
Grains		1) Grain prices remain stubbornly low and without volatility, making trading opportunities few. 2) The U.S. dollar's multi-month slide should support exports, though Brazilian crops have the present advantage. 3) The grain industry is facing a supply situation vastly different from recent years. How individual firms manage the situation will determine their success.
U.S. Oilseed Processing		1) Low soybean prices are supportive for margins, and the price outlook is for more of the same. 2) The U.S. antidumping/countervailing duties on Argentine biodiesel should be supportive for soyoil prices. 3) The U.S. EPA's review of biofuels policy caused soyoil prices to sink, eroding margins. 4) Agribusinesses in the soybean processing industry should see steady margins in the near term.
Farm Inputs		1) Nitrogen and DAP prices have improved along with considerably higher nitrogen prices. 2) The industry share price index has improved, bringing the North American fertilizer industry index back to levels of two months ago. 3) Upcoming earnings reports will likely benefit from the improvement in fertilizer prices. 4) This benefit may be lowered by nitrogen supply additions that will pressure prices.
Meat & Livestock *Packers*		1) Feed costs are low, and herds and flocks are expanding. 2) Domestic demand is strong, and volumes of beef and pork are offsetting lower prices while broiler prices remain strong. 3) Exports are reaching record levels as global demand grows, especially with economic expansion in key markets. 4) The value of the U.S. dollar has weakened this year, offsetting (at least partially) tariff as well as other costs and keeping U.S. exports competitive.
Cow/Calf Operations		1) Feed costs remain low and supportive for operational profits. 2) Poor pasture conditions and an expected hard winter will increase feed needs/costs. 3) Feeder calf prices should allow for near breakeven profits, but downside risks remain. 4) WPI forecasts most cow/calf operations will breakeven on their 2017 calf crop.

Policy Factors

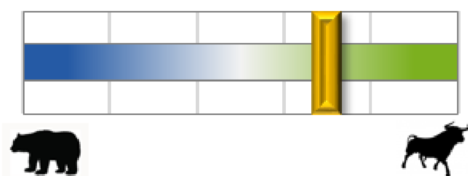
1) Investment in agrifood is growing rapidly.
2) The food industry is increasingly reliant on technology, but brick-and-mortar stores still reign supreme.
3) Consumers view technology as providing enough benefits to compensate workers for lost opportunities.

WPI Bull/Bear Ratings for Policy Factors Influencing Agribusinesses

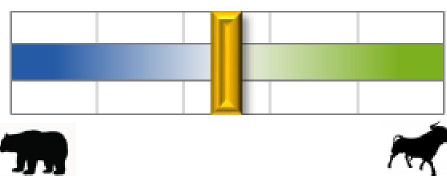
Macroeconomics



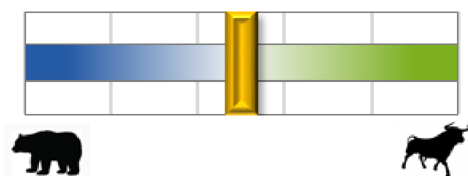
Trade Policy



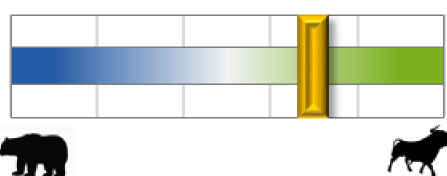
Agricultural Policy



Food Policy



Geopolitics



THE U.S. GRAIN INDUSTRY

By Robert W. Kohlmeyer

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

- Grain prices remain stubbornly low and without volatility, making trading opportunities few.
- The U. S. dollar's multi-month slide should support exports, although Brazilian crops have the present advantage.
- The grain industry is facing a supply situation vastly different from recent years. How individual firms manage the situation will determine their success.

It goes without saying that there cannot be a grain industry without grain. How much will be available in the U.S. for the 2017/18 crop cycle remains an unanswered question. The fall harvests for corn and soybeans will soon get underway in the main production areas of the Midwest. Meanwhile, until actual harvest results can be measured and analyzed, the size of those 2017 crops remains the subject of considerable debate within the grain industry. We cannot recall a recent year when there were such wide differences of opinion about crop production prospects this close to the actual harvest.

The difficulties in developing a good sense of what U.S. corn and soybean production will be in 2017 stems from the widespread variations in weather patterns that the central Corn Belt experienced during this spring and summer. Not only did almost all portions of that region experience periods that were too wet, too dry, too hot, and too cool, there were also important geographic variations in weather from east to west and north to south. If there is one general similarity, it is that total rainfall for the heart of the Corn Belt – Iowa, Illinois, and Indiana – during the last half of July through September was below normal. Some areas did receive rains at key times for crop development, but others did not. Consequently, there is a general sense that most of the corn and soybeans crops have grown and developed under less-than-desirable conditions, certainly less so than last year's near-perfect growing season that achieved record-high national average yields for both crops. This feeling has been supported by USDA's weekly reports crop conditions, which have consistently been well below last year. This has led to an almost unanimous conclusion among private analysts that corn and soybean yields for 2017 will fall noticeably below 2016's record levels.

USDA's National Agricultural Statistical Service (NASS) did not add much clarity to the situation with its August yield and production estimates. It had U.S. corn production in 2017 at 14.153 billion bushels (about 1 billion bushels less than last year) and the national average corn yield at 169.5 bushels per acre (BPA). That would be about 5 BPA less than last's extraordinary record, but it was 3.5 BPA more than the average pre-report guess and, in fact, above the highest published private estimate. NASS estimated soybean production to be 4.381 billion bushels, about 75 million more than last year, and the national average yield at 49.4 BPA, 2 BPA higher than the consensus trade expectation. The NASS yield and production estimates were met with considerable skepticism. Nevertheless, they generated an immediate bearish reaction that drove corn and soybean futures sharply lower, a reaction from which markets have yet to recover.

Conclusions from various private crop surveys have also varied widely. In the September WASDE, NASS reported a national average yield

of 169.9 BPA for corn and 49.9 BPA for soybeans. The trade was fully expecting a *decrease* from the August report, but the yields were boosted on higher ear counts for corn and higher pod weights for soybeans. The markets reacted negatively and will maintain a bearish sentiment until there is actual harvest data as well as NASS's October estimates. The coming WASDE yield projections will be based on corn ear weights, soybean pod counts and results from NASS's own test plots, giving the grain industry a good sense of the crop sizes. For now, about all that can be said is that the U.S. corn crop will probably be 7-10 percent smaller than last year's record and the U.S. soybean crop will be relatively close to that of last year, thanks to its increased acreage.

The U.S. wheat harvest is over, and the final production estimate will be included as part of USDA's annual Small Grains Summary, which will be released in late September. USDA's latest 2017 wheat production estimate is 1.739 billion bushels, making this the smallest U.S. wheat crop in many years. This is mostly due to the small amount of planted area, but the crop was also challenged by less-than-desirable weather conditions, especially the drought that has plagued the hard red spring wheat (HRS) crop in the Dakotas and eastern Montana since June. Most recently, NASS estimated U.S. HRS production at 364 million bushels, down about 130 million from a year ago. That number is likely to fall further as estimated harvested acreage is reduced by fields that were grazed out or abandoned.

Despite the unanswered questions about the size of the corn and soybean crops, there is no anxiety about the adequacy of supplies. The 2016/17 harvest carryovers to the 2017/18 crop year are relatively large, certainly sufficient to ensure that total available supplies will be at a comfortable level. Even in the case of the very small U.S. wheat production this year, the overall supply situation should be more than adequate because of the large stocks carried over. The volume carried into 2017/18 is almost 70 percent of the year's estimated production.

More Volatility, Please

The last three crop cycles have featured growing U.S. and world supplies of grain and oilseeds as well as rising demand, especially for soybeans. A big supply, big demand scenario would seem to be exactly what large integrated grain companies and processors like to see. It would suggest that operating and processing margins should be relatively wide, particularly for firms with multinational operations and facilities that could take advantage of increasing supplies and demand around the world.

However, things did not quite work out that way. There were multitudes of trading opportunities, but the ability to earn margins from them tended to be lessened by a lack of price movement and the low level of market volatility. Grain and oilseed prices fell to relatively low levels in terms of U.S. dollars, and they basically stayed that way for the most part. Moreover, the U.S. dollar strengthened in value against most other currencies in 2016 and the first half of 2017. Exports from other grain-exporting countries such as Brazil, Argentina, Russia, Ukraine, Canada, and the EU were priced in USD, but the payments to local farmers were in local currency. Thus, as the U.S. dollar grew stronger against those local currencies, the more farmers received in Brazilian reals, Russian rubles, euros, etc. Besides making U.S. exports higher-priced to overseas buyers, the strong U.S. dollar encouraged farmers in other countries to expand production to take advantage of the higher prices they were receiving, creating more competition for U.S. grain exports.

Another aspect of this situation was the complacency of world buyers and users of grain and oilseeds. Knowing that prices were likely to stay low and that available supplies in exporting countries were quite large, buyers saw no reason to cover their longer-term needs. Many simply purchased on a short-term, as-needed basis, which limited trading opportunities for suppliers. A notable exception was China. For reasons not always market-related, some Chinese soybean buyers did make deferred purchases of U.S. and South American stocks.

The fiscal 2016 financial results of the large multinational trading companies reflected dampened trading opportunities and could generally be described as mediocre. So far in fiscal 2017, their financial reports have been mixed, although they collectively appeared to be somewhat better than for 2016. Apparently, these companies were better able to cope with the lack of market volatility and take better advantage of opportunities when they did appear.

During the 2016/17 crop cycle, the volume of U.S. exports of corn, soybeans and wheat were all quite good. In fact, they turned out to be much better than originally expected despite large production in a number of other competing countries. Prices for U.S. corn and soybeans were competitive with other origins for most of the crop cycle. Even U.S. wheat prices were competitive with offerings from the Black Sea region, the EU and other wheat exporters during the last several months of 2016/17.

Export opportunities should continue in 2017/18. Brazilian corn will probably compete through most of the balance of the year, but U.S. corn should take over thereafter. U.S. soybeans should remain price competitive with Brazil and Argentina, at least until March/April 2018 when the new South American soybean crop becomes available, and perhaps beyond that.

Despite the small wheat crop this year, U.S. wheat should continue to be a factor in world wheat trade. Russia has about finished the harvest of an enormous crop that appears to be in excess of 80 MMT, a record by far. However, every other major wheat-exporting country will produce smaller crops in 2017/18 due to a variety of weather issues. Transportation and other logistical constraints are likely to limit Russian wheat exports to around 30-32 MMT, only slightly higher than the total for 2016/17. This should offer the U.S. an opportunity to increase its wheat exports and market share this year. Moreover, the world's supply of high quality milling wheat will tighten considerably this year, and the U.S. will be a major source of it for world buyers.

Looking Ahead

The U.S. dollar's long-term rally against other currencies peaked in early 2017. Since then, it has been in serious retreat and is currently trading at its lowest level in well over two years. The reasons for this are varied and complex, including political turmoil in the U.S.; relative improvement in the economies of a number of developed and developing countries; and tensions arising over North Korea's expanded nuclear capacity. The U.S. dollar rallied after the Fed confirmed it would leave rates unchanged in its September meeting, but the long-term downtrend remains deeply entrenched.

U.S. Dollar Index Weekly Chart
May 2015 - September 2017

Source: DTN ProphetX

The weaker U.S. dollar will create a different environment for grain traders and users. Exactly how it will play out is difficult to predict, but it will at least make U.S. export prices for nearly everything more attractive to foreign buyers.

Aside from answering the questions about the size of U.S. corn and soybean production this year, the next potentially important factor for grain and soy markets will be the prospects for Brazilian and Argentine production in 2017/18. Planting of those crops will begin in just a few weeks. Brazil harvested record-large soybean and corn crops for 2016/17, and Argentina produced fairly good, although not record, crops of both as well. It seems rather unlikely that Brazil will duplicate last year's huge production, and the weakening U.S. dollar/stronger real offers no incentive for farmers there to expand planted

area. But if weather cooperates, Brazil could again produce large crops. Markets will focus on South American weather from November through January/February. Any sign of an unfavorable weather pattern that could harm production prospects would almost certainly promote a solid rally for U.S. futures prices.

There are enough changes in the air to suggest that 2017/18 may different for the grain industry. It could possibly break out from the low-price environment that has prevailed. Domestic and overseas demand prospects appear to be quite good, and the U.S. grain industry should be in position to take advantage of that. It is certainly possible, perhaps even likely, that the long hoped-for increase in market volatility will emerge in 2017/18.

U.S. OILSEEDS PROCESSING OUTLOOK

By Matt Herrington

Top Four Reasons WPI is Neutral the U.S. Oilseeds Processing Industry

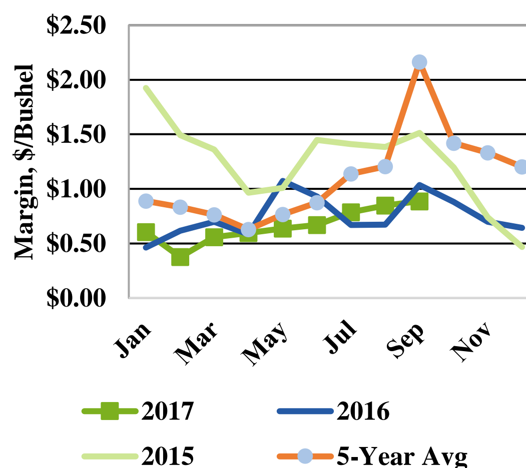
- Low soybean prices are supportive for margins, and the price outlook is for more of the same.
- The U.S. antidumping/countervailing duties on Argentine biodiesel should be supportive for soyoil prices.
- The U.S. EPA's review of biofuels policy caused soyoil prices to sink, eroding margins.
- Agribusinesses in the soybean processing industry should see steady margins in the near term.

In the September WASDE, USDA predicted 4.395 billion bushels of soybeans would be produced given a U.S. national average yield of 49.5 bushels per acre (BPA). To calculate the yield, USDA used a pod weight that was significantly above historic norms. The market's view is that maintaining such a weight into the "final" October yield estimate is unlikely. Accordingly, downward revisions are expected, although not to a level that will create a tight-supply situation.

USDA lowered its average on-farm soybean price $0.10/bushel in the September WASDE, a sign that large supplies will take their appropriate toll. WPI maintains a lower yield forecast (49.5 BPA) and a soybean export forecast that is 50 million bushels larger than USDA's. As such, WPI's price forecast (based on historic ending stocks/use and price relationships) is $9.90/bushel, $0.70/bushel higher than USDA's forecast. WPI expects soybean prices to remain on the defensive through the fall and winter and then increase heading into the spring, leaving opportunities for crushers to maintain margins early in the crop year.

U.S. Soy Crush Margin Outlook

The futures-implied soybean crush margin has been largely stable but slowly rising during 2017. Having hovered near $1.00/bushel since July, it is approaching its seasonal decline into the fall. The U.S. harvest will continue to pressure soybean prices to the benefit of crushers.



Source: USDA, World Perspectives, Inc.

However, with soybean futures near multi-year lows and weather issues in South America, it is doubtful whether prices will move substantially lower. Accordingly, the ability of crushers to maintain current margins or push them higher will largely depend on product prices.

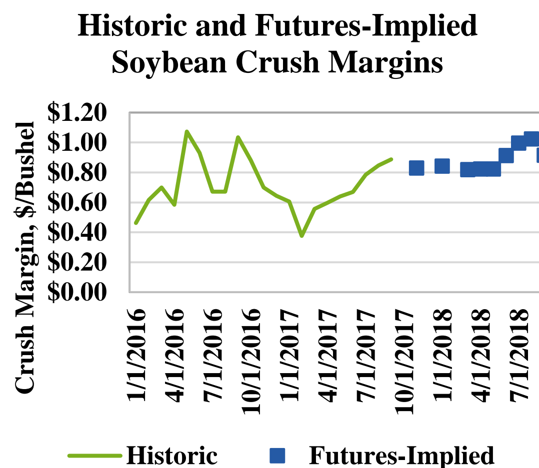
Both soymeal and soyoil futures remain in long-term downtrends with some bullish support building over the summer. From a fundamental standpoint, soyoil should receive a demand boost from the U.S. antidumping and countervailing duties on Argentine biodiesel imports, which will pull more U.S. soyoil into biodiesel production. However, the EPA recently muddied the outlook for soyoil demand by announcing a possible reduction in the renewable fuels obligations for biodiesel. Soyoil futures fell $0.50/cwt the day of the announcement. The news pushed soyoil below key support points and will keep the market under pressure in the near term.

Soymeal should also receive a demand boost from increased livestock inventories. The June Hogs and Pigs report from USDA showed the nation's hog inventory to be the largest in history. While hog market dynamics may encourage producers to feed animals to lighter weights, the overall inventory numbers are supportive for feed demand from the sector. Expansion in the beef and poultry sectors will further support soymeal demand, but a fully bullish outlook is not yet offered for soymeal due to the 2 percent production increase that USDA currently forecasts.

The outlook for U.S. soybean crushing margins is neutral-to-bullish given the demand situation facing the industry. The futures market offers a similar outlook with the futures-implied crush margin remaining under $1.00/bushel until July 2018. As such, how individual companies manage their crushing operations will ultimately determine the profitability of the sector.

Global Soy Complex Dynamics

Of course, the U.S. soybean crushing industry does not exist in isolation. It is subject to the influences of global markets, and the profitability of U.S.-based companies is often determined in destinations far from Midwest crop fields. Of particular concern this year are the dynamics in South America and China, where supplies may be tightening and demand may be waning, respectively.



Source: USDA, DTN, World Perspectives, Inc.

Brazil has been under abnormally hot, dry weather that is delaying the country's soybean planting. The nation has planted only 0.3 percent of the expected 2017/18 area versus 5 percent last year. Farmers have delayed seeding operations in hopes of more favorable weather that would reduce the possibility of replanting. USDA estimates Brazil's soybean crop will reach 107 MMT in 2017/18, down from 114 MMT the year prior. At the moment, the planting delay is not sufficient to cause worries about reduced production prospects. However, should the delay continue and the anticipated La Nina weather pattern develop, both could threaten the country' soybean crop.

Higher soybean prices have eroded Chinese crushing margins this fall. Despite buying large volumes from the U.S. PNW, which are at a $0.30-0.40/bushel discount to U.S. Gulf or Brazilian-origins, Chinese crush margins have traded both sides of their break-even value in the past few months. China's soymeal stocks are falling due to limited crushing interest as prices are nearly RMB 200 higher than they were a few months ago. Soyoil prices in China have been rising steadily since the spring but are still RMB

1,000 lower than their three-month high set in the fall of 2016.

Predicting Chinese soybean crushing margins is seldom easy, but some signs are pointing to improvement in the sector. Vessel lineups are indicating that China's annual soybean imports for 2016/17 could reach as high as 93.5 MMT, 1.5 MMT more than USDA's projection. Given the vessel lineup activity and PNW exporters' reports hinting of significant Chinese interest in November and December purchases, it is likely that Chinese soy crush margins will improve heading into the fall. This should create an overall positive effect for the global soy complex, including U.S. soy crushers.

Implications for U.S. Agribusinesses

A steady/modestly bullish outlook is offered for U.S. agribusinesses in the soybean crushing industry. Crushing margins should at least remain stable, if not rise in accordance with the upside potential that exists in the market. Agribusinesses should maintain profitability on crushing operations, if not increase revenues through shrewd management.

THE U.S. MEAT PACKING INDUSTRY

By Dave Juday

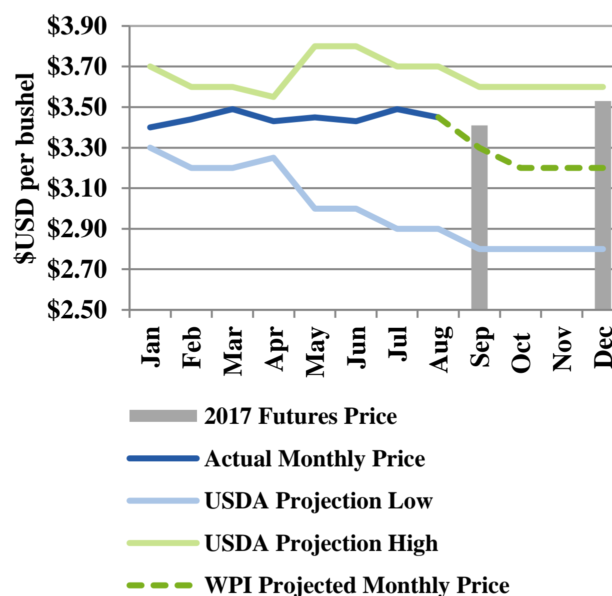
Top Four Reasons WPI is Bullish the Biofuels Sector

- Feed costs are low, and herds and flocks are expanding.
- Domestic demand is strong, and volumes of beef and pork are offsetting lower prices while broiler prices remain strong.
- Exports are reaching record levels as global demand grows, especially with economic expansion in key markets.
- The value of the U.S. dollar has weakened this year, offsetting (at least partially) tariff as well as other costs and keeping U.S. exports competitive.

For the first half of 2017, exports were more important than ever for meat packers and poultry companies. All the available data indicates beef, pork and broiler exports during that period exceeded year-ago levels. Those global sales not only moved additional volume, but they also supported margins. Following is a look at what is driving these exports as well as the risks posed by the Trump administration's trade agenda to the new export era.

Economic Background

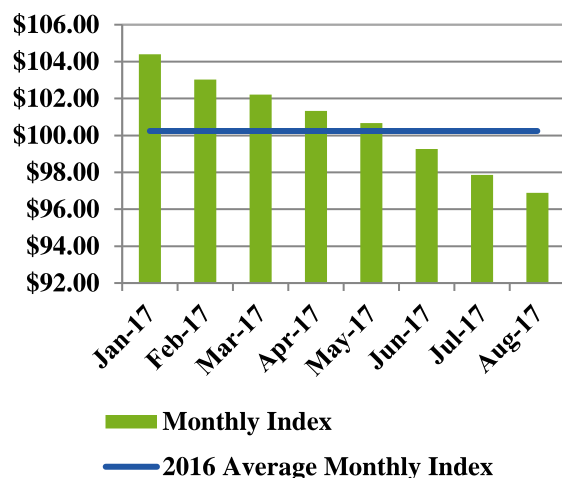
Record corn production last year and another expected bumper crop this year have brought down feed costs for livestock and poultry producers. Monthly average corn prices through August were about 3.5 percent lower versus a year ago. Although August prices were higher, all other months came in below the previous year with June's 10 percent below the same month in 2016. The corn outlook for the remainder of the year is bearish. USDA's September WASDE forecast production at 14.185 billion bushels, a supply big enough to boost ending stocks to 2.335 billion bushels. The combined effect should keep a lid on corn prices or even push them down in the last quarter of the year.



Source: USDA, CME Group, WPI

Cheap feed this year has fueled expanding herds and flocks, which in turn have increased meat and broiler production compared with last year. During January-June, beef, pork, and broiler production were up 4.1 percent, 2.3 percent, and 1 percent, respectively. While growing supplies helped push down beef and pork prices, foreign exchange rates have been a factor in making U.S.

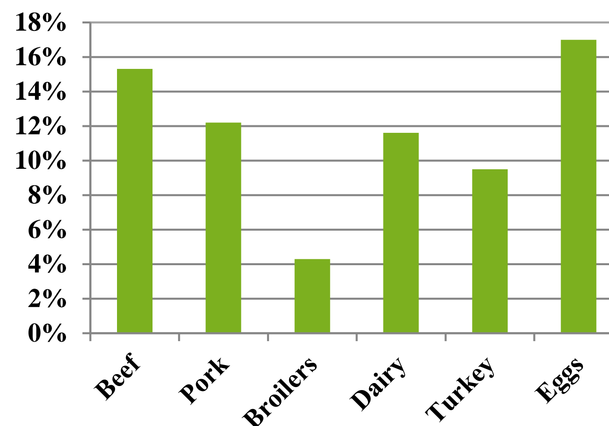
meat and poultry steadily cheaper in local foreign currencies so far this year. According to the Federal Reserve's Price-Adjusted Broad Dollar Monthly Index, which is a weighted average of the foreign exchange values of the U.S. dollar against the currencies of a group of trading partner, the USD fell 5 percent in the first six months of the year.



Source: U.S. Federal Reserve, WPI

On the demand side, the global economy has been performing well. Merchandise trade volumes are up this year across the board except in the automobile sector. The latest WTO data puts the World Trade Outlook Indicator (WTOI) index at 102.6 for August. An index of 100 indicates trade is on trend, while below 100 signifies it is contracting below trend and above 100 that it is expanding above trend. It's noteworthy that among all agricultural commodities, the WTOI is slightly contractionary at 98.8 but was higher than July's index of 95.

More specifically, gross domestic product (GDP) growth has been strong among some significant meat and poultry importers, especially the top two markets for U.S. animal agriculture products, Japan and Mexico. Japan has been the largest importer of U.S. beef this year, and Mexico has been the top market for all other animal products. Besides beef, pork and broilers, exports of all U.S. animal products are up versus last year.



Source: USDA, WPI

Indeed, Japan's second quarter GDP growth was the fastest in over two years, driven by consumer demand and expanding at an annualized rate of 4 percent versus 1.5 percent in the first quarter. In Mexico, economic growth has been faster than had been forecast. While slowing slightly in the second quarter compared with the first quarter, it has generally exceeded expectations. On 8 September, the finance ministry presented the Congress there with a budget that projected an annualized rate of GDP growth of 2-2.6 percent, up from the June forecast of 1.5-2.5 percent.

Trade Policy Threats to Exports

With the strong demand, Japan's frozen beef imports grew so rapidly in the first quarter (up more than 17 percent) that its safeguard mechanism was triggered. This means the tariff rose to 50 percent as of 1 August and will remain so until the end of the Japanese fiscal year on 31 March 2018. The new duties affect about 15 percent of Japan's total beef consumption.

This is the first time the frozen beef safeguard has been triggered since 1996, one year prior to Japan entering several bilateral trade deals (known in Japan as "economic partnership agreements") that excluded some beef exporters from the tariff. For example, Australia, Mexico, and Chile are exempt from the higher rate, although the latter is a *de minimis* exporter. By dropping out of the Trans-Pacific Partnership (TPP) agreement,

however, the U.S. beef sector missed a similar opportunity and is facing a growing disadvantage in its top market from competitors like Australia that do have economic partnership agreements with Japan.

Japan's Import Market for Frozen Beef			
Country of Origin	**Share (Pct.)**	**Tariff Rate**	**Authority for Tariff**
U.S.	33%	50%	Safeguard Mechanism; WTO Uruguay Round
Canada	7%	50%	Safeguard Mechanism; WTO Uruguay Round
New Zealand	4%	50%	Safeguard Mechanism; WTO Uruguay Round
Australia	53%	27.2%	Japan-Australia Economic Partnership Agreement
Mexico	2%	30.8%	Japan-Mexico Economic Partnership Agreement

Source: USMEF, WPI

Because of the U.S.'s trade agreement with Japan that lowered tariffs and its withdrawal from the TPP, which would have matched the tariff schedule afforded the Australians, U.S. beef is at a disadvantage. It was assessed a tariff of 38.5 percent (prior to the safeguard measure), but Australian beef is subject to rates of 27.2 for frozen and 30.5 for chilled. So far this year, higher cattle prices in Australia, lower prices in the U.S., and the depreciation of the U.S. dollar have offset the tariff disadvantage, but those mitigating factors won't last indefinitely.

As stated previously, Mexico is the largest market for all U.S. animal agricultural products other than beef, and the future of that market is dependent upon the contentious NAFTA renegotiation process, that began last month. The outcome of the talks is far from clear at this point. Consider a tweet from President Trump on 27 August that stated, "We are in NAFTA (worst trade deal ever made) renegotiation process with Mexico and Canada. Both being very difficult, may have to terminate?" On one hand, such rhetoric is the classic Trump approach, straight from his book *The Art of the Deal*. On the other, international trade negotiations are not business deals, and it is not as easy to move on to the next deal in diplomacy and trade as it is in Trump's world of real estate investment.

While the U.S. is pulling out of trade deals such as the TPP, Mexico is looking elsewhere, trying to find an opportunity with China and its sphere of trade influence. Earlier this month during the second round of NAFTA talks, Mexican President Enrique Pena Nieto traveled to China to meet with President Xi Jinping and also to join the talks being held by the trade coalition of Brazil, Russia, India, China, and South Africa (BRIC) in Xiamen.

Beyond, NAFTA, Trump has also threatened to pull the U.S. out of the Korea-U.S. Free Trade Agreement (KORUS). Korea routinely is among the top three markets for U.S. meat exports. So far in 2017, it is the second-largest beef market and third-largest pork market. Overall, Korea is the sixth largest-trading partner with the U.S. in terms of goods and services. Its finance ministry is projecting annual growth of 3 percent for this year, which would be the highest since the 3.3 percent rate in 2014. According to Deputy Finance Minister Lee Chan Woo, the growth is "consumption-led," which has helped U.S. exports to date.

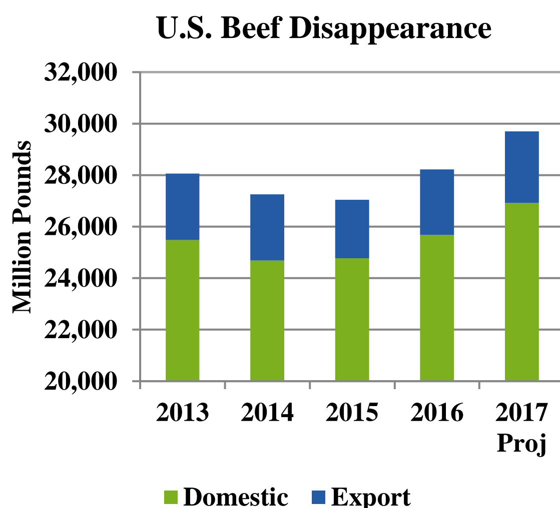
So far this year, four countries have accounted for 73 percent of U.S. beef exports and 72.3 percent of U.S. pork exports: Japan, Mexico, Korea, and Canada. The Trump administration thus far has pulled out of the TPP, which granted improved access to Japan, and started renegotiations and/or threatened to exit the NAFTA and KORUS agreements. Setting aside other trade concerns like automotive products and vehicles, steel, and various manufactured goods and given current market share, this trade agenda is a high stakes strategy that may be limited in the potential net gains for the red meat sector. Broiler exports are

more diverse, being shipped to 110 countries so far in 2017, but these four markets still account for 25 percent of all U.S. exports.

The supply side economics in the U.S. and the demand side economics globally have aligned to be supportive of the U.S. meat and poultry industry and its ongoing expansion. Increased volumes of red meat have more than offset reduced prices, and poultry products are riding strong prices as well as strong demand, especially among traditional markets. Based on these market conditions, USDA forecasts additional growth in 2018 and beyond. However, there is substantial political risk that threatens the continued pace of exports. Current access, trade, tariff deals and other non-tariff barriers could all change, and likely not for the good. Moreover, the risks are virtually impossible to predict.

Beef

To date, 2017 has maintained last year's momentum for the U.S. cattle and beef markets. Domestic consumption is projected to increase 4.8 percent and exports are forecast to rise 8.9 percent this year, and that growth is in addition to the gains made in 2016 of 3.6 percent and 12.7 percent, respectively. This year domestic disappearance of U.S. beef is projected to hit its largest volume since 1999, and exports are expected to have the largest volume ever.

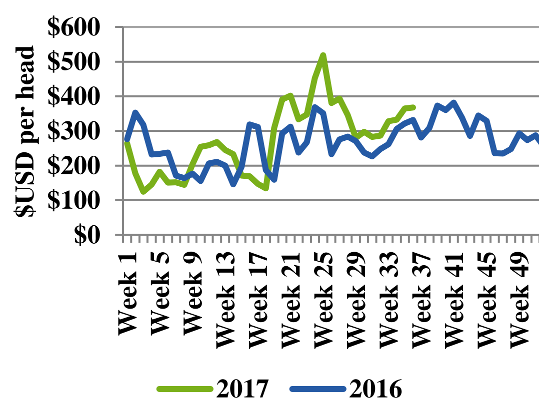


Source: USDA, WPI

There were 1.615 million head of cattle placed in feedlots in July. While that total was up 2.7 percent from July 2016 and 4.4 percent more than July 2015, it was down from June. Given seasonal patterns, July placements almost always exceed June's; the recent exceptions (in addition to this year) were 2005 and 2007. The situation was partly due to big placements in May and June, which pulled cattle forward and left fewer for July placement. June's placements were the highest for that month in 11 years, although it was the month with the lowest placements in the last three years. This shows the robust demand from packers.

On 1 July, the U.S. cattle herd was 102.6 million head, the largest since 2008, which means more are available outside feedlots. With a larger calf crop as well, there are plenty of cattle to be placed on feed through the remainder of 2017 and into 2018.

On top of the cattle inventory situation, USDA's monthly Cold Storage report shows that as of 31 July, beef in U.S. cold storage facilities totaled 430.4 million pounds, 8.4 percent less than last year and 3.1 percent less than the five-year average. This should be positive for packer margins moving forward.



Source: USDA, WPI

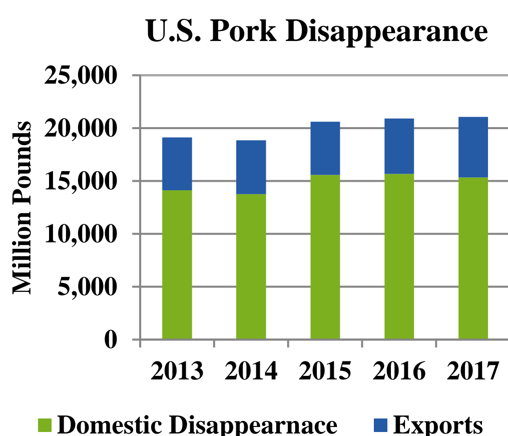
With the large number of feedlot placements and cattle yet to be placed, the more likely outcome is that feedlots will be aggressive in their marketings during the coming quarter and into

the end of the year. As a result, fed cattle prices will drop to the benefit of beef packers' margins.

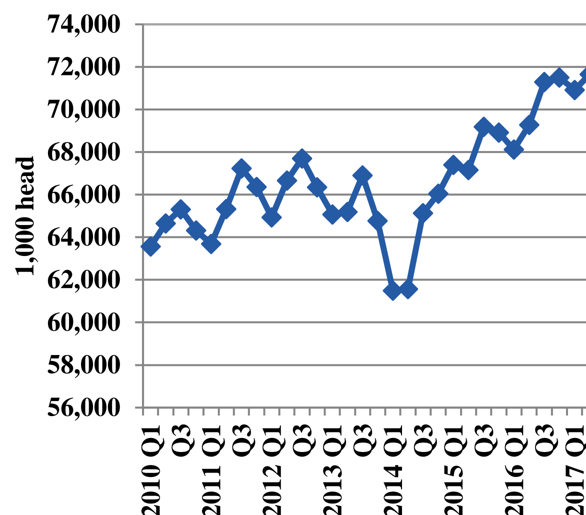
Pork

Domestic pork consumption is projected to slip 2.1 percent this year from 2016, while exports are expected to grow 9.8 percent. Even as pork production is on track to set a new record for the second consecutive year, the share that is sold into the export market increased to 27.5 percent during January-July, up from 25.6 percent a year ago. Domestically, pork in cold storage at the end of July totaled 556.2 million pounds or 7.1 percent less than last year and 2.7 percent below the five-year average. Pork bellies have been driving the whole carcass pork cutout value this year, and their stocks in cold storage reached a new record low of 17.6 million pounds, 65.4 percent less than last year.

According to USDA, the combined total hog and pig inventory for the U.S. and Canada as of 1 July totaled 85.78 million head, up 3.2 percent from a year ago and 6.5 percent higher than two years ago. In the U.S. alone, it was 71.7 million head, the largest June inventory since USDA started keeping records in 1964.



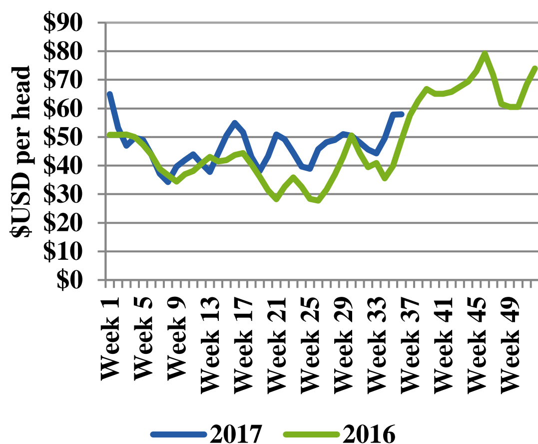
Source: USDA, WPI



Source: USDA, WPI

Along with the swine herd growth, slaughter capacity has expanded. On the first business day after the Labor Day holiday, hog processing capacity in the United States grew more than it had in any single year. Two new plants were added in Coldwater, Michigan and Sioux City, Iowa with peak capacities of 12,000 head per day (to be met in February 2018) and 10,500 head per day, respectively. Overall, according to the U.S. Pork Board, the industry is adding 35,515 head in plant nameplate capacity this year, which is the equivalent of 2.63 million head per week. This is good news for producers as there will be more competition among packers to keep this new shackle space filled, so higher prices are expected. That will eat into margins somewhat.

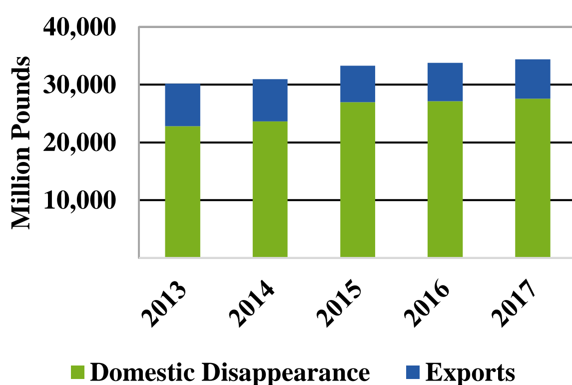
Moving forward, packer margins are likely to decrease from current levels to near $50 per head in the coming quarter and perhaps lower in the fourth quarter. Nonetheless, packers should experience a good year.



Source: USDA, WPI

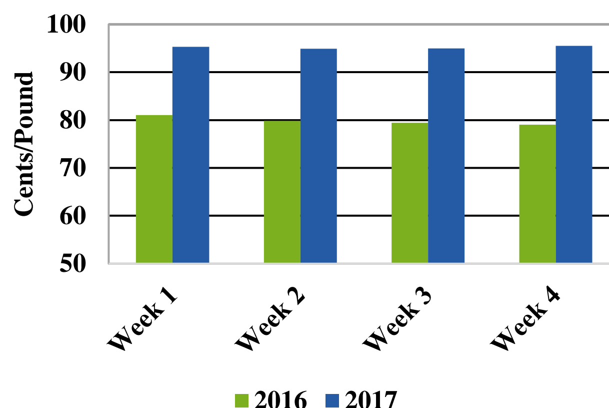
Broilers

Domestic consumption is projected to grow 1.5 percent against last year, and exports are forecast to grow 2.9 percent. That 2017 export forecast for broiler meat was lowered from earlier estimates as volumes were smaller than expected. Nonetheless, June and July exports were up 5 percent and 7 percent, respectively, versus 2016 shipments.



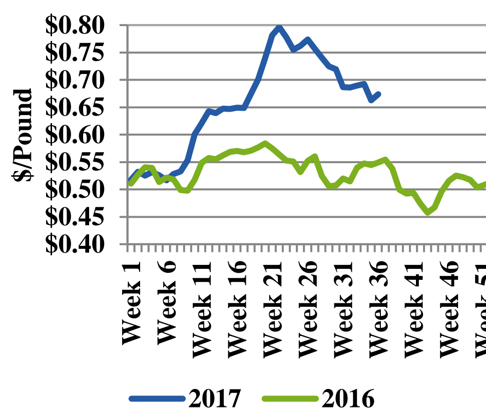
Source: USDA, WPI

Part of the drag on export sales could be strong prices. The national composite whole broiler price in the first week of August hit its highest level since 2014.



Source: USDA, WPI

Total consumption is trending up about 1.7 percent as production growth lags slightly behind, which is supporting margins while feed prices stay low. Production growth has been driven by larger slaughter numbers. Because retail and restaurant demand is resistant to bigger birds, weights have not increased significantly. The broiler-type layer flock as of 1 July hit 56.4 million birds, the largest since 2011.



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Source: USDA, WPI

Looking forward, broiler feeding margins will likely continue to trend well above last year's levels.

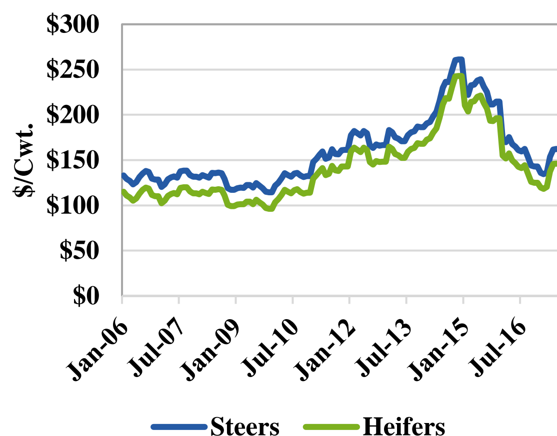
Cow/Calf Returns in 2017

By Matt Herrington

Expectations for cow/calf producer profitability have deteriorated over the summer but remain near break-even levels. October feeder cattle futures prices, while lower than highs reached in May, remain robust and should provide solid fall marketing opportunities. Feed costs are low and, with ample U.S. corn and soybean supplies combined with near-record South American production, should remain so through the fall. There is still significant risk facing the sector, however, and pasture conditions and winter weather may provide operational as well as financial challenges for cow/calf producers.

Feeder calf prices remained largely steady through the summer and early fall with the expected October price[1] averaging $160/cwt from May to September. Feedlot placements tapered off in June and July while fed cattle marketings retained more of their strength, buoying feeder calf prices somewhat. Fall beef (and therefore fed cattle) demand remains the wildcard in the market, but early indications are that demand will remain robust. October feeder cattle futures have been rising steadily since mid-August, although they are approaching technical resistance at $154/cwt. Operators who have not made sales so far should evaluate potential profits at current prices and plan marketings accordingly. **WPI currently perceives more downside risk to the market than upside potential and advises serious evaluation of taking profits now.**

Feed prices have been generally favorable this summer and early fall. Except for the weather market rally in early July, corn and soymeal prices worked their way lower over the summer. The corn market appears to have scored seasonal lows, but prices will not rise substantially before winter with large South American and global supplies available. DDGS prices have been increasing modestly on improved export prospects, but with ethanol production (and, therefore, DDGS supplies) remaining above-average, supply tightness will not cause further price increases in this ethanol co-product.



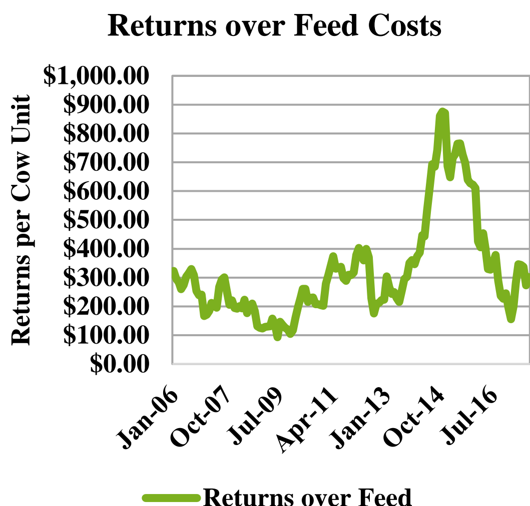
Source: USDA AMS, WPI
Note: Expected prices are based on current futures prices plus predicted basis.

The drought that decimated pastures in eastern Montana, North Dakota and parts of South Dakota has caused hay prices to respond accordingly. The average price for good quality alfalfa hay in Montana rose 20 percent from early spring to September, but prices in the Midwest (Kansas and Nebraska) have remained far more stable. WPI notes that cow/calf operations in different locations of the U.S. face extremely different feedstuff pricing situations. On balance, however, the majority of cow/calf producers will see feed/hay costs remain low through the remainder of 2017 and into 2018. In addition, returns above feed costs will be in line with historic norms.

Producers in the northern Plains, Mountain West, and portions of the Pacific Northwest (PNW) are facing multiple weather threats: poor summer range conditions, interrupted pasture rotations due to fire activity, and the outlook for an early, harsh winter. These regions were hardest hit from 2017's drought, leaving pastures and grazing conditions well below average. Now, the region faces the threat of an abnormally harsh winter

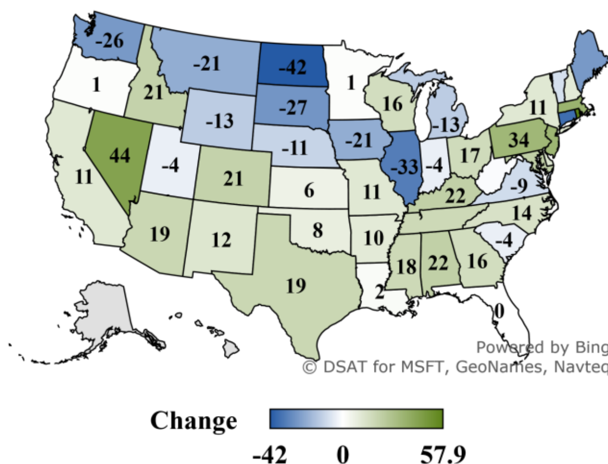
[1] October CME feeder cattle futures plus the average October basis for feeder calves.

when feed supplies will be low and supplemental feeding is already in full swing across parts of the West. Cow/calf operators in these regions should cast a critical eye to current feedstuff stocks and prepare for higher-than-normal feeding programs this winter.



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

Change Pastureland Rated Good/Excellent, 2017 versus Five-Year Average

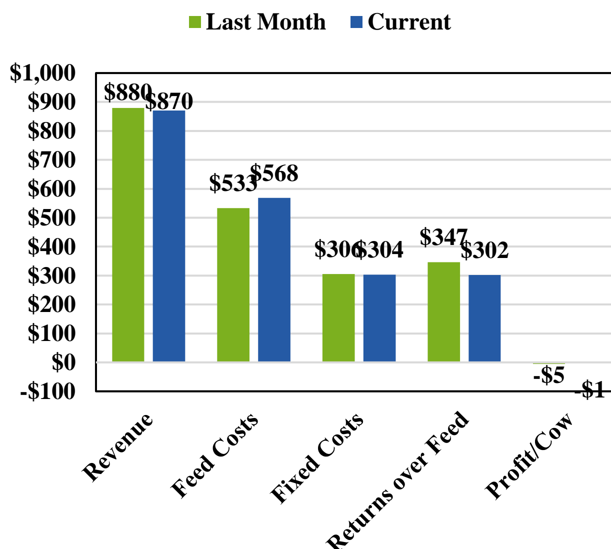


Source: USDA NASS, WPI

Stability in calf prices has left accounting costs for replacement heifers similarly unchanged. WPI estimates the value of a replacement heifer at $120/cow unit, down slightly from our previous forecast. Heifers were comprising a higher-than-normal share of feeder calf sales receipts early in 2017, per USDA. Typically, this would indicate tighter inventories of replacement heifers this fall. Accordingly, breeding heifer values may increase this fall if producers look to expand.

Cow/calf profits are still expected to cyclically decline, although to a lesser extent. The average Kansas cow/calf operation is currently forecast to net -$1 per cow unit this year, down from $46 in 2016 but up from WPI's May projection of -$5.

WPI Cow/Calf Economics Forecast Changes



Source: World Perspectives, Inc.

Given the current profitability outlook, WPI strongly encourages cow/calf producers to evaluate feed procurement on an "as-needed" or "stocking-up" basis, factoring regional supply and demand dynamics. Additionally, feeder calf sales should be made soon as futures' technical uptrend looks to be ending, and producers should lock in profits or break-even revenues as opportunities exist. With winter weather risks rising, opportunities to minimize other risks (financial, procurement, etc.) should be taken as they arise.

FARM INPUTS

By Joost Hazelhoff

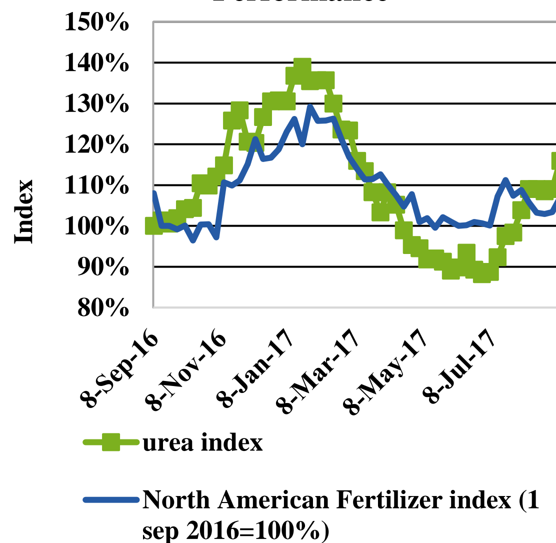
Top Four Reasons WPI Is Neutral-to-Bullish the Farm Inputs Industry

- Nitrogen and DAP prices have improved along with considerably higher nitrogen prices.
- The industry share price index has improved, bringing the North American fertilizer industry index back to levels of two months ago.
- Upcoming earnings reports will likely benefit from the improvement in fertilizer prices.
- This benefit may be mitigated by upcoming supply additions in nitrogen that will pressure prices.

In the July issue of *Ag Review*, WPI noted that nitrogen fertilizer prices had likely bottomed, but weak demand in the Latin American markets and the end of the U.S. seasonal demand market left low expectations for a price rebound. While prices did indeed bottom by that time, there has been a rebound nonetheless. Initially, fertilizer prices finally responded to the weather-driven rally in grain prices. However, when that rally faded as weather conditions turned more favorable than anticipated and USDA included an optimistic corn yield estimate in the September WASDE report, new pockets of demand pulled fertilizer prices higher.

The market has been in wait-and-see mode for any news/announcement on the next fertilizer tender. India's tender announced 1 September triggered a strong upswing in the global nitrogen market. Brazilian demand is offering higher prices now, product out of China has advanced, and U.S. prices have moved higher on the coattails of the international market despite low domestic spot demand.

While the anticipation of new U.S. domestic supply coming online in the fall kept a lid on price advances during the summer, that new capacity still hasn't been opened. In combination with a thin import lineup, total availability for the last quarter this year is in question. This could allow prices to move higher, benefitting revenues for producers and their next round of earnings reports.



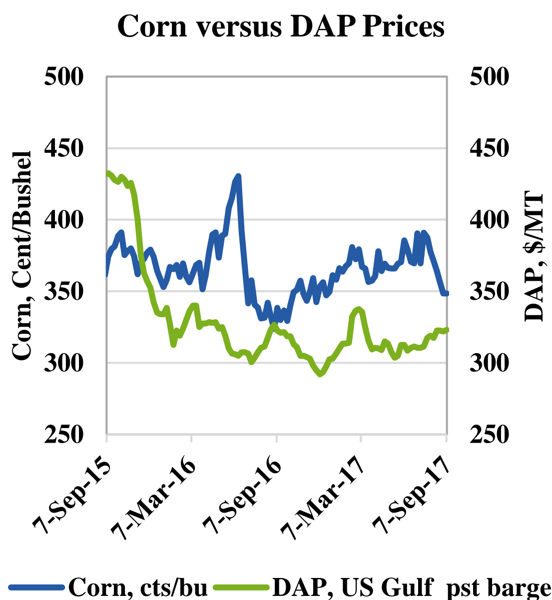
Source: CSI datasystems, WPI analysis.
The Index is the unweighted average of PCS, Agrium, Mosaic and CF.

These market dynamics are a classic case of low prices curing low prices. Increased U.S. domestic production has translated into low U.S. nitrogen prices compared with other markets. In turn, it

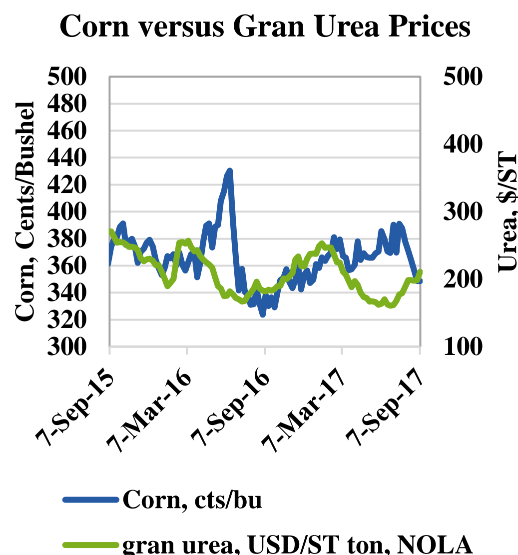
seriously choked nitrogen imports into the U.S. July urea imports were down 50 percent versus the same month one year ago. Simultaneously, exports in July were 10 times higher than July 2016 at 230,000 MT, pushing the monthly U.S. urea trade balance into positive territory for the first time in several years – a situation that is likely to occur more often going forward when seasonal demand is low.

Near-Term Grains versus Fertilizers

Two months ago when the urea/corn spread was at its widest in more than a year, the future of the grains versus fertilizers correlation was debated along with whether it would be as strong going forward as it has been historically. WPI previously reported some individuals in the industry had taken a bearish stance, given the new U.S. domestic supply coming online, and no longer expected grain rallies to impact fertilizer prices as they used to. While it is of course too early to determine whether they are right or wrong, it is notable that fertilizer prices followed corn prices higher in July even if that move was further reinforced by industry demand fundamentals coming into play a few weeks back.



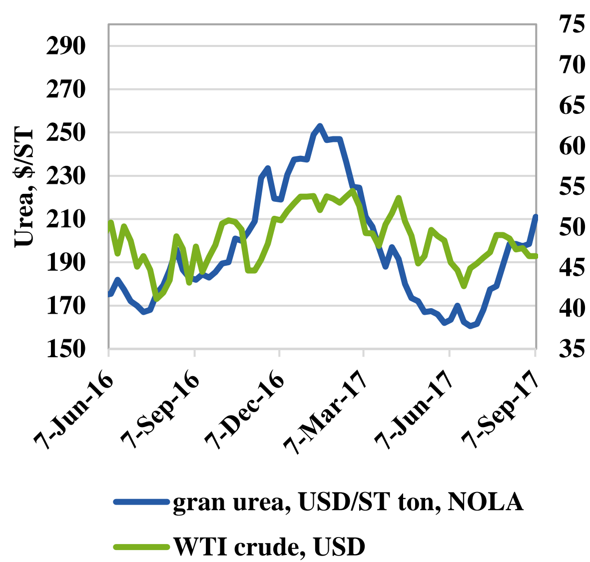
Either way, the grain/nitrogen spread that widened during April has now closed again, and the DAP/corn spread is following a similar pattern. If grains resume their firming trend, it will help fertilizers consolidate their recent price uptick and possibly move higher from current levels in the next three months.



Source: CME, CSI data, WPI analysis

Crude Oil versus Fertilizers

The relatively steady crude price the world has experienced for more than a year is providing another source of stability and support for fertilizers. As mentioned before, the consolidated price range for crude helps keep natural gas, and thus nitrogen production, costs low. Natural gas at $3/thousand cubic feet would roughly put cash production cost for urea at $100/ST, encouraging North American nitrogen producers to keep producing at current fertilizer price levels. Current storm/hurricane conditions in the U.S. will likely drive demand lower, and this has consequently pushed natural gas prices down even further. Together with improving product prices, margins for North American nitrogen production have improved in the past two months, and WPI's hunch is that there may be additional upside in the next few months as well.



Source: UA Dataservice, WPI analysis

POLICY TRENDS

By Gary Blumenthal

Top Three Reasons WPI is Bullish Macroeconomic Trends for Agribusiness

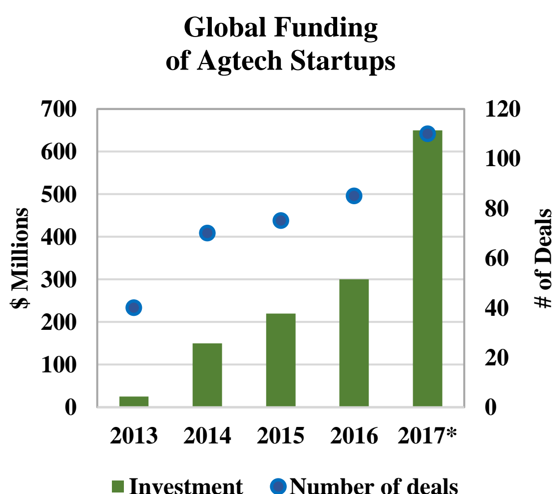
- Investment in agrifood is growing rapidly.
- The food industry is increasingly reliant on technology, but brick-and-mortar stores still reign supreme.
- Consumers view technology as providing enough benefits to compensate workers for lost opportunities.

Economic Risk

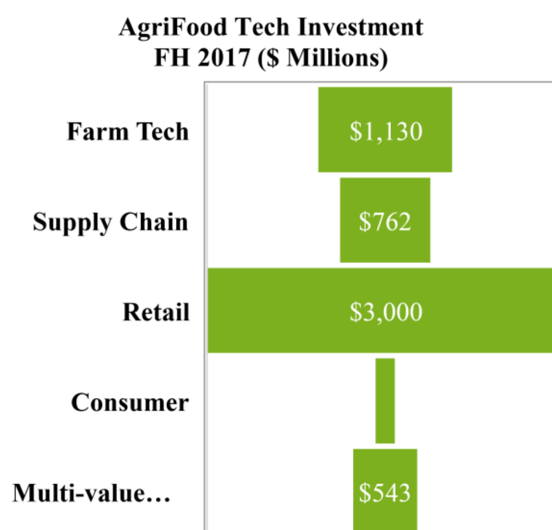
Historically, investment in the agrifood space has tended to wax and wane with commodity prices. When food is precious, the higher prices spur investment to drive down its cost, and when food is cheap, capital runs to where it will obtain a higher return. For the same reason that the top ten global companies by market capitalization (including Apple, Alphabet, Microsoft, Facebook, and Amazon) provide or exploit information technology (IT), much of the investment flowing into agrifood seeks to disrupt by creating new IT applications.

One useful measure of the expected return to capital is the number of startups seeking to enter a space. According to an analysis by CB Insights, the number and value of agtech startups will jump significantly higher in 2017 compared with previous years.

It is also important to look where resources are being focused along the food chain. The latest report from deal follower AgFunder (see following graph) is likely skewed slighlty due to a few large deals.



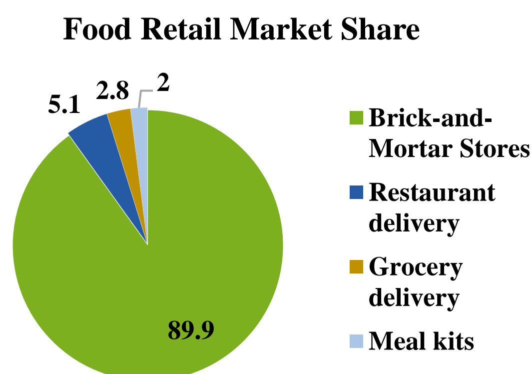
Source: CB Insights



Source: AgFunder

Deals likely skewing the data include a $1 billion investment in the Chinese meal ordering service ele.me, $421 million in new funding for German food delivery service Delivery Hero, $400 million raised by U.S.-based Instacart, and a $400 million funding round by U.S.-based grocery delivery service Instacart. AgFunder actually believes some of these spaces have become oversaturated and caused the number of total deals to drop some.

The food sector is so competitive that it requires a constant flow of investment capital to avoid falling behind. Still, it isn't always clear where the investment should go. Just as every automobile manufacturer is persuing some form of an electric, autonomous driving vehicle, retailers are pursuing every form of grocery, meal and restaurant delivery system. The difference is the automakers know what the end product will look like and are trying to crack the technology, while food retailers have the technology but lack an understanding of what will ultimately win the pocketbook of the consumer. For all of the influx of cash and deals to change the system, it still looks very much like it always has (see graph below).



Source: Priceonomics

One of the technology efforts at the farm level is designed to disrupt the traditional middlemen on each side of the farmer (inputs and marketing). This component accounted for $301 million in new funding thus far in 2017. However, there have also been increases in novel farming systems. Given consumer demand for new foods that are healthier, fresher and unique, there has been a 60 percent increase in funding for innovative food products. Because labor is the largest cost component in the agrifood value chain, much of the effort is focused in this area. Products in development include 3D food printers, burger making robots, fresh food vending, and food waste monitoring.

Amazon's purchase of Whole Foods sent a jolt through the food marketing system, but it mostly represents a continuation of the information and communications technology trend that has been ongoing for decades.

While investors are keen on the farm production level, the most recent U.S. Ag Economy Barometer by Purdue/CME Group found producer sentiments (-14 percent) have followed commodity prices downward on a "Current Conditions" basis, but it held fairly steady (-0.725 percent) on a "Future Expectations" basis.

There is no breakout for new investment in biofuels, but the potential bombshell this past month was China's decision to take the world's largest auto market and make it drink E10 fuel by 2020. There is currently an E10 policy in about a third of the provinces. Based on current growth in vehicle sales and miles driven, one estimate is that it will take nearly a quarter of the country's annual corn crop just to juice the entire gasoline market with 10 percent ethanol. The market likely did not go bonkers over the announcement because expanding ethanol production seven-fold in just three years is more of a goal than a completable objective. The logistics involved in making such a transformation are enormous.

While this new center of demand in an otherwise heavily supplied market is welcome news to many, there is some underlying concern about ethanol eventually being challenged by electric vehicles and the environmental goal of ending combustion. That is likely some years off, but with 18 major, multi-billion dollar electric car efforts currently underway, the handwriting is on the wall.

The introduction of IT, artificial intelligence (AI) and robotics applications have some worried about the social implications. One estimate is that when the tractor was first introduced, 40 percent of farmers left the business rather than adopt and adapt. Social media expert Brian Carter says that, “Every technical improvement creates new companies…and destroys others.” Policymakers are contemplating how to ease the modern day transitions, such as through guaranteed incomes.

Policymakers can regulate food safety, labeling for ingredients and posting calorie counts, but the digitization of services does advance on its own momentum. Like agrifood and other sectors, governments need to invest and adopt technologies that make them more efficient and productive. The European Commission wants to more intensively use the Copernicus satellite system to monitor compliance with the Common Agricultural Policy. Brussels may also look at smartphone apps and geotagging as part of an effort to digitize regulatory compliance.

Robotics & Artificial Intelligence

Source: Initiative on Global Markets

Meanwhile, across the Atlantic, JP Morgan CEO Jaime Dimon made headlines by declaring that bitcoin “is a fraud.” However, he was very careful to single out the positive utility found in the blockchain technology that underlies it. In fact, Commodity Futures Trade Commission Chairman J. Christopher Giancarlo declared blockchain to be in America's "national interest." He announced that, "Distributed ledger and blockchain technologies ... are going to challenge orthodoxies that are foundational to our financial infrastructure.” He believes the technology will improve regulatory oversight.

At the Nexus of Markets and Policy