


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

# AgReview

June 2016

Volume 28, No. 5

World Perspectives, Inc.

A close-up photograph of a Highland cow's face, showing its thick, shaggy brown fur and dark eyes.

**Issues Plaguing the Meat Industry**

**U.S. Meat Exports and the TPP**

**Aquaculture and the Global Livestock Industry**

**Competitiveness of EU Livestock**

**Commodity Market Review**



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

If you would like to receive *World Perspectives: Ag Review* in PDF format via email, please send your name, organization name and e-mail address to: [wpi@agrilink.com](mailto:wpi@agrilink.com).

Editor: Coleen Blumenthal

Cover Design: Renee Boudreau, Studio Del Ray

Cover Photo: Tim Sackton (<https://www.flickr.com/creativecommons>)

For more information about WPI and its information services, including subscriptions for *World Perspectives: Ag Review*, please contact us via email at [\*\*wpi@agrilink.com\*\*](mailto:wpi@agrilink.com) or mail your request to:

**World Perspectives, Inc.**  
**1901 N. Fort Meyer Drive**  
**Suite 1015**  
**Arlington, VA 22209 USA**

---

Copyright ©2016 World Perspectives, Inc. World Perspectives, Inc., 1901 N. Fort Meyer Drive, Suite 1015, Arlington, VA 22209 Telephone: 202-785-3345. Email: [wpi@agrilink.com](mailto:wpi@agrilink.com). Web: [www.worldperspectives.com](http://www.worldperspectives.com). The information contained herein has been obtained from sources believed reliable but is not necessarily complete and cannot be guaranteed. Any opinions expressed are subject to change without notice. Reproduction of any portion of this report is strictly prohibited without permission of World Perspectives, Inc.

What was, is,  
and will continue to be  
most important in the business world?



## ***EXPERIENCE.***

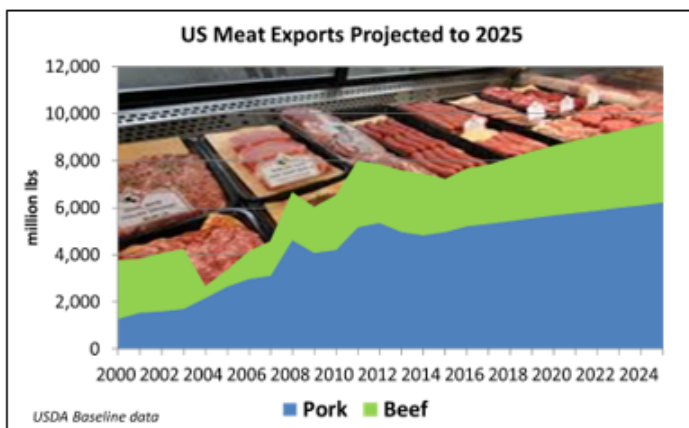
Since 2000, World Perspectives, Inc. has offered hundreds of practical, forward-thinking recommendations to diverse clients across the global agri-food system.

Let our experience help guide your organization's future success. *For more information regarding WPI's consulting capabilities, please write [dgregg@agrilink.com](mailto:dgregg@agrilink.com) or call (202) 785-3345.*

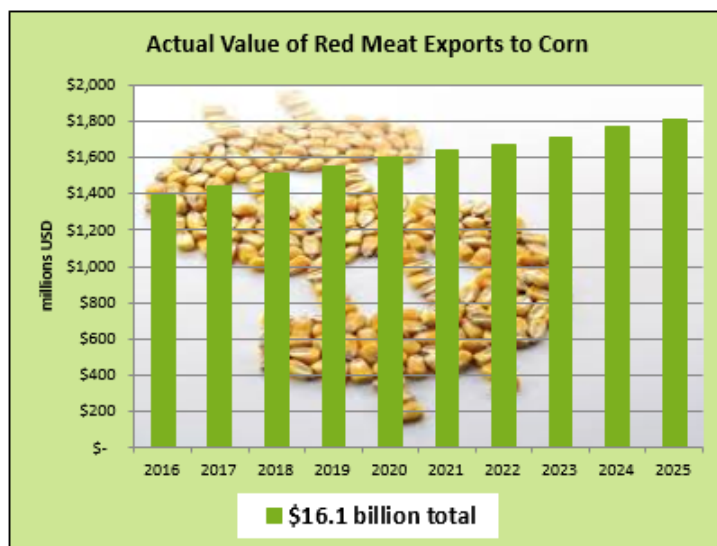
## The Value of U.S. Meat Exports to Corn

The following is a snapshot of a study that WPI completed on behalf of the U.S. Meat Export Federation

- Growth in red meat exports is projected to increase by 26 percent 2016-2025



- Indirect exports of corn and DDGS through beef and pork will grow 33 percent from 2016 to 2025, totaling 15.65 million tons
- The value of red meat exports to DDGS over the next 10 years will be approximately \$2.25 billion
- The value of red meat exports to corn over the next 10 years will be approximately \$16.1 billion



- In 2015, red meat exports added approximately \$0.45 to the price of a bushel of corn

World Perspectives, Inc. 2016

## U.S. Feed Utilization

Per finished calf:

- 35 bushels of corn
- 806 pounds of DDGS

Per finished pig:

- 11 bushels of corn
- 37 pounds of DDGS
- 136 pounds of SBM

### Did You Know?

- USDA projects feed to be the largest growing domestic use of corn:
  - +17% feed
  - -2% FSI
  - -3% ethanol
- One in every 3 lbs. of additional U.S. beef produced over the next 10 years will be exported
- One in every 2.75 lbs. of additional U.S. pork produced over the next 10 years will be exported

### Value of red meat exports to top 10 corn States:

Iowa	\$2.97 bln
Illinois	\$2.40 bln
Nebraska:	\$2.00 bln
Minnesota:	\$1.69 bln
Indiana:	\$973 mln
South Dakota:	\$947 mln
Kansas:	\$687 mln
Ohio:	\$590 mln
Wisconsin:	\$582 mln
Missouri:	\$518 mln

---

# CONTENTS

---

<b>ISSUES PLAGUING THE MEAT INDUSTRY .....</b>	<b>1</b>
From animal welfare to meat substitutes, the livestock sector faces many challenges.	
<b>U.S. MEAT EXPORTS AND THE TPP .....</b>	<b>4</b>
The U.S. International Trade Commission's (ITC's) analysis of the Trans-Pacific Partnership (TPP) projects the biggest increase in U.S. beef, pork and poultry exports will be to Japan.	
<b>AQUACULTURE AND THE GLOBAL LIVESTOCK INDUSTRY .....</b>	<b>7</b>
While the swine, poultry, beef and dairy sectors are the most important in the global livestock arena, aquaculture is a large and fast-growing part of that industry today.	
<b>COMPETITIVENESS OF EU LIVESTOCK.....</b>	<b>10</b>
The combination of extensive regulation weighing on margins and generally low price levels has already put the EU livestock sector in a crisis mode for a few years, and the near future is not offering much relief.	
<b>COMMODITY MARKET REVIEW .....</b>	<b>12</b>
There are several factors involved in the resounding rally in soybean, soymeal and corn futures markets.	

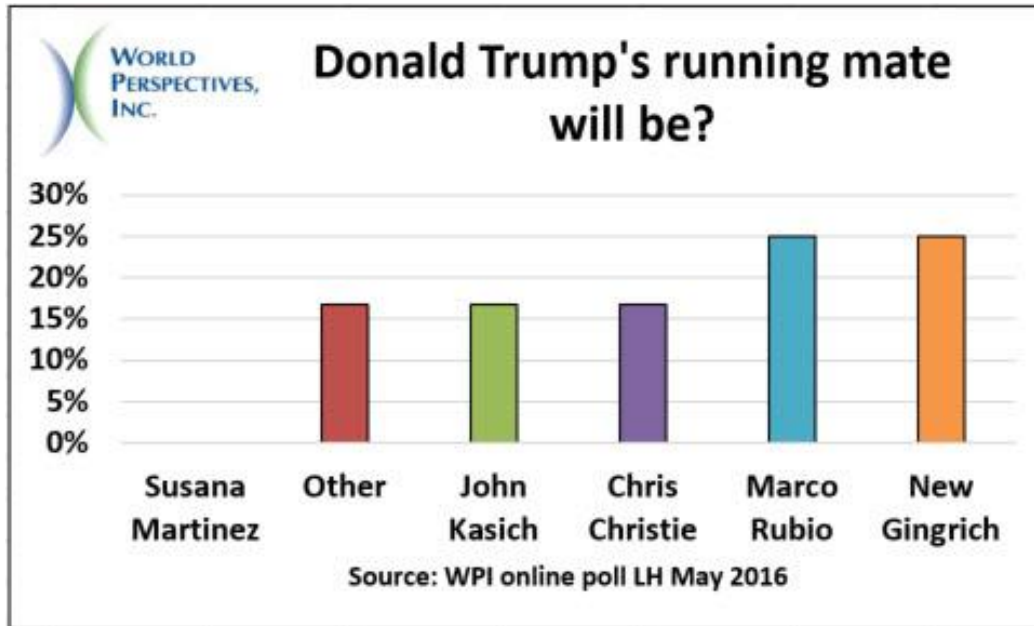
“It takes considerable knowledge to realize the extent of your own ignorance.”

— *Thomas Sowell*

<i>HARVESTED DATA</i>	
<b>Farmers</b>	
<b>All in the Family</b>	<p>The majority of those surveyed (62 percent) said that at least five generations in their family have been involve in agriculture.</p> <p style="text-align: right;">Zimm Poll</p>
<b>Food for Thought</b>	
<b>Less Hunger</b>	<p>15 percent of U.S. adults reported in the first quarter of 2016 that there had been times in the past year when they did not have enough money to buy food, a drop from 19.7 percent in the third quarter of 2013. Those most likely to report struggling reside in Mississippi.</p> <p style="text-align: right;">Gallup Poll</p>
<b>Breaking Bread</b>	<p>According to a recent survey, 87 percent of Americans who live with others sit down for a family dinner at least once a week and roughly a third do so four to six nights a week.</p> <p style="text-align: right;">Foodnaviagor-usa.com</p>
<b>Let's Make a Deal</b>	
<b>Mixed Response</b>	<p>When asked what a Bayer Monsanto buyout would mean for ag, 36 percent of respondents in a current poll said it was bad news with 28 percent indicating better solutions for farmers would result and another 19 percent saying that consolidation is inevitable. 9 percent didn't know, and 8 percent didn't care.</p> <p style="text-align: right;">Zimm Poll</p>

## WPI POLLING

Below is the result of a recent WPI poll. Visit [www.worldperspectives.com](http://www.worldperspectives.com) to cast your vote in our current survey.



---

# ISSUES PLAGUING THE MEAT INDUSTRY

---

By Gary Blumenthal

It is fundamentally accepted that protein is a critical building block of life. Since it isn't stored in the body, daily intake is required for the maintenance of basic functions, including immunity, circulation and enzymatic functions. While well-fed westerners have made protein the new silver bullet to fight obesity, the more important expanding need in the years ahead will be to support basic muscle growth in the forecasted billions of additional children entering the world. This explosion of protein demand need not come exclusively from animals, but their nutritionally complete amino acid structure is an advantage. Their disadvantages are both real and over-dramatized.

Protein intake is inadequate in many parts of the world despite the annual production of three times as many cows, chickens and pigs as people, and that doesn't count the ducks, goats, sheep and a dozen other domesticated animals in use. Just as people have impacts on the environment, animals require inputs and have outputs besides just their flesh. Indeed, environmental impact is one of the more measurable ethical issues associated with animal protein consumption by humans. However, those morally opposed to meat consumption have made a multipronged attack on livestock production that grows in scale each year.

**Antibiotics:** Production-enhancing treatments from hormones to ractopamine remain controversial, but the latest complaint surrounds the use of antibiotics in livestock. Opponents charge that this practice increases the possibility that pests will develop resistance to antibiotics and ultimately harm humans. Regulators have not taken stronger action against such usage because the antibiotic resistance risk from animals is overstated. For one, the vast majority of

antibiotics used in livestock production are not concurrently used in humans. Nonetheless, U.S. public policy is to use antibiotics in animals for therapeutic purposes and not as general preventatives intended to promote the animal's growth. The livestock industry has endorsed this policy.

The real culprits in the increase in antibiotic resistance are humans themselves. It is estimated that a third of all antibiotic prescriptions are unnecessary, issued mostly as a placebo to placate patients. Moreover, too many patients preemptively quit taking a drug when they start feeling better, which greatly increases the risk of bacteria evolving a resistance to it.

Barring the use of antibiotics in livestock would impose suffering on the animals, and so that is an unlikely end game. However, opponents of meat consumption will continue to conflate the usage with human health risk. Notable will be any conclusion expressed by the Presidential Advisory Council on Combating Antibiotic-Resistant Bacteria when it meets this month.

**Animal Welfare:** No issue evokes greater emotion than the humane treatment of animals. Illustrative was the outrage by some who felt that the Cincinnati Zoo had its priorities wrong when it shot and killed a gorilla last month that posed a risk to a four-year old boy. Most issues involving animal welfare are not so clear cut and are tainted with more emotion than science. A Belgian research study betrayed human intuition when it found that chickens were less agitated when picked up by a robot than by the soft hands of human beings. Soft hands or not, to the chicken it was a choice of being grasped by a predator or an inanimate object. Even USDA cannot get it correct as its draft rule for organic poultry would



require time spent fully outdoors, exposing birds to both predators and pathogens from wild bird flocks.

With animal welfare standards being developed anthropomorphically rather than scientifically, the results are disparate and thus driving the industry toward a major trade crackup. Already, six egg-producing states are challenging California's Proposition 2, which dictates the size of the cage used to house hens regardless of geographic origin. The entire industry is headed toward a "cage-free" production system due to consumer demand even though an "enriched" cage system developed by poultry experts would offer both a safer and more comfortable environment for the birds.

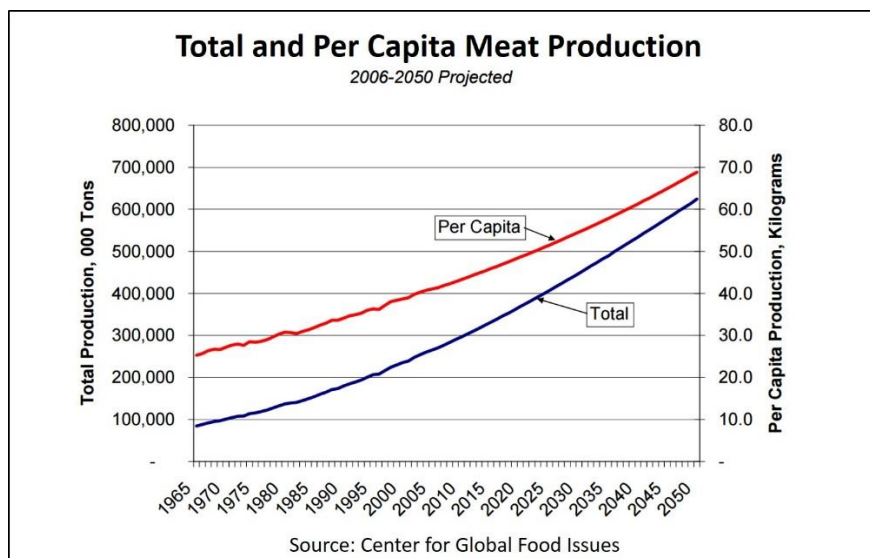
The U.S. and EU reached an equivalency agreement on organic food production, recognizing that the specific standards may be different on each side of the pond but are close enough to be mutually acceptable. The actual trade in organic food products is very small. However, Europe's livestock industry is already uncompetitive and will be made more so by the demands of groups like the animal welfare party (the Euro Animal 7) and the European Parliament. Animal welfare standards are poised to become the international market access barrier of the future.

**Food Safety:** In the U.S., meat is one of the few products inspected thoroughly throughout the slaughter and packing process; the reason being that it is the most biologically active food product

and thus most likely to attract opportunistic pathogens. While large national food retailers receive all of the attention for provoking foodborne illnesses, over 90 percent of cases would be easily avoided by two key practices in the home and in local restaurants: 1) avoid cross-contamination of raw meat with other products; and 2) cooking to the USDA specified temperatures necessary to kill any pathogens.

**Climate Change:** The degree to which livestock contribute to global warming is highly contested, but without doubt there is a contribution. Some deflect by noting that the number of cattle in the U.S. only exceeds that of the original bison by a fraction, but there is no equivalent antecedent to 2 billion chickens and 65 million pigs. At the same time, the climate argument receives stronger emphasis from the anti-meat crowd than from climatologists. Almost regardless of this debate, meat consumption is slated to grow at a rapid pace.

For practitioners of supply/demand projections, animal protein offers a near-perfect correlative to two fundamental factors: changes in population and income. Protein is an essential building block for a growing population, and because of its higher cost, money is needed to acquire it. Demographic trends change slowly, and today's projections for both population growth and economic advancement indicate increased meat production is already baked into the cake.



As a point of digression, India has the world's largest bovine population, estimated at 300 million. The government is urging farmers to stick with indigenous breeds rather than allowing imports of genetics from more productive breeds such as Holstein Friesian or Jersey. In the same way that Tokyo once rebuffed imported snow skiing equipment by arguing that Japanese snow is different, New Delhi now argues that domestic cattle are better suited for the Indian environment.

**Human Element:** There are many other livestock issues ranging from growth promotants to disease vectors to cloning. However, there are two last elements worthy of mention: human condition and innovation. As to the human condition, it is notable that activists demand extra space for chickens but not for jetliner passengers. There is also intense focus on the humane slaughter of animals but not on the fact that meat packer workers are more liable to injury than the rest of the manufacturing sector.

Finally, the wild card in meat production forecasting is the innovation of meat substitutes. At this juncture, most plant-based meat alternatives on the market are characterized as terrible. With a third of all U.S. consumers experimenting with meat substitutes, it is clear that there is interest. The Plant Based Foods Association claims that sales of meat alternatives have grown by 8.7 percent over the past two years to \$3.5 billion annually. It is a race to see whether plant-based versions will improve sufficiently or if the stem-cell or fermentation approaches for synthesizing proteins will prevail. Either way, there are influential investors betting that a larger share of human protein demand will be fulfilled in the future by non-animal sources.

---

# U.S. MEAT EXPORTS AND THE TPP

---

By Dave Juday

**O**n 18 May, the U.S. International Trade Commission (ITC) released its 792-page review of the provisions of the Trans-Pacific Partnership (TPP) and their likely impact on the U.S. economy and industry sectors. With regard to meat and livestock trade, the report confirms what could be expected from the makeup of the TPP countries. The U.S. has pre-existing trade deals with seven of the 11 countries party to this agreement. Of the remaining four, three of which are Malaysia, Brunei and New Zealand, Japan accounts for more than 89 percent of their collective GDP and thus provides the single largest market opportunity for U.S. exports. Moreover, from the meat and livestock perspective, Malaysia is a Muslim country that requires rigorous halal certification while New Zealand is a major dairy exporter, making it also a significant producer of dairy beef.

In 2015, Japan was the second-largest export market for U.S. beef and pork exports and a top 20 market for U.S. broiler exports, but the concessions made through the TPP will likely increase U.S. red meat and poultry exports. This is a significant development as Japan went into the TPP negotiations in 2013 with resolutions passed by the Diet urging that beef and pork – as well as rice, sugar and dairy – be exempt from tariff elimination. However, the current TPP text provides opportunities for the U.S. meat and livestock sector.

## Beef

The TPP's primary benefit for beef is greater access to Japan, which is currently the top market for U.S. beef exports despite a tariff of 38.5 percent on chilled and frozen cuts. That tariff would be reduced to 9 percent over 16 years, putting U.S. beef on equal footing with that from Australia, presently Japan's largest supplier. The Japan-Australia Economic Partnership Agreement was implemented last year and gives

Australian beef preferential treatment in the Japanese market. This year it has a 7 percent tariff advantage over U.S. chilled beef and a 10 percent advantage over U.S. frozen beef. The gap in tariff treatment would grow without implementation of the TPP. The Japan-Australian pact phases in over 18 years beginning last year.

Japan's market would become highly competitive under the TPP as all of its major beef suppliers are member countries, including the U.S., Canada, Mexico, Australia and New Zealand. However, Japan is import dependent as 58 percent of all beef marketed there is from outside the country despite high tariffs and other programs to support domestic producers. Beef from New Zealand is primarily cow meat from culled dairy cattle, and that from Australia is a mix of grass and grain fed (about one-third of production and half of its exports are grain fed). The competition for grain-fed beef in Japan, the preference in that market, will largely be between the U.S. and Canada.

There would be a slight offset in two other key markets: Mexico and Canada, currently the third- and fourth-largest markets for the U.S. in terms of value. Mexico is also the second-largest market in terms of volume. Under the North American Free Trade Agreement (NAFTA), U.S. beef exports have an advantage in those markets with duty-free access. Under the TPP, exporters such as Australia and New Zealand would also gain such access to both countries.

Other potential growth markets include Peru, which gives the U.S. preferred access under the U.S.-Peru Trade Promotion Agreement, and Vietnam, where the U.S. has lost market share since 2012 due to competition from other exporters. Vietnam is a net importer of beef and gives preferential treatment to India, the world's

largest beef exporter, under the 2010 ASEAN-India Free Trade Agreement. The Indian product comes from water buffalo and is technically called carabeef. Like most of India's exports, the meat goes to the developing world as the carabeef is economically-priced and not in much demand domestically. Southeast Asia is the largest market, accounting for 60 percent of India's exports in 2013. Since India supplies boneless halal cuts, it is a very attractive supplier for predominately Muslim countries such as Malaysia.

## Pork

Like beef, most of the TPP's benefit to U.S. pork exports would be growth in volume shipped to

Japan. One of the major concessions Japan made in the TPP agreement was to phase in reforms of its elaborate gate price system. Pork imports into Japan, both variety meats and muscle cuts with a customs value below the gate price, are assessed a specific tariff equal to the difference between that value and price plus a tariff equal to a percentage of the customs value (ad valorem). Imports with a customs value equal to or greater than the gate price are assessed the ad valorem tariff only. By essentially establishing a minimum average price per kilogram for imported pork, the gate price system penalizes lower-priced cuts. To get around the system, exporters mix the cuts in a load to manipulate the average price to a level slightly above the gate price. However, volumes of certain cuts would certainly increase once the system is eliminated.

<b>Japanese Gate Price System for Pork</b>			
<b>Product</b>	<b>Gate Price (¥/kg)</b>	<b>Gate Price (\$/lb.)</b>	<b>Ad Valorem (Pct.)</b>
Carcass/Half-Carcass	¥393.00	\$1.47	4.3%
Pork Cuts	¥524.00	\$1.96	4.3%
Dried/Smoked/Prepared	¥897.59	\$3.28	8.5%

*Source: U.S. ITC*

Approximately 96 percent of the projected growth of U.S. pork exports would be to Japan under the TPP. Over the past five years, Japan's per capita consumption of pork has increased. Some of that had to do with the carryover effects of the country's ban on U.S. beef imports due to the 2003 outbreak of bovine spongiform encephalopathy (BSE), which resulted in it importing more pork to replace the grain-fed beef that the U.S. traditionally supplied, and partially with the high global price of beef after the ban had been lifted. The rate of pork imports may slow as beef and pork prices reach a more traditional balance. Additionally, Mexico and Canada would also gain more access to Japan under the TPP. In turn, this will create some competition for U.S. products, especially in the post-gate price era when the value of the U.S. dollar is stronger than the Canadian dollar or the Mexican peso relative to the yen. Among the other TPP countries, New Zealand imports

virtually all of its pork, making it likely to purchase more from the U.S.

## Poultry

Poultry is likely to make some modest gains under the TPP as much of the expanded exports to member countries will be offset by lower volumes to other global customers. Poultry in general and broilers in particular have not always fared well from trade agreements, and the results for the sector are mixed under the TPP. For example, NAFTA has been in place for 27 years, and U.S. access to Canada for broiler chicken as well as other poultry products has been limited to small tariff-rate quotas (TRQs). The TRQ for broiler chicken is approximately 7,000 MT, and the NAFTA restrictions stay in place under the TPP with only limited exceptions. Currently, 86 percent of U.S. broiler exports were shipped to NAFTA partners Mexico and Canada with about



two-thirds to the former and one-third to the latter. Of the chicken meat shipped to Canada over the last three years, 32 percent was in-quota shipments and another 20 percent was over-quota trade subject to higher tariffs. The remaining 48 percent was not traditionally-produced broiler meat but instead from spent egg-laying hens, which enters the country under special NAFTA duty-free tariff lines. The lack of significant expansion to the TRQs will keep this mix in place.

Outside of the NAFTA partners, approximately half of the remaining U.S. exports to TPP countries shipped to existing free trade agreement (FTA) partners Chile, Singapore, Peru and Australia. However, sanitary restrictions in Australia as well as New Zealand allow only U.S. poultry meat that is canned, heat-processed or cooked to be imported. The biggest gains for U.S. poultry meat would come from Japan as that country would eliminate all duties on such imports within 11 years. Bone-in chicken legs constitute the largest and most competitive product type for U.S. exporters; the United States supplies 94 percent of Japan's total import value of \$44 million in this category. TPP duties on bone-in chicken legs are reduced from 8.5 percent to zero over the 11-year period under the TPP.

Unlike beef and to a lesser extent pork, no other TPP countries are major poultry meat exporters. Thus, the opened access under this agreement, especially to Japan, will not result in increased competition for U.S. exports but rather give a cost advantage to U.S. product versus Brazil. The U.S. is the largest broiler producer in the world and the second-largest exporter after Brazil. Currently, Brazil has about a 90 percent market share in Japanese frozen chicken imports. Most of the share is based on custom production for certain cuts that the Japanese market demands. With lower tariffs under the TPP, though, the cost advantage for U.S. frozen chicken grows dramatically. For prepared chicken products, Thailand and China have the greatest market share in Japan, but the new TPP tariff reductions again would make U.S. products competitive with those two sources.

### **Summary**

According to U.S. ITC's TPP analysis, beef exports are projected to grow 8.4 percent over the baseline by 2032, resulting in a 5 percent increase in total U.S. beef production. Meanwhile, pork and poultry exports are both forecast to rise 1.3 percent for 3 percent and 6 percent gains, respectively, in total U.S. production by that year.

---

# AQUACULTURE AND THE GLOBAL LIVESTOCK INDUSTRY

---

By John Baize

When examining the world's livestock industry, it is logical to think first of the swine, poultry, beef cattle and dairy sectors as they are by far the most important and the largest, providing the most animal protein for human consumption. However, it is increasingly important to include aquaculture on that list because it is rapidly entering the mainstream. It has been practiced around the world for thousands of years, particularly in Asia. The overfishing of the oceans and rapid growth in global demand for seafood are now spurring more countries to begin developing aquaculture sectors of their own.

Major multinational companies such as Cargill and Bunge are now investing in them, and others are certain to follow as the world's demand for seafood grows.

Aquaculture is now producing about 45 percent of the world's seafood, and its share is only going to increase. This is because production from the capture fisheries industry has stagnated and may be in decline. Rising prices for seafood are also making aquaculture more profitable, which is attracting more investments in the sector. Global trade in seafood is now valued at about \$150 billion annually and is growing about 8 percent each year.

Top 15 Farmed Food Fish Producing-Countries 2012 (MT)		
Country	Production	Global Share (Pct.)
China	41,108,306	61.7%
India	4,209,415	6.3%
Vietnam	3,085,500	4.6%
Indonesia	3,067,660	4.6%
Bangladesh	1,726,066	2.6%
Norway	1,321,119	2.0%
Thailand	1,233,677	1.9%
Chile	1,071,421	1.6%
Egypt	1,017,738	1.5%
Myanmar	885,169	1.3%
Philippines	790,894	1.2%
Brazil	707,461	1.1%
Japan	633,047	1.0%
South Korea	484,404	0.7%
United States	420,024	0.6%
Total Above	61,762,101	92.7%
Rest of World	4,871,152	7.3%
Global Total	66,633,253	100.0%

Source: *The State of World Fisheries and Aquaculture 2014*, FAO

China leads the world in aquaculture production with a volume of about 43.5 MMT of food fish in 2013, almost 62 percent of the estimated 70.5 MMT produced globally. Its production grew by about 2.39 MMT (5.8 percent) that year. Approximately 23.3 MMT of China's 24.4 MMT of finfish output were produced in inland waters and the remaining 1.03 MMT in the ocean. Future growth in aquaculture there is threatened by serious problems of water availability and pollution. At the same time, Chinese seafood demand is growing very rapidly as a result of rising incomes. For that reason, China is becoming an increasingly large importer, and many expect it to purchase most of the exportable supplies available in Asia in the future.

India is the world's second-largest seafood producer at approximately 4.21 MMT. Its production is growing, but rather slowly. As the preceding table shows, ten of the world's largest aquaculture producers are in Asia, and the output there is growing relatively rapidly. Major investments are being made to expand such production in Indonesia as the nation has an abundance of non-polluted ocean water and sees very few typhoons. Production is also quickly expanding in Vietnam and Bangladesh.

The U.S. is a minor aquaculture producer compared to Asian countries. Its production is largely limited to catfish, shellfish, salmon, tilapia, trout and striped bass. However, the catfish industry has seen its output decline substantially as a result of growing imports of low-cost basa catfish from Vietnam. Efforts to expand marine production of finfish have been limited by the lack of federal regulations governing the ocean aquaculture sector and local opposition to fish farms being located along coastal areas.

The National Oceanic and Atmospheric Administration (NOAA) did issue a final rule in January 2016 to establish a comprehensive regulatory program for managing the development of an environmentally sound and economically sustainable aquaculture fishery in federal waters of the Gulf of Mexico, which is an exclusive economic zone (EEZ). However, the amount of fish that can be produced annually

under the rule totals only 29,000 MT, and no more than one-fifth of that can be produced by any approved entity. Additionally, only species native to the Gulf will be allowed to be produced. The regulations effectively assure aquaculture will remain a relatively small industry in the Gulf in the future. For that reason, most seafood consumed in the future in the U.S. will likely have to be imported.

Clearly, some major multinational agricultural firms see a bright future in aquaculture. Cargill announced in August 2015 that it had purchased EWOS, one of the world's largest producers of salmon feed, for 1.35 billion euros. The company joined with the firm Naturisa in the previous month to invest \$30 million to build a shrimp feed plant in Ecuador. Cargill already had existing aquaculture capabilities there as well as in Mexico, Central America, China, the United States, Southeast Asia and India. It indicated in a press release that "with the need for protein expected to grow by 70 percent worldwide by 2050, farmed fish and shrimp offers one solution to meeting this demand, and Cargill intends to play a major role in this growing and important market."

Bunge is also making an investment in the aquaculture sector, announcing with Terra Vista on 4 May 2016 the launching of their first product line for animal nutrition. Utilizing the proprietary algae-based technology platform that has been developed by TerraVia over the past dozen years, the joint venture partners declared themselves as exclusive distributors for AlgaPrime DHA. In doing so, both companies seek to address the growing \$3 billion Omega-3 ingredient market with an initial emphasis on aquaculture. Bunge is believed to be interested in making additional investments in the sector in the future.

The U.S. soybean industry is extremely interested in seeing the global aquaculture sector expand. That is because soymeal and soy protein are major ingredients in aquaculture feeds, more than 50 percent in that for some species. It is estimated that close to 12 MMT of soy ingredients may already be used for this purpose. The U.S. Soybean Export Council is carrying out aquaculture support activities across Asia, the

Middle East, Southern Europe and Latin America in order to promote even greater use of soy in aquaculture feeds. Meanwhile, the United Soybean Board is funding activities aimed at making soy protein an even better such ingredient with a focus on replacing fish meals in predator fish feeds.

It is likely that other multinational companies have taken notice of Cargill's and Bunge's aquaculture investments, and some will probably do the same in the future. Companies such as JBS, ADM, Tyson Foods, and Perdue Farms all have capabilities that make them naturals to invest in the aquaculture sector, which is clearly going to see major growth. Not many agricultural multinationals are going to want to miss an opportunity to be a part of that. Asian companies like Charoen Pokphand are already big players in this industry, but there clearly is room for other firms as well.



---

# COMPETITIVENESS OF EU LIVESTOCK

---

*By Joost Hazelhoff*

The European livestock sector is having a difficult time with extensive regulation weighing on margins and generally low price levels impacting revenue. Poultry production is met by solid demand, but beef is dealing with significant supply growth while demand is slowing down. The combination of these factors has already put EU livestock in a crisis mode for a few years now, and the near future is not offering much relief.

The European Commission has acknowledged the situation, putting in place aid packages last March as well as previously in September 2015. Notable elements of these initiatives include:

- Financial aid, voluntary supply and production measures as well as increased intervention ceilings for skim milk powder (SMP) and butter for the dairy sector
- State aid in the form of direct payments to farmers
- Consideration of a new private storage aid scheme for the pig sector
- Establishment of a meat market observatory, similar to one set up for the milk market in 2014

Time will determine how effective the above measures and the rest of the package elements will be to any future recovery of EU livestock. Regardless, their reception when announced was mixed at best. Generally, the increased intervention ceilings for SMP and butter were welcomed while private storage possibilities for pig meat were met with more skepticism as new storage schemes may encourage additional production, a development not embraced by that sector. Others also fear that state aid at member

state level may result in unfair competition within the EU.

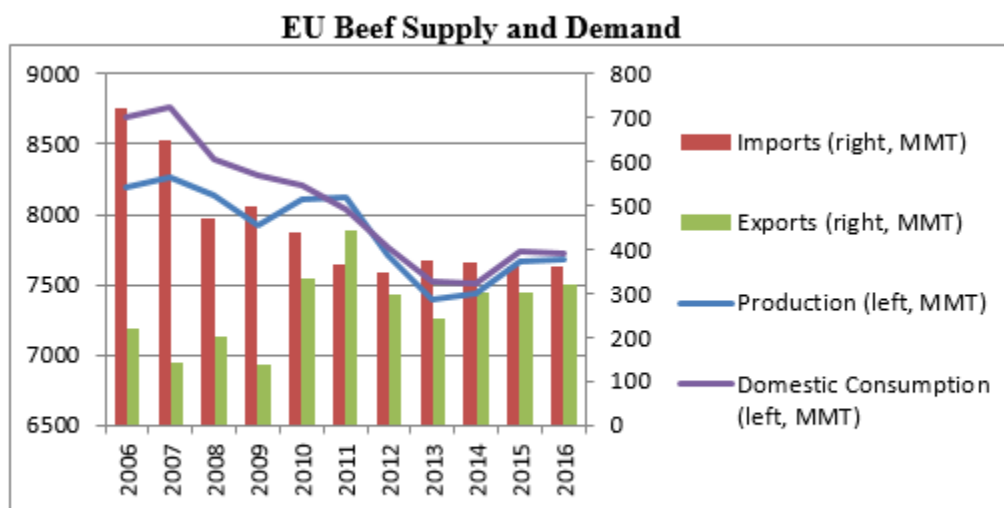
Meanwhile, the industry is calling for additional action, which may be warranted if viewed in the context of providing EU's livestock with more fundamental and long-term capacity to compete on international markets. The list of topics where the European livestock industry would like to see change or at least consideration of costs being added is long and includes (GM) feed regulation, animal welfare and environmental legislation, the use of growth promoters, and the nitrates directive.

The impact these topics have differs strongly per subsector. In poultry, for instance, available research by Wageningen University from 2013 has shown that the cost related to EU legislation relative to the farm level production cost base is about 5 percent. In the same research, production of broiler farms and slaughter are combined and compared between select countries. The combined cost in 2013 was about EUR 1.73/kilogram carcass weight (kg/cw) in the EU, EUR 1.35/kg in the U.S. and EUR 1.17/kg in Brazil. It seems that even with taking out that 5 percent legislation-related cost at farm level, the EU is still at a production cost disadvantage.

In beef, the cost of environmental and feed regulation may be significant, but supply and demand are having difficulty finding equilibrium anyhow. Where poultry consumption has increased by almost 35 percent in the past 10 years, beef consumption has decreased considerably. At the same time, production has risen again in the past few years, and slaughter numbers have increased. Much of that was driven by low feed prices as well as the abandonment of

the dairy quota system in 2015. Anticipating the end of the system, EU dairy farmers worked rapid to expand herd size in countries like the UK, Ireland and the Netherlands. Lower milk prices later in 2015 prompted a considerable increase in

slaughter rates. Balancing declining demand has relied on adjustment to all line items of the balance sheet such as reducing EU production and lowering imports by 50 percent while expanding exports at the same rate.



Source: USDA/FAS, WPI

While the industry is struggling to compete on production cost and facing slowing consumption in some sub segments like beef, trade agreements (still) on the negotiating table such as the Mercosur trade agreement and the Transatlantic Trade and Investment Partnership (TTIP) seem daunting to almost everyone involved in EU livestock and probably rightly so. Lower import tariffs for Brazilian poultry will likely result in a significant increase in imports.

Similarly, there will probably be more beef coming from the U.S. because of improved access as part of a prospective TTIP deal. A strategy of raising environmental and quality standard roadblocks will be met by WTO scrutiny and no doubt offer little resolution. Investing in innovative production methods to improve competitiveness from a cost or product quality perspective likely yields a better return.

---

# COMMODITY MARKET REVIEW

---

By Robert Kohlmeyer

The bullish drumbeat rolling out of the CME soybean, soymeal and corn futures markets described in these pages last month resounded with equal fervor throughout May. Money from noncommercial sources, mainly managed commodity funds and hedge funds, continued to pour into the long side of these markets, pushing prices seemingly ever higher. By mid-May, the markets had developed a momentum of their own that was difficult to slow, much less stop. The strength and durability of the rally during April and May has been

remarkable as has been the volume of trade. Trading volumes for soybean and soymeal futures contracts have been huge, equaling or exceeding those posted during the 2012 drought year. Open interest in both climbed to record levels during May.

The price velocity of the rally is displayed in the following table, which shows price changes in the key futures contracts for soybeans, soymeal, corn and wheat between 5 April 2016 and 25 May 2016:

Comparison of 5 April and 25 May Closing Futures Prices*			
	5 April	25 May	Change
July Soybeans	\$9.13	\$10.86	+\$1.73 (18.9%)
November Soybeans	\$9.20	\$10.54	+\$1.34 (14.6%)
July Soymeal	\$271.20	\$407.20	+\$136.20 (50.2%)
July Corn	\$3.60	\$4.05	+\$0.45 (12.5%)
July Chicago Wheat	\$4.81	\$4.66	-\$0.15 (4.7%)

Source: CME Group, WPI

\*Prices are per bushel except soymeal, which is per short ton (ST), and rounded to the nearest penny

During the 36-day trading period noted above, the prices for a number of different commodity markets worked higher in large part due to the influence of speculative buying by various types of funds. The commodity market commanding the greatest attention from the general public is the crude oil market, and the most widely traded crude oil futures market is the CME Group's contract for West Texas intermediate crude oil. From 5 April to 25 May, the July crude oil contract went from \$37.99/barrel to \$49.56/barrel, a gain of about 30 percent. By comparison, the 50 percent price appreciation of the July soymeal contract is truly impressive, and the nearly 20 percent jump in the price of the July soybean contract is a very significant change of value. One of the most popular broad-based commodity price indices is the Dow Jones-UBS

Commodity Index, a weighted index based on daily futures market prices for energy products, agriculture, industrial metals, precious metals and livestock. During this same 5 April-25 May period, the Dow Jones-UBS Commodity Index posted a gain of about 10 percent. This provides some perspective by which to measure the resounding rally currently underway in the soybean, soymeal and corn futures markets.

## The May WASDE

The May WASDE is always highly anticipated because it contains USDA's first real projections for U.S. and world supply/demand for the next crop year, which in this case is 2016/17. The current U.S. crop year for wheat ends 31 May, and winter wheat crops in the Northern

Hemisphere are already well advanced and only a few weeks away from harvest. Thus, USDA analysts have a solid basis for their wheat estimates. The U.S. crop years for corn and soybeans runs until 31 August, and seeding of the new crop has usually just started when the May WASDE is released, usually on or about 10 May. Hence, USDA's production projections for U.S. corn and soybeans are typically based on USDA's pre-planting acreage estimates made in March and trend line yields. World crop production projections are analytical "best guesses." Demand projections are also based on trends, the potential influence of current prices and any other foreseeable factors.

In the May 2016 WASDE, USDA made minor adjustments in its old crop U.S. and world supply/demand estimates for wheat and corn. Based on the March new crop acreage estimates, it projected a small U.S. wheat crop and record-large corn production for 2016/17. Ending stocks for both were projected to be larger than the amounts estimated for 2015/16. However, estimated U.S. soybean demand for 2015/16 was boosted enough to lower estimated ending stocks below expectations.

Based on smaller planted acreage and a slightly lower yield, USDA projected U.S. soybean production in 2016/17 would be about 130 million bushels less than in the previous year and demand would be 175 million bushels greater. This resulted in an estimated 25 percent reduction in U.S. ending stocks, which was a bullish surprise for analysts and the soybean market. The combined U.S. and world old crop supply/demand estimates and new crop projections were viewed as quite bearish for wheat and somewhat bearish for corn. Although those for soybeans still left the world adequately supplied, they were seen as bullish since the projected increase in demand resulted in ending stocks that were much lower than expected.

The May 2016 WASDE provided a major fundamental rationale for the strong rally in soybean futures prices that was already underway but had lacked such support until then.

## More Fundamental Rationales

Prior to the release of the May WASDE on 10 May, there had been a tendency by some to ascribe the soy and corn rally solely to the influence of noncommercial managed funds as they accumulated huge long futures positions. The Commodity Futures Trading Commission's (CFTC's) last weekly Commitment of Traders (COT) report near the end of May shows that combining futures and options positions, funds are net long approximately 200,000 soybean contracts, 62,000 contracts of soy meal and 75,000 contracts of corn while net short about 117,000 contracts of Chicago wheat, which represents soft red winter wheat, and 20,000 contracts of Kansas City wheat, the hard red winter wheat contract. To provide perspective, the fund long position in soybean futures and options is the equivalent of about 1 billion bushels.

Some analysts argue that the April/May rally is grossly overdone. They point out that these big price increases have occurred amid abundant supplies. There is nothing remotely approaching a shortage of corn, soybeans or soy meal in the U.S. or the world as a whole. They also note that even as spot soy meal futures prices pushed above \$400/ST for the first time since 2014, U.S. soybean processors were discounting already cheap basis offers of soy meal in a scramble to find buyers in order to lock in historically high crushing margins. In short, although soy and corn prices climbed to their highest prices in many months, supplies in the U.S. and world remain abundant with prospects for large 2016 crops in the offing. These analysts argue that the wheat market, which has been in a bearish slide since early 2014 amid a surplus and record-large global ending stocks, better reflects fundamental supply/demand realities.

Nevertheless, there are some factors that have come along to lend some fundamental support to the current bullish market action in addition to USDA's projections of tightening soybean stocks in the May WASDE. The winter corn crop in north central Brazil has been plagued by dry



weather verging on drought that has cut potential production by perhaps as much as 5 MMT. In the preceding several months, Brazil exported so much corn that domestic users are now struggling to find supplies in advance of the winter crop harvest. Reduced corn production there will undoubtedly lower that country's corn exports over the next several months.

During late April through the first half of May, northern Argentina suffered excessive rainfall that led to extensive flooding. Persistent wet conditions endured by mature but unharvested soybeans appear to have ultimately caused a production loss of 2.5 MMT and deterioration in quality of an additional several MMT. This situation played into the scenario of tightening soybean supplies pictured in USDA's May WASDE and the already bullish soybean market.

Another supportive factor helping to push soybean and soymeal futures prices higher comes from China's Dalian Commodity Exchange, which has seen its soymeal futures contract recently stage a major price rally of its own. The huge volume of trade in that contract makes it the most widely-traded agricultural derivative contract in the world as measured by the number of contracts traded. It is not uncommon for daily trading volume in Dalian soymeal to reach 7 or 8 million contracts, while the CME's corn futures, the biggest U.S. agricultural derivative contract by trading volume, seldom reach 500,000 contracts and its soymeal futures average about 150,000 contracts. Comparing Dalian soymeal futures trading volume with that of CME's soymeal contract strictly on the number of contracts traded is somewhat misleading, though, since the CME contract is for 100 ST and the Dalian contract only for 10 MT. Even on just a tonnage basis, however, the amount of soymeal changing hands at the Dalian exchange each trading day is roughly 50 times greater than that at the CME.

The huge volume of futures traded there is fueled by thousands of small "retail" speculators attracted by market volatility, low margin deposits and the chance for quick profits. Dalian meal futures prices gained more than 40 percent

during the last few weeks, setting several daily volume records along the way. Toward the end of May, the Chinese government grew concerned by the "speculative bubble" in Chinese commodity markets, and it imposed a number of new rules, including much larger margin requirements, in an effort to squeeze out speculators. These moves forced Dalian soymeal prices to retreat, although they remain relatively higher than the value of physical meal would appear to warrant. Meanwhile, the earlier rally of Dalian meal prices gave some support to U.S. fund managers' long positions at the CME.

### **What is Next?**

USDA's next weekly crop condition report should show that more than 90 percent of the U.S. corn crop had been seeded as of 29 May along with close to 75 percent of the soybean crop. Open weather during the first few days of June should allow planting of the small remaining balance except for double-crop soybeans that will be planted after soft red winter wheat is harvested in the southern and central U.S. History will record that the timing of planting of the 2016 U.S. corn and soybean crops met the five-year moving average.

El Nino has been declared dead, and nearly all weather forecasters predict that it will be followed by a La Nina condition based on cooling surface waters in the central Pacific Ocean. The debate is over how quickly a La Nina is likely to develop. A number of private forecasters contend that it will happen rapidly enough to significantly raise the risks of a hot, dry Midwestern summer that could impair crop yields. U.S. Weather Service forecasters predict that La Nina will not develop until sometime in autumn, too late to be a weather factor during the U.S. summer growing season. The weather outlook through the first three weeks of June is for below-average temperatures and normal rainfall, an excellent combination to provide a good start for the 2016 corn and soybean crops.

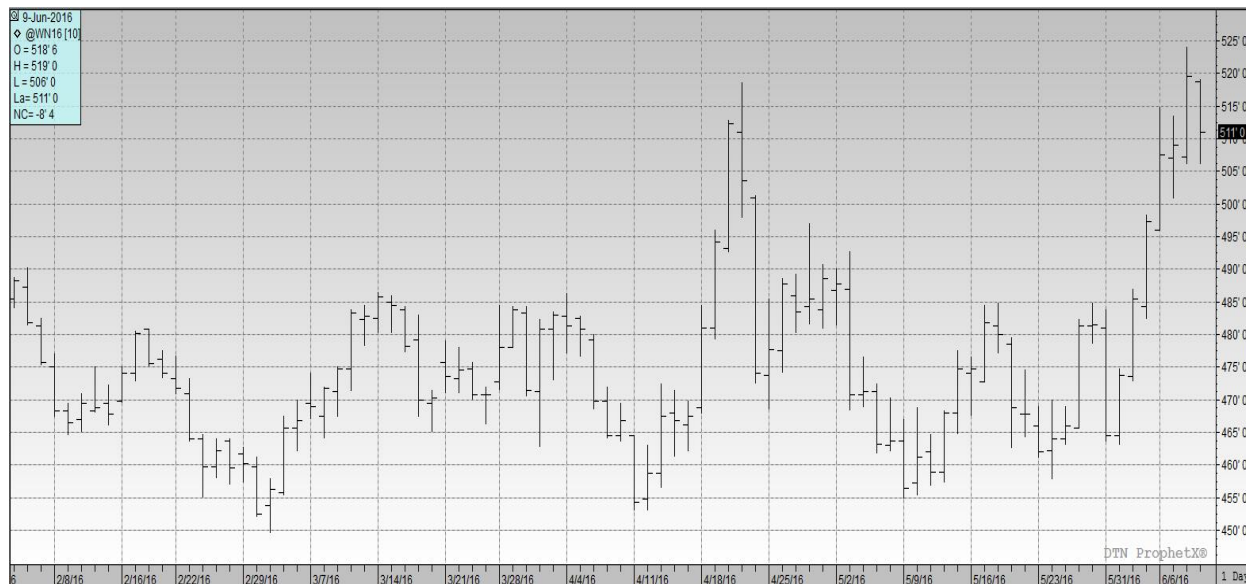
Recent soybean price gains have been relatively higher than those for corn, and this has provided some incentive for farmers to shift previously

intended corn land to soybeans instead. There has no doubt been some switching, but the question of how much land will be involved is a matter for debate, at least until USDA's final planted acreage estimates are released on 30 June. Most guesses are in the 1-3 million acre range. Each 1 million acres switched would mean an additional 45-46 million bushels of soybean production.

The Chinese government just announced it will begin auctioning off 300,000 MT of soybeans from government reserve stocks for domestic processing against a sales target of 4.4 MMT. Indications suggest that it does not intend to replace the stocks sold. Theoretically, whatever volumes are auctioned should reduce demand for imported soybeans by a like amount. In this sense, China's sales of reserve stocks should effectively replace the Argentine soybeans lost to adverse weather.

Weather conditions thus far have supported timely planting and a good early start for the new U.S. corn and soybean crops. They will also determine the extent to which another potential year of large U.S. crops is realized. About all that can be said right now is: so far, so good. The soy complex and corn markets have had an unexpectedly vigorous bullish run during April and May. However, market bulls will soon need something to come along to add a significant, fundamental underpinning to sustain the rally. They face the burden of demonstrating that spot corn futures prices around \$4/bushel and/or spot soybean futures prices near \$11/bushel are justified. This means that they probably must depend on adverse summer weather to sustain their case.

## July Chicago Wheat Futures Prices



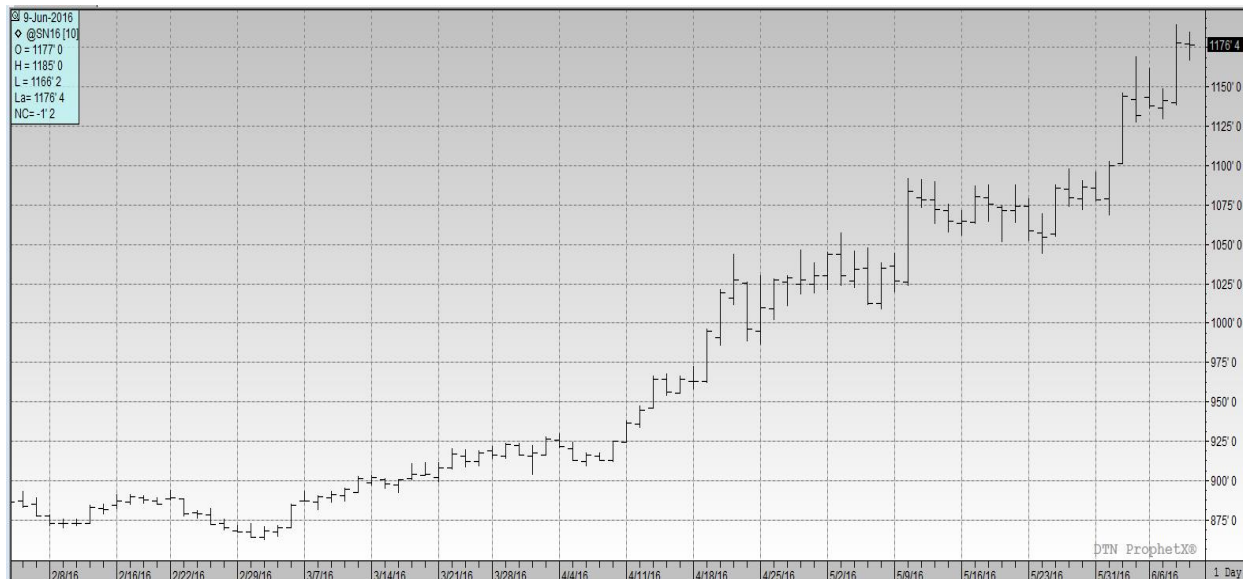
Source: Prophet X (6/9/2016)

## July Corn Futures Prices



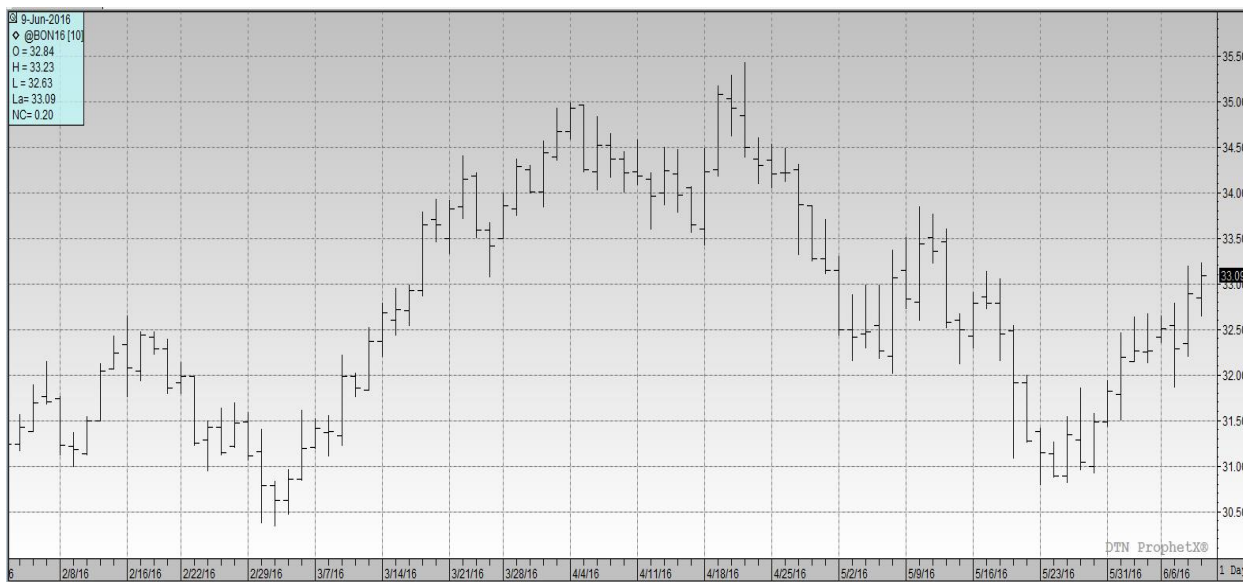
Source: Prophet X (6/9/2016)

## July Soybean Futures Prices



Source: Prophet X (6/9/2016)

## July Soyoil Futures Prices



Source: Prophet X (6/9/2016)

## July Crude Oil Futures Prices



Source: Prophet X (6/9/2016)