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"The fewer the facts, the stronger the opinion."
— *Arnold H. Glasow*

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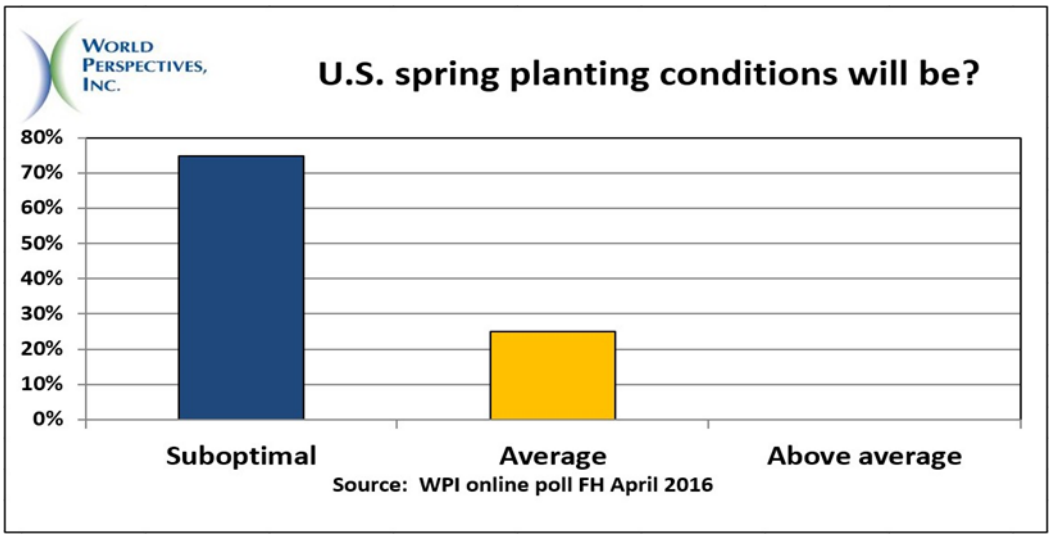
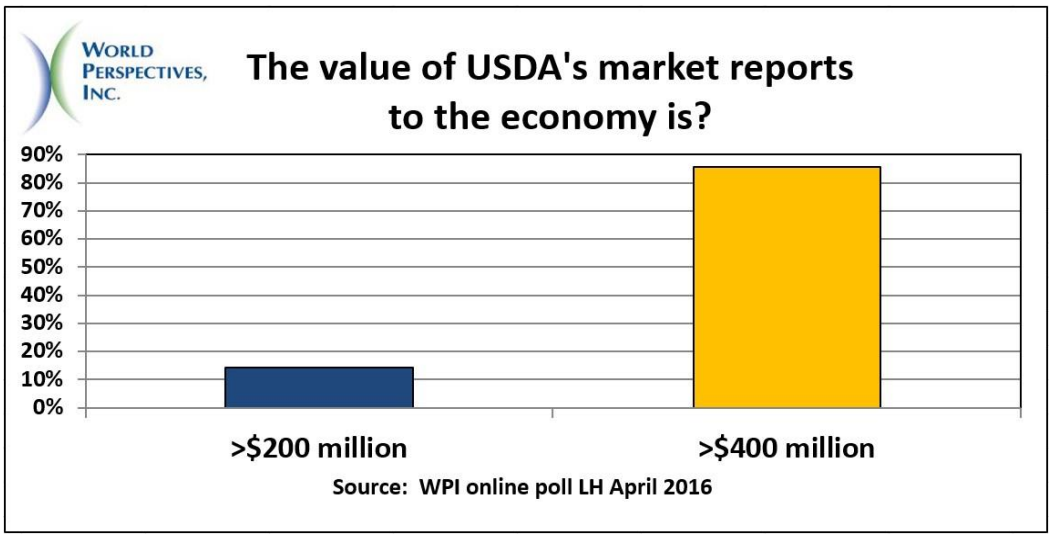
WPI POLLING

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



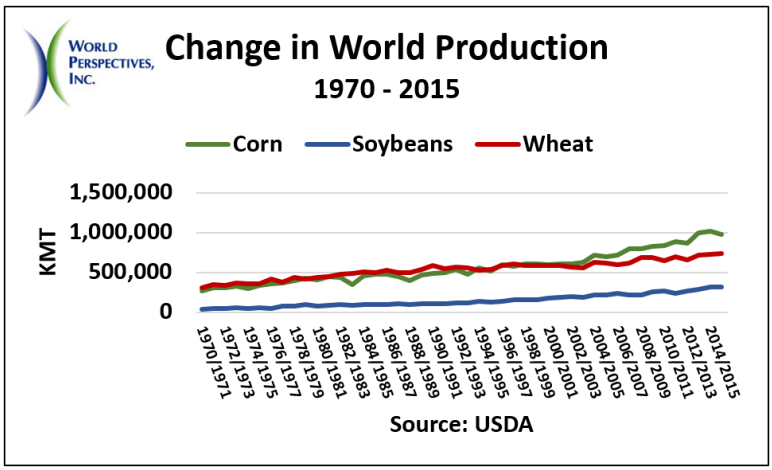


WHEAT OUTCOMPETED

By Gary Blumenthal

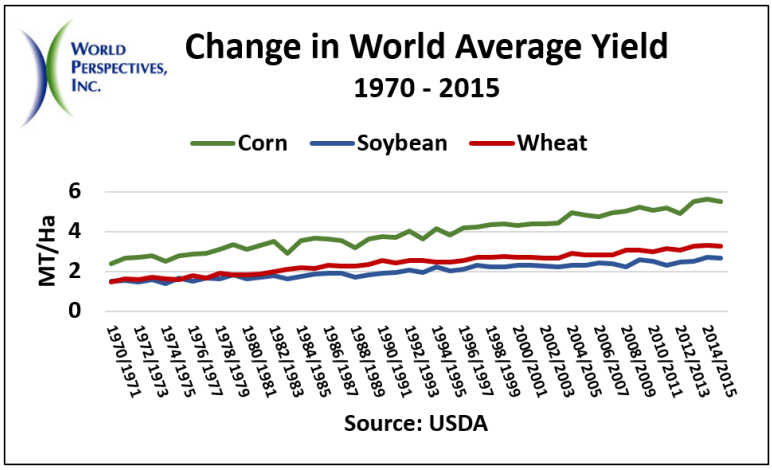
Until recently, the volume of wheat produced globally had rivaled that of corn (see graph below). By contrast, corn has long been "King" in U.S. agriculture for its volume, but wheat was held with more reverent respect. At its crudest level, wheat delivers more energy (calorie) and protein than an equivalent volume of corn. However, there is also an appeal to the sheer complexity of wheat. Unlike many other plants, it has multiple sets of chromosomes. There are six major types of wheat, depending on genetic structure.

The U.S. (as do some other countries) further categorizes wheat into six distinct classes based on growing season, appearance (color), protein content and gluten quality. Each class delivers attributes favored by different final products. If agricultural commodities were each represented by a particular sport, wheat would be a complex one like baseball.

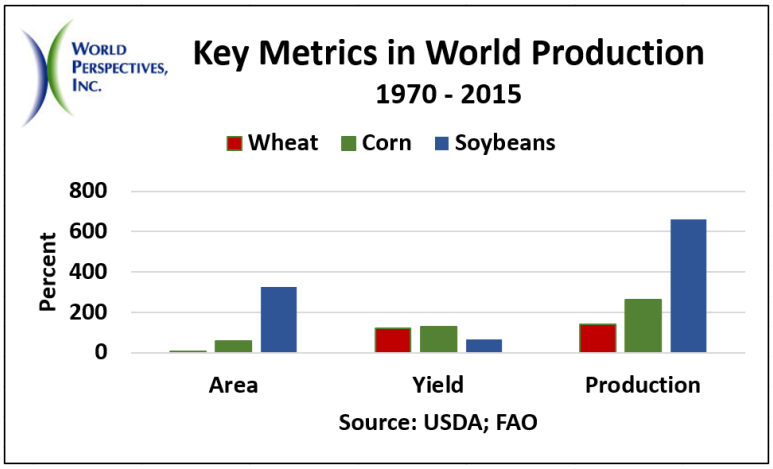


Notably, production of corn and soybeans fell below trend growth levels during the bearish 1990s and early 2000s, whereas wheat was above trend during that period. That flipped during the most recent bull market with global production of wheat below long-term trend rates and corn and soybeans rising above their respective trend levels.

On a global measurement, yield gains over the past few decades have trailed those of corn but not notably. In fact, soybean yield gains have significantly lagged behind that of wheat, though that is largely due to the expansion of soy into new planting areas with lower yield results. Where wheat has trailed badly is in the competition against other major crops for production area.



As shown in the graph below, soybeans have been the big winner in the global competition for production area and production increases. The area planted to wheat has been stable.



While wheat can grow under very diverse agronomic conditions, it has a lower net return than other crops when cultivated in more highly mineralized soils with higher moisture levels. Consequently, it is more profitable to grow it in drier grassy plain areas such as the northern Great Plains in the U.S. or the low plains of Russia.

The positives for wheat producers include the fact that most of the population growth occurring between now and 2050 will be in the mid-latitude region where wheat is not grown, and wheat demand is correlated to population growth. As a result, world trade in wheat is expected to double. On the downside, over 37 countries produce wheat in the grain-producing belts to the north and south of that mid-latitude zone, and the competition to supply that new demand will be fierce.

Complicating that competition is the use of government subsidies for both increasing production and facilitating export. Some countries restrict imports and exports. For example, Canada classifies imported wheat as "feed" so that it is unable to compete with domestically-produced product going into the higher-valued food market. Argentina just recently removed restrictions on exporting wheat, which it had imposed in an effort to ensure more cheaply-priced domestic food. Egypt subsidizes the price of wheat used by bakers to ensure low-cost bread for consumers.

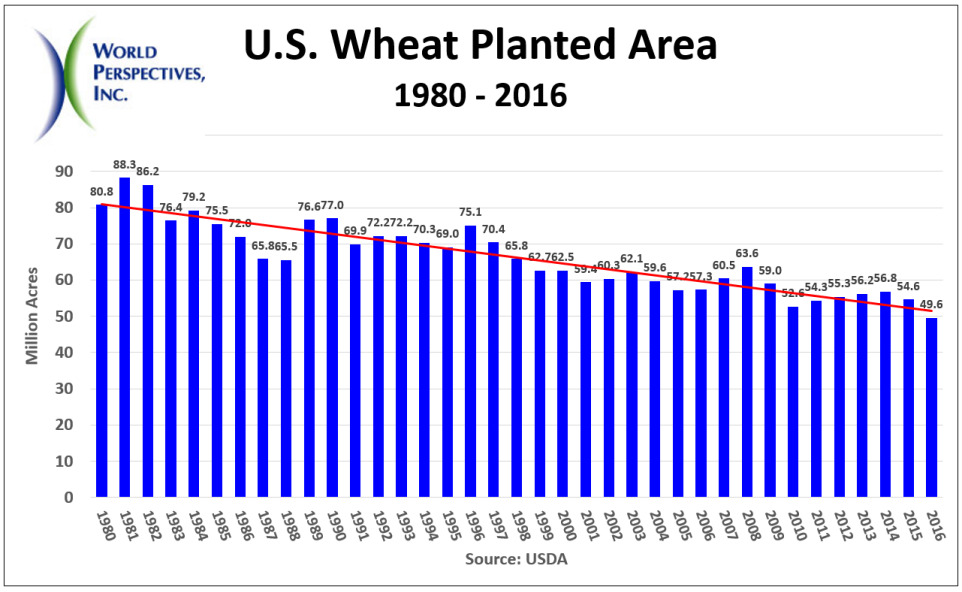
With climate change and genetics making other crops more profitable, wheat production in the United States is in decline. Russia is now the world's largest wheat exporter and is likely to maintain that position for years to come. It supplied more than a third of all globally traded wheat a century ago, and Moscow's policy is to return the nation to that level of dominance. Moreover, it has the resources to accomplish that goal. The problem for wheat growers elsewhere in the world is deciding what to grow instead.

U.S. WHEAT SECTOR'S DECLINE AND LACK OF TECHNOLOGY

By John Baize

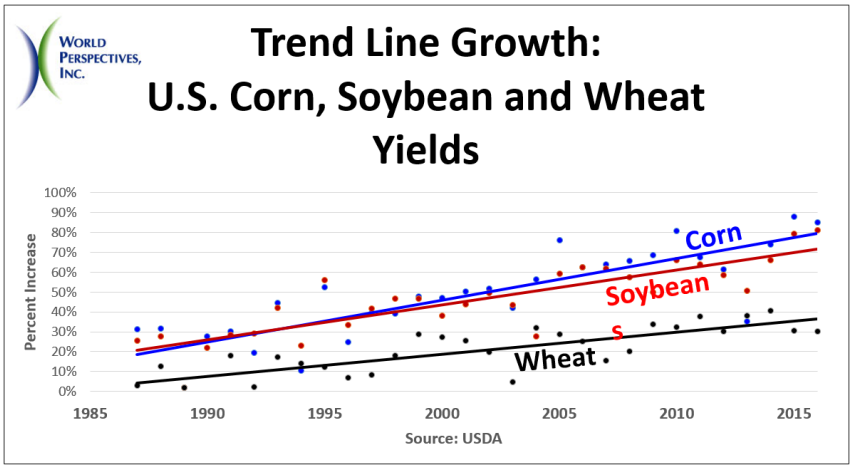
The U.S. wheat industry, clearly in the midst of a major decline, is in the process of developing a National Wheat Action Plan that is aimed at reversing the 30-year decrease in U.S. wheat plantings and production. The goal is to announce the plan this fall and then begin moving forward toward its implementation over the next several years.

U.S. wheat planted area has dropped 44 percent from a high of 88.3 million acres in 1981 to only an estimated 49.6 million acres for this year, a decline of almost 44 percent. U.S. wheat production has fallen 26.4 percent from a high of 75.8 MMT to last year's 55.8 MMT. During the same period, U.S. soybean and corn plantings have grown 19.1 percent and 11.3 percent, respectively, with some of the largest gains occurring in traditionally large wheat-growing states such as the Dakotas. Meanwhile, soybean and corn production have increased 118 percent and 80 percent, respectively.



There are many reasons why U.S. wheat plantings and production have declined so much in the last 35 years. First, growth in global demand for wheat has been much slower (59.2 percent) than that for soybeans (277 percent) and corn (136 percent). Second, farm policy changes that have granted farmers greater flexibility in what they plant have allowed them to shift land out of wheat into corn, soybeans and other crops. The Conservation Reserve Program also took a great deal of fragile land out of wheat production. Third, the collapse of the Soviet Union has resulted in major increases in wheat production in the Black Sea region to the point that it is now the world's top wheat exporter. The European Union, Australia and South America have also seen their wheat exports expand. U.S. demand for wheat flour dropped in 2015 to the lowest level in 16 years. Wheat diseases and the U.S. biofuels program also have played a role in U.S. wheat's decline.

Possibly the most important reason the U.S. wheat sector has contracted is the fact that wheat yields and profitability have not kept pace with that of corn, soybeans and some other crops. The average yields of corn and soybeans in the last three years were approximately 85 percent and 81 percent greater, respectively, than they were in 1980, but the average wheat yield was only about 35 percent higher. Thus, it is no mystery why farmers able to do so have reduced their wheat plantings in favor of growing more corn and soybeans.



There are likely several factors why wheat yields have lagged behind those of the other crops, but a key one is that life science and seed companies have had much greater incentives to invest in varietal research for corn and soybeans than for wheat. For many years, the U.S. wheat sector fought laws that prevented brown bag sales of protected wheat varieties to other farmers, although they can still legally save back wheat for replanting on their own farms in subsequent years. Because of this, private companies have invested very little in developing higher-yielding wheat varieties as they cannot recoup their money. Meanwhile, public funding in wheat varietal development has not kept pace with inflation.

In contrast, corn seed companies have long been able to make good profits from developing new hybrid varieties because the seed produced cannot be re-used. Additionally, life science companies have also had patent protection of their biotech corn seeds since the late 1990s. Beginning with Monsanto's 1996 release of the Roundup Ready soybean event, farmers wanting to plant that variety and other GM strains have had to buy new seed each year and pay a price that includes a royalty to the company that developed and patented it. This so raised the revenue that companies could make from selling soybean seed that funding for soybean varietal research grew enormously. All of these investments have resulted in faster growth in soybean yields and the development of varieties that are drought-tolerant and insect-resistant as well as ones with different fatty acid content.

The wheat industry could also be benefitting from biotechnology, but it chose not to do so out of a fear that buyers of wheat and wheat flour would not purchase any that was genetically modified. It is true that wheat is mainly a human food as opposed to a feed for animals, and there has been much more resistance to GMOs in foods. Perhaps there would have been no market for GM wheat, but that was not a certainty. Ironically, by bowing to concerns about consumer acceptance of biotech wheat, this sector may have unwittingly exacerbated consumer apprehensions about GM crops overall. Clearly, the wheat industry has lost out on gains in productivity by not supporting biotech development as this failure caused Monsanto and other companies to stop all such work on GM wheat.

Fortunately, the U.S., Canadian and Australian wheat sectors realized all of this a few years ago. As a result, the wheat industry associations of the three countries agreed in June 2014 to support biotech research and development. Several life science companies are now working on the development of varieties that will be resistant to various herbicides and insects and also have higher yields. However, it likely will take several more years before they are developed and receive the required regulatory approval necessary for their release to farmers. In the interim, biotech crops almost certainly will continue to see their yields and competitiveness for land grow faster than that of wheat. As well, the resistance that GM wheat will probably face in the marketplace is unlikely to be any less than it would have been two decades ago, and it may be even greater.

The development of the CRISPR-Cas genome editing technology may be particularly important for the wheat industry. This is because it should expedite the development of new varieties that will not be classified as transgenic, at least by the U.S. government, since the transfer of genes from other organisms is not involved. In turn, this should reduce resistance to the new varieties by groups opposed to GMOs. At this point, it is impossible to know how much this technology can help improve wheat yields, but the odds favor it being very useful.

When GM wheat varieties are developed and released for commercial production, they are certain to face opposition from committed anti-GMO organizations. To prepare for this, the wheat industries of the U.S., Canada and Australia need to begin educating food companies and consumers now about the safety and advantages of biotech wheat and flour. That is going to require a great deal of money to be effective, more than the industries currently have available. The U.S. wheat sector, in particular, needs to seriously consider establishing a national wheat checkoff to raise the funds that will be required. Otherwise, the breakthroughs that biotechnology promises to provide may not occur because of a lack of a market for the new wheat varieties developed.

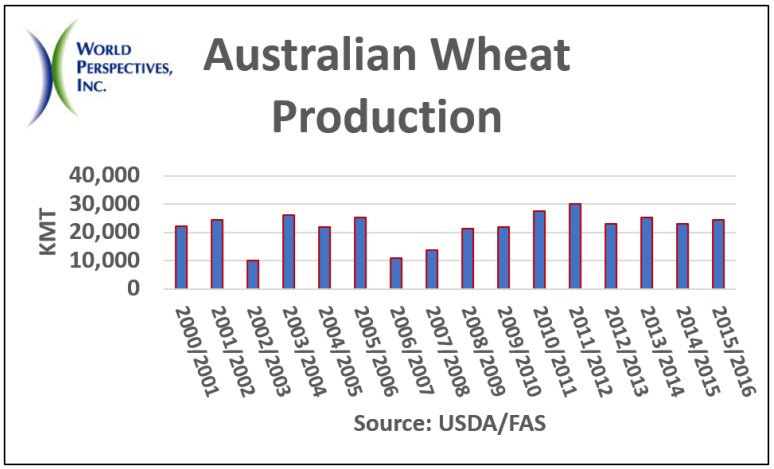
THE NEXT CROP – AUSSIE GROWERS PREPARE FOR BATTLE

By Michael Darby

On 25 April, Australia celebrated its annual Australian and New Zealand Army Corps public holiday, the ANZAC Day long weekend. This commemorates the Battle of Gallipoli in World War I, which turned out to be one of the greatest Ottoman Empire victories of the war as well as one of the last. The lives of 11,430 ANZACs were lost on the beach now referred to as ANZAC Cove – their names forever emblazoned on the memorials of Australia's wheat belt towns. To this day, Australia remains one of the few countries in the world to commemorate a military defeat.

The ANZAC holiday is also significant for another reason – in the wheat belts of Australia, there is an old saying: "If it hasn't rained by ANZAC Day…you're in trouble." Generally speaking, little or no rain has been received in most Australian wheat-growing states, and dry planting has now commenced in earnest.

Following six years of above-average production conditions, it appears that Australia could be entering another drought cycle. Its last big one, the millennium drought, began in 2002/03 and only abated in 2009/10 (see graph below). During that time, the worst-affected growers experienced five consecutive crop failures.



Since the millennium drought, Australia's crop production has rebounded with consecutive wheat production and export volume records set in 2010/11 and 2011/12. In the latter, Australia exported 24.7 MMT out of the record 29.9 MMT produced, an impressive effort to say the least. Other crops such as cotton also recorded all-time production and export records.

Now as planting commences for the 2016/17 crop, there is genuine concern as to how the season will pan out in key wheat-growing regions. Despite subdued prices, a decline in the cost of some key inputs together with historically low livestock numbers has created expectations of at least an average-sized crop.

In eastern Australia (including South Australia), where most of the country's wheat is grown, conditions have been very dry and subsoil moisture in key districts has been pitiful. Further, records for hot weather continue to be broken. This has put pressure on livestock markets and caused wheat growers to look to the sky for rain.

In western Australia, where the largest proportion of wheat is exported, rainfall in the lead-up to planting has been excellent. Some growers reported reaching their projected annual rainfall prior to the commencement of planting. Excellent subsoil moisture should provide a degree of surety for wheat growers there with many looking toward their fourth consecutive bumper year!

Back in the east, poorer expectations for wheat production will be compounded by greater domestic demand as livestock producers increase rations amid falling supply scenarios. From a production mix standpoint, later rain often results in higher barley production at the expense of wheat as growers take advantage of the barley crop's shorter season. Combined, this will increase downward pressure on east coast grain exports should the dry weather persist until the conclusion of planting.

Long-term weather forecasts are slightly more encouraging and remain the key in eastern Australia, which lacks subsoil moisture. Australia's Bureau of Meteorology has forecast most of the country's wheat belt (east and west) will receive more than 100 mm of rainfall in all states (with the exception of Queensland, which is a minor wheat producer) between now and the end of planting. Western Australia, Victoria and New South Wales show the most promise under this forecast with South Australia also looking good. If this forecast proves correct, the rainfall for planting should be adequate, but more rain will be needed in the east if average yields are to be achieved.

The Southern Oscillation Index (SOI), another indicator for long-term rainfall, has been in the negative for over a year now, and this has not provided much hope over the longer term. However, with the SOI moving upward from -19.7 in February to just -4.7 by the end of March, Australia's wheat growers remain hopeful.

As ANZAC Day passes, growers' thoughts will return to their own struggles – thankful that unlike those in uniform, they only have the weather and the markets with which to do battle.

A WORLD WHEAT CONTRACT

By Robert Kohlmeyer

The business of buying and selling grains, oilseeds and oilseed products around the world is fraught with risks for producers, exporters, importers and end users alike. Among them are:

- Ocean freight rate changes
- Exchange rate fluctuations when trade occurs using different currencies
- Value of money changes due to fluctuating interest rates
- Quality changes in the grain between origin to the consumption point

These risks are always faced to some degree by participants in the exporting and importing of grain. However, the constant, universal one is that of an adverse price change, which confronts anyone holding title to the commodity. Grain can be moved from origin in one country to consumption in another in the most efficient, cost-effective manner possible, but how well participants in that process manage all of these risks, especially that of adverse price change, will usually determine its relative profitability.

Hedging Mechanism

We are all familiar with the classic concept of hedging price risks, inherent in the ownership of freely traded physical commodities or the need to own them at some future time by establishing equal but offsetting short or long positions in associated derivative or futures markets. It is a unique concept that first evolved for agricultural commodities, later spreading to others. The usefulness of futures contracts as viable tools to manage price risks was and still is the economic rationale that supported the growth of futures exchanges such as the Chicago Mercantile Exchange (CME).

Hedging price risks for internationally-traded grain can be a complex process. How does one manage price risks of soybeans grown in the U.S. or South America and processed in China, Japan or Europe? How does one manage such risks for corn grown in the U.S., South America, Ukraine or possibly China and milled into feed products in Japan, Europe, Egypt or South Korea?

Soybean production is concentrated in the U.S., Brazil and Argentina, which account for more than 80 percent of world production and almost 90 percent of world exports. Thus, world soybean values are closely integrated, and the CME soybean futures complex is an effective proxy and hedging vehicle for the world soybean and soy product trade. Corn is produced and consumed more widely around the world than soybeans, but world corn values are not tied as closely together. However, the U.S is still the largest corn exporter. Combined, the U.S., Brazil, Argentina and Ukraine will provide about 85 percent of the world's corn exports in 2015/16. This concentration of export supplies allows CME corn futures to function fairly well as a reasonable hedging vehicle for world corn trade.

Broken Mechanism

The world wheat situation is quite different. Of the major agricultural crops, wheat production and consumption are the most widely dispersed globally. The U.S. no longer plays a dominant role in world wheat production or world wheat trade. It is the fifth-largest producer in the world behind the EU, China, India and Russia. Although the U.S. once regularly accounted for more than 40 percent of world wheat trade, that share will fall below 13 percent this year. The EU, Russia and Canada will all export more than the U.S. in 2015/16. The world wheat market is comprised of at least five distinct types of wheat

that are not necessarily interchangeable, making that market considerably more complicated.

When the U.S. played a larger role in the world wheat market, Chicago wheat futures (now the CME wheat contracts) provided a price discovery function for most world buyers and sellers. And even though U.S. participation has greatly diminished, the CME's soft red winter (SRW) wheat futures contract still attracts more trading volume than any of the world's several wheat futures markets and remains the go-to one for speculative interests. However, as wheat production and consumption has widened geographically, CME wheat has lost much of its appeal as a hedging vehicle. Although the CME still portrays it as the best marketplace for world wheat hedgers, our sense is that only a small and declining share of world trade of non-U.S. wheat is hedged in CME wheat. The truth is that CME SRW wheat futures have never been a logical hedge for the great majority of world wheat trade, and the reality is that hedging Australian or Ukrainian trades in CME SRW futures creates two different speculations.

SRW, the physical wheat that underlies CME wheat futures, is grown mostly in the eastern Midwest, Delta and Southeast. CME SRW wheat contracts are settled by physical delivery in the Chicago and Toledo regions and at certain locations along the Ohio and Mississippi Rivers. SRW represented about 22 percent of total U.S. wheat production in 2014/15, which has dropped to about 17 percent in 2015/16. Its participation in world wheat trade has declined even more rapidly than the total market share for all U.S. wheat. U.S. exports of SRW accounted for about 2 percent of world wheat trade in 2014/15 with the same expected in 2015/16. To put it bluntly, although CME's SRW futures are the most traded wheat futures contracts in the world, SRW is an insignificant part of world wheat trade.

The disconnection between CME wheat futures and the world wheat market has been starkly demonstrated this year. CME wheat prices have consistently been trading at the equivalent of $10-25/MT higher than Russian/Ukrainian and/or EU wheat. Exporters of Black Sea or EU origin ignore the price action of CME wheat futures when they price their daily export wheat offers, and those who trade CME wheat futures ignore the daily movement of competitive world wheat prices.

Tacitly, the CME management acknowledged the limited scope of its SRW contracts when in 2012 it launched a Black Sea wheat futures contract settled by physical delivery at certain Black Sea port facilities in Ukraine, Russia and Romania. It was hoped that international wheat traders would use the contract to hedge Black Sea trades and that it would also generate spread trade versus CME SRW or KC HRW futures contracts. However, the Black Sea contract never was able to attract any commercial or speculative interest. Although it is still listed, there has not been a single trade in quite some time and no open interest. The concept of making or taking physical delivery of wheat in a Black Sea facility was off-putting to commercials, and the lack of trading volume caused speculators to ignore the contract. Obviously, it is not an answer for world wheat traders seeking to lay off price risk. As things now stand, Paris wheat futures are the best existing option for a world wheat trader seeking to hedge price risk, but Paris wheat has issues of liquidity and limited physical delivery capacity.

World Wheat Contract

What is needed is a "world" wheat contract. A world wheat contract must be seen as reflecting the physical value of wheat from multiple origins. It would have to be an index type of contract based on the value of wheat from major export origins. The CME itself has discussed this concept for some time. Following are some thoughts about how a world wheat index contract should be devised:

The contract should represent milling wheat, however defined. It should be based on milling wheat values from the major exporters: the EU, Russia, Ukraine, Canada, Australia, Argentina and the U.S. When appropriate, it could include different types of wheat from the same origin. The weight of each origin and type would be adjusted based on USDA's June WASDE projections and then reweighted based on that

agency's December WASDE. The price index could be weighted based on the percent share of world wheat trade that each origin or type of wheat is expected to achieve.

Collecting reliable price data from independent sources in each major wheat origin has typically been a major problem, but it would be an essential component to the index. Fortunately, this has become more readily achievable in recent years. One or more independent sources from each origin would have to be developed, or perhaps it could be the new charge for an organization such as the International Grains Council since it already does so on a more general basis.

The index contract would be priced in U.S. dollars and could include the months of July, September, December, March and May or any other combinations of months that make practical sense. It is doubtful that the index could be traded more than 12 months out. However, the number of different monthly contracts should be limited to no more than five due to the limits of liquidity.

Since the index would be settled by an exchange of cash, the volume of wheat represented by each contract unit would not be a crucial factor – within reason. Perhaps it should be 1,000 MT. CME's Black Sea contract represents 136 MT (5,000 bushels) because the CME wanted to ease the way for potential spread trade between the Black Sea contract and its existing U.S. wheat futures contract. But from a commercial view, 136 MT is not a practical unit for physical wheat trading, which usually involves larger volumes.

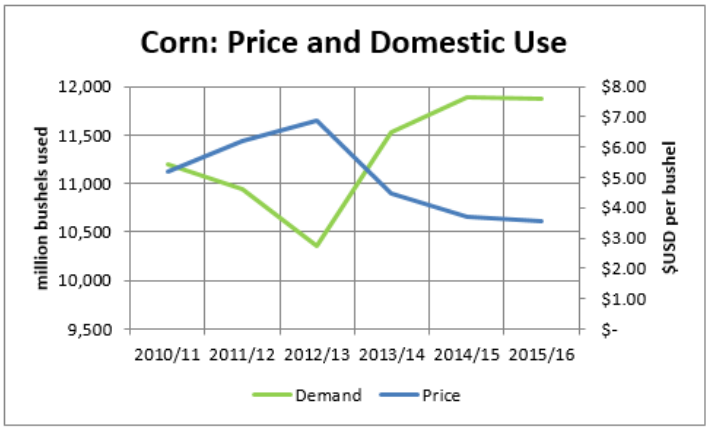
This is just an outline of what a world wheat index futures contract might look like. Obviously, there would be many details to complete. This would not be a panacea to the world wheat hedging dilemma. Whether a futures contract of any kind would work in the real world can only be determined via actual experience. And only experience would show whether a world wheat contract would attract sufficient speculative participation. Designing a workable and viable contract involves art as much as anything else. A workable world wheat index contract requires solving a multitude of problems. From a logical perspective, though, this concept makes a great deal more sense than trying to use one based on the physical delivery of a minor wheat as a hedging tool for the whole of global wheat trade.

LOOKING AT WHEAT MARKET ECONOMICS THROUGH RICE

By Dave Juday

In literature, a tragedy is a type of dramatic story about a protagonist destined for a great downfall due to some overpowering force such as a character flaw, conflict, or fate. Could wheat's tragic quality be that it is the modern day Giffen good?

In economic theory, a Giffen good is a product for which a price increase means demand for it rises and vice versa. It is not a status symbol product nor a luxury product with added attributes such as organic, cage-free eggs. A Giffen good has the opposite qualities of other goods and products. Normally, demand decreases when the price of a good rises and drops when that price declines. The example below comparing the domestic utilization of U.S. corn to price shows the standard economic quality of price and demand (in this case domestic use) moving inversely.



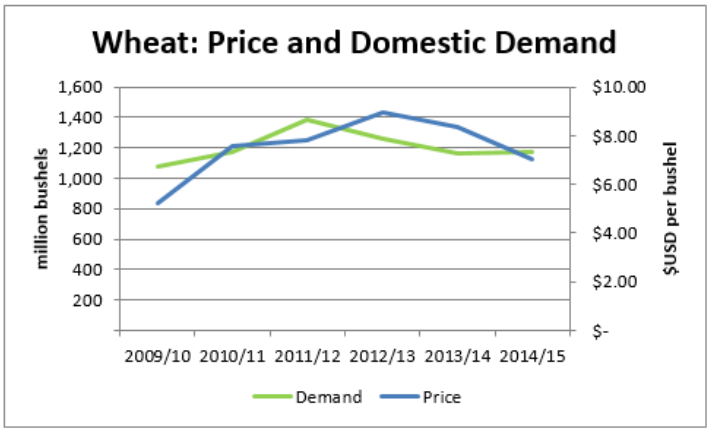
Source: USDA, WPI

Giffen's Paradox is a theoretical exception to the standard economic rule and was conceived by the 19th century British economist Robert Giffen. Interestingly, Giffen's observations were formed on the price and demand for bread in the late 1800s. The theory became a popular one at the time when bread was a staple in the diet of the poor. Economic theory would hold that when the price of bread dropped, the poor's purchasing power would increase, thus allowing them to buy more meat instead. Thus, the demand for bread decreased. Conversely, there was less purchasing power when the price of bread increased, so substitutes were eliminated from the diet and more bread was demanded. Giffen's paradox was used to describe the great Irish potato famine – a time when a loss of supply of potatoes drove up the price and yet demand grew along with it. The problem with this example is that Ireland was in the midst of a famine, and rising potato prices were a function of lowered supply resulting from a potato blight; thus, in the aggregate, it was impossible to actually sell a larger supply of potatoes.

To understand a Giffen good within economic theory, it's necessary to apply both the income theory and the substitution effect theory. The former holds that as income rises, consumers will change the type of goods they buy – meat instead of bread, for example. When incomes drop, they typically revert back to buying more bread and

less meat. Thus, the income effect for a given good can be positive (meat) or negative (bread). Under the substitution effect, as the price of a good goes up, one typically buys less of it. Therefore, the substitution effect is always negative as the price of a given good goes up.

The paradox of a Giffen good is that when the price of a good goes up, the income effect, which is positive, and its value is greater that the negative value of the substitution effect – enough to offset the substitution effect. This dynamic would yield an upward sloping demand curve, which is opposite of the typical downward sloping demand curve. The chart below illustrates how the utilization (proxy for demand) of wheat from the 2009/10 crop year to 2011/12 follows pricing; it is sloping upward in tandem with an increasing price and downward when it drops. Compare the direction of the price and utilization curves of wheat below to the curves for price and utilization of corn in the preceding chart.



Source: USDA, WPI

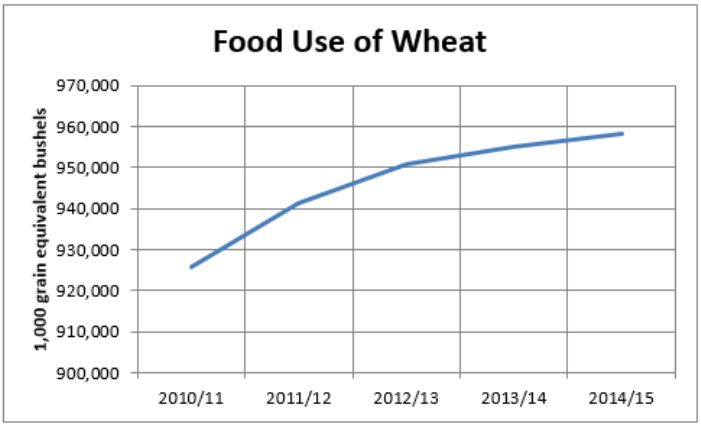
Note, however, that even a Giffen good becomes price sensitive at the extreme. At some point, the demand curve has to slope downward as the price of the good starts to absorb all of a consumer's income. Thus, the bottom of the curve slopes upward as the top of the curve slopes downward, making the demand curve look like a backwards "u" as the following shows:

Throughout the past 120 years of economics study, there has been heated debate about whether a true Giffen good really exists. That debate raged until about 2007 when two Harvard economists, Robert Jensen and Nolan Miller, actually found strong evidence of a true Giffen good: rice in China (at least among the poor).

Jensen and Miller looked at the poor in China and demonstrated that they consume more rice or noodles, their staples, as prices go up. Humans need a certain amount of calories to survive, and those can be obtained either by consuming just rice and perhaps some vegetables or also adding a few bites of meat. However, meat is expensive. As the price of rice increases, these poor Chinese can no longer afford the luxury of meat, and yet they still need to get their calories. Thus, they eat rice instead, which is still relatively cheap compared to meat.

Wheat is like rice in many ways in that it is a food grain that provides calories. Of course there is high-end use of wheat in foodstuffs, but there is also a key and substantial use for maintaining adequate calories, especially among the poor as in China. Trends like high protein, low carbohydrate, and gluten-free diets impact the higher end of wheat use. Indeed, those who follow these diets are not the poor; they are trying to avoid amassing calories. Such diet trends have driven down consumption since the early 2000s. However, this is not new. For nearly 100 years until the 1970s, per capita wheat use declined in the United States as diets became more diversified and incomes grew. Wheat use dropped from over 225 pounds per capita in the 1880s to a low of 110 pounds in 1972.

Wheat is certainly not a pure Giffen good, but the role that it plays in diets does suggest some similar characteristics. What does that mean for the real world? During the period of record-high meat prices, the domestic food use of wheat started to grow, at least slowly, despite the trends of low carbohydrate and gluten-free diets.



Source: USDA, WPI

We are now seeing meat prices drop from their record historical highs, while dairy prices are down significantly and produce prices have leveled off from recent highs. If wheat has at least partially intrinsic Giffen qualities, wheat consumption is likely to trend back downward.

CORRECTION: Dairy Exports
In the April edition of Ag Review, the article "U.S. Dairy Labor Pool Versus Global Dairy Demand" used out-of-date (2014) data on cheese exports and should have cited New Zealand as the largest cheese exporter in 2015. Additionally, it mischaracterized the U.S. as a larger cheese exporter than the EU when the intent was to say that it is larger than any one single European country. The EU as a whole is a much larger dairy producer and exporter.

It should be noted that following the expiration of the previous production quota, DG-Agri projects EU dairy production will "expand significantly" based on growing domestic cheese demand as well as increased exports of both cheese and milk powders. In fact, the authority expects EU producers to contribute the most toward larger world dairy exports, followed by New Zealand and then the United States.

COMMODITY MARKET REVIEW

By Robert Kohlmeyer

The last time that grain and soy futures markets could be described as exciting was in early July 2015 when there was still some concern about production prospects for the 2015/16 U.S. corn and soybean crops. Less than favorable weather during the spring planting season gave the market something to ponder. However, that apprehension soon abated as weather conditions turned favorable during the growing season, raising the prospects for yet another year of very large U.S. crops. Grain production prospects for both Western and Eastern Europe also blossomed.

At the same time the U.S. was harvesting its large crops in September and October, South American farmers were expanding the areas they would be planting with soybeans and corn. By the end of the year, it became clear that world production of wheat, corn and soybeans for 2015/16 was at or near record levels, production would exceed demand and already abundant world stocks would grow even larger. It was also evident that the U.S. share of world trade in grains and soybeans would continue to decline in the face of stiff competition from other well-supplied exporting countries, exacerbated by the strong U.S. dollar.

From July 2015 forward, the CME Group's grain and soy complex futures market prices worked irregularly lower under the pressure of bearish supply/demand fundamentals facing the underlying crops. Markets settled into something of a bearish funk. Managed money funds – those still trading agricultural derivatives – built up large short positions in futures and options for wheat, corn, soybeans and soymeal.

By early March of this year, however, the bearish sentiment that had dominated markets for months began to slowly change. Fund short positions had grown so large that they effectively became their own worst enemy. Each new issue of the Commitment of Traders report evidencing their steep one-sidedness would prompt a short covering rally. Soybean harvesting was also well underway in Brazil, and some questions began to arise about the size of the crop there as well as in Argentina. The question arose as whether their crops would turn out to be as large as originally thought.

A pattern of dryness settled over north central Brazil that was seen as unfavorable for the winter corn crop that was planted on land from which soybeans had recently been harvested. Conversely, a pattern of persistent wet weather began to fall on mature soybeans in northern Argentina and Uruguay. Moreover, there was concern about drought and freezing temperatures harming newly emerged U.S. hard red winter wheat in Kansas, Oklahoma and Texas. Dry conditions were also seen putting at risk the winter wheat crop in portions of southern Russia and Ukraine.

Funds began to buy back some of their huge short positions as futures prices started to edge higher, which turned charts and some technicals bullish, causing more short covering. By the time the calendar turned over to April, the rally was underway. Then, as more concern about damage to Argentina's soybean crop emerged, funds turned the corner and were long about 40,000 contracts of soybean futures and options. However, managed money funds began the month still holding large short positions in corn and wheat. On 1 April, we estimate that funds were still short 160,000 contracts of corn futures and options as well as more than 150,000 contracts of Chicago wheat futures and options.

April was a tumultuous month for grain and soy futures markets and indeed for many other commodity derivative markets as well. Soybean

and corn futures saw the kind of daily price movements and volatility that reminded many traders of 2012 and 2013. Although never reaching the levels seen during the previous big bull market, they did seem quite exciting compared with the bearish dead zone of the prior 10 months. However, it should be noted that the excitement was dominated by noncommercial traders. Commercials hedged their purchases from the large surge of U.S. and South American cash corn and soybean movement as producers took advantage of the higher prices they were surprised and delighted to see. By and large, though, commercials were not major participants in the April futures market rally.

The April Market Rally

The dimensions of the April rally can be seen in the following comparison of futures price closes on 31 March with those of 29 April, the final trading days of those months.

Futures Prices Closes
31 March and 29 April 2016
($/bushel)

	31 March	29 April	Change
July Soybeans	$9.1775	$10.2975	+$1.12
November Soybeans	$9.1075	$10.21	+ $1.1025
July Corn	$3.5575	$3.9175	+ $0.36
September Corn	$3.6875	$3.9525	+ $0.265
Chicago July Wheat	$4.8075	$4.885	+ $0.0775
KC July Wheat	$4.87	$4.785	- $0.085

Source: WPI

Another measure of April's futures market activity are the changes in the positions carried by the managed money funds. As noted, funds were short about 160,000 contracts of corn futures and options on 1 April. We estimate that they were long about 80,000 corn contracts by the end of that month, meaning that they bought a massive 240,000 corn futures and options contracts (approximately $4.5 billion) during April. Funds also added about 105,000 soybean futures and options contracts, finishing the month long a total of about 145,000 contracts. Funds ended April still short more than 105,000 contracts of Chicago wheat, having covered about 45,000 contracts during the month.

The size of the respective price changes and the changes in fund positions during April are good indicators of the level of speculative activity in each market. The soybean market has historically been more volatile than the corn or wheat markets, and this has always attracted speculative interest. The trading pattern for April was no exception. The gains for the July soybeans futures contract, the leading old crop contract, and November soybeans, the main new crop contract, of more than $1/bushel (about 12 percent) indicate that soybeans were the funds' principal target. In fact, open interest in soybean futures reached record-high levels late in the month, higher even than during the drought of 2012. This is remarkable given that world soybean supplies were rising to a record level as well. In monetary terms, the corn market's monthly gains were much more modest than those of soybeans, but they still added a significant 9 percent to corn futures values.

Fund managers viewed the wheat market differently. Fundamentally, the supply/demand outlook for wheat in the U.S. and the world as a whole was arguably more bearish than for corn and soybeans, and funds accumulated a large short position in wheat futures months earlier. However, the dryness in the southern U.S. Plains as well as portions of the winter wheat regions of Russia and Ukraine provided a small, bullish spark. That along with the influence of rising corn and soybean prices forced funds to cover some of

their large short position in wheat. Short covering forced a mid-month rally in wheat futures prices that actually took them as much as $0.30 higher than the end-of-the-month levels in the preceding table.

During the second half of April, however, significant rains alleviated dry conditions for winter wheat in both the U.S and the Black Sea region, quickly revving wheat production prospects. USDA's last weekly winter wheat crop condition report in April rated 59 percent of winter wheat as in good or excellent condition. That compares very favorably with last year's 42 percent and is well above the end-of-April average.

The U.S. winter wheat crop is in the best condition in years, and spring wheat planting in the northern Plains is well ahead of average. U.S. wheat production in 2016/17 could well approach last year's level despite the smaller planted area. Moreover, winter wheat crops in the EU, Russia, Ukraine and North Africa have also improved and appear in excellent condition. It is possible that 2016/17 could be another year of record world wheat production. However, the better production prospects for both the U.S. and the world proved too much of a burden for the wheat futures rally to bear, and prices turned lower late in April. KC futures prices, representing hard red winter wheat, were actually pressured below their starting point for the month.

Commodities Rebirth

The long bull market for commodity futures markets, including those for agricultural commodities, ended in 2013/14. Money had flowed into commodity markets for years, turning them into a mainstream asset class. A stagnant world economy caused a downturn in demand for raw materials, the U.S. dollar appreciated against other currencies, commodity prices stopped rising and turned downward instead, and money flowed out of commodities back into "safer" investments. Commodities were again shunned by "hot money" investors.

However, that began to change earlier this year. There were signs that massive government stimulation programs in China had halted the economic deterioration there. The EU and Japan engaged in their own stimulus programs. While the U.S economy was improving at a modest, erratic pace, it was enough for the U.S. Federal Reserve Bank to indicate that it foresaw two more interest rate increases to follow the initial one last December. The U.S. stock market reversed its decline and headed higher again. The U.S. dollar's long bullish rally peaked and began a slow slide lower against other major currencies.

Years of economic stagnation and very low or even negative interest rates among developed countries along with loose monetary policies produced a huge pool of money searching for better returns than were available from traditional investments. Commodity prices had fallen to comparatively low levels as supplies outstripped flat or falling demand. Crude oil became a sort of symbol for commodities in general, and oil prices sank to near $26/ barrel, a multi-year low, in January due to a supply glut. Gradually, some of this so-called hot money was attracted back to commodities because their prices were cheap.

Although the broad commodity rally actually began in March, it became more impressive in April with rising grain and soy futures market prices part of it. During April, the widely-watched NYMEX June crude oil futures contract gained more than $6/barrel, going from $39.75 to $45.92 as U.S. production shrank and OPEC tried to freeze its members' production levels. The U.S. dollar slid lower, and gold futures prices, which often move in an opposite direction, climbed from $1,236 to $1,291 per ounce. Copper and other industrial metals were also part of the rally.

There is considerable question as to whether supply/demand fundamentals support the higher commodity prices. Certainly, this is an appropriate question for grain and soy markets. Newfound bulls point to the weather problems that will likely result in smaller Brazilian winter

corn production and cite the smaller-than-expected Argentine soybean crop now being harvested as a result of the excessive April rains. However, neither of these situations will change the fundamental outlook that views world corn and soybean supplies as more than adequate to meet anticipated demand.

U.S. corn planting so far this spring is well ahead of schedule. USDA reported that nearly 50 percent of the crop was in the ground by the end of April with a good chance that it will be entirely planted early and with the best soil moisture profile in several years. Obviously, it is too early for serious production forecasts. However, early planting and the expected larger area devoted to corn could lead the way to another huge U.S. crop when it is harvested this fall, assuming normal weather conditions during the growing season. Likewise, early U.S. corn planting leads to the potential for early soybean planting, which is also likely to increase in acreage above the 82.2 million acres projected by USDA at the end of March.

At this very early point in time, it seems quite possible that 2016/17 world corn production will be noticeably larger than last year, but it is difficult to forecast much of an increase in world demand. By the same token, world soybean production in 2016/17 should approximate the levels of the past two years, which would of course likely add to the already record-large ending stocks.

Again, it is clearly too early in the Northern Hemisphere growing season to be drawing firm conclusions about levels of grain and soybean production as well as demand for 2016/17. It does seem apparent, though, that only adverse weather can prevent this from being another year of large and possibly record-setting crop production. Barring such adverse weather and/or an unexpected surge of demand, the burden of rationalizing their long positions will be on the newly-minted noncommercial bulls.

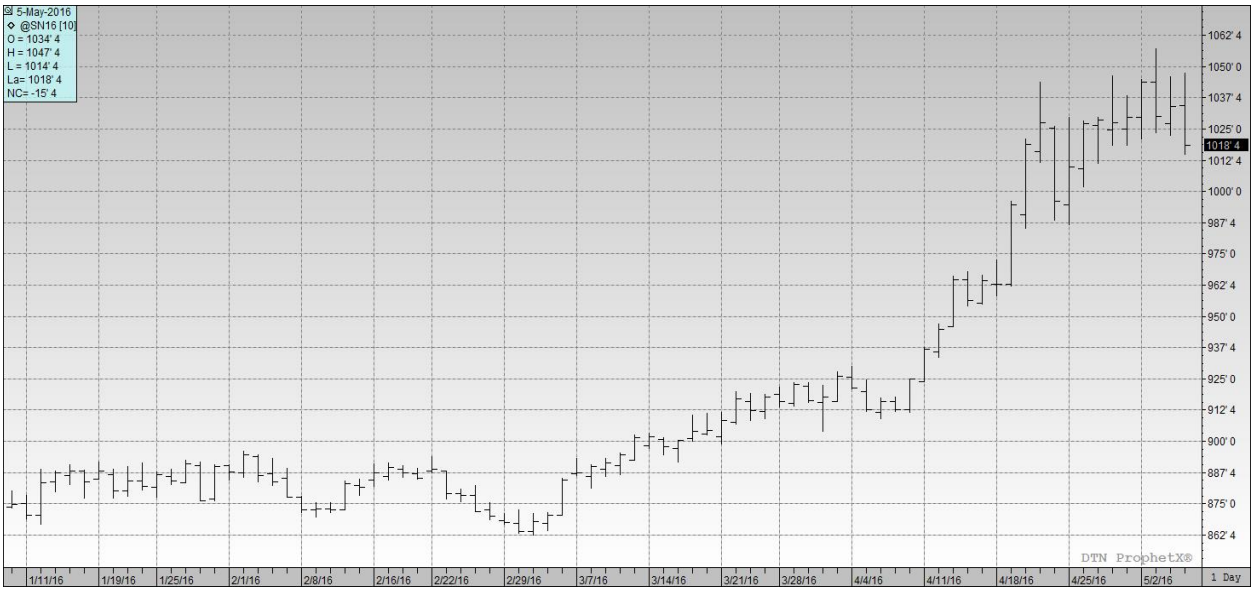
July Chicago Wheat Futures Prices

Source: Prophet X (5/5/2016)

July Corn Futures Prices

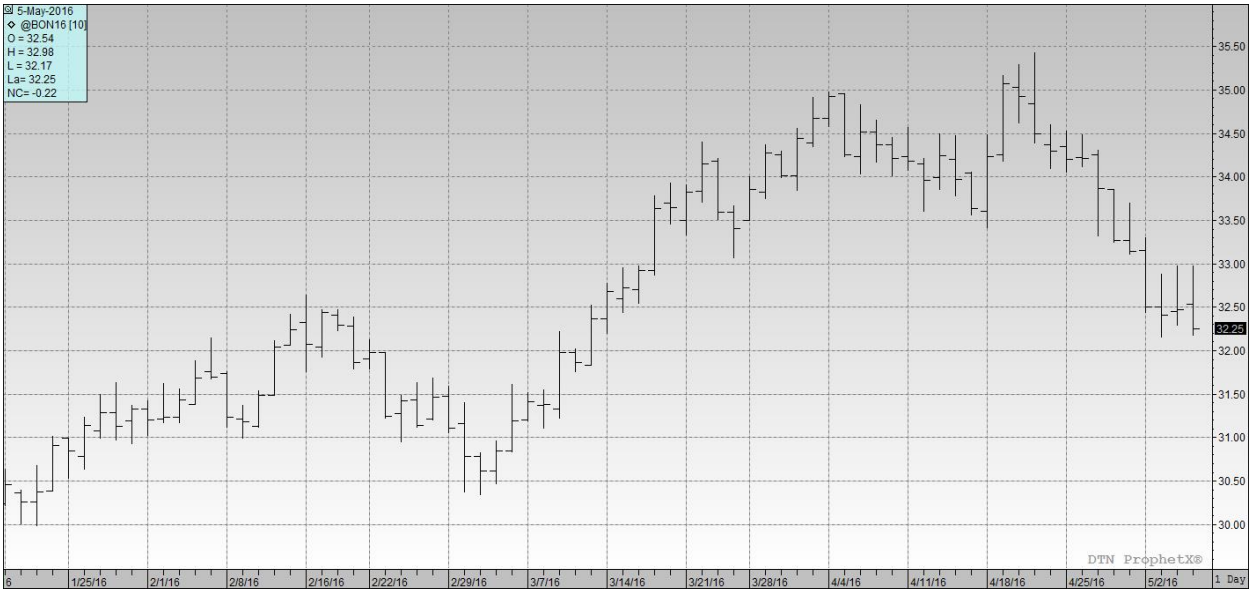
Source: Prophet X (/5/5/2016)

July Soybean Futures Prices



Source: Prophet X (5/5/2016)

July Soyoil Futures Prices



Source: Prophet X (5/5/2016)

July Crude Oil Futures Prices

Source: Prophet X (5/5/2016)