Global Feed Market 2011

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Market outlook by Paul Aho Ph.D

The grain crisis of 2011

Driven by the 2011-2012 US corn crop, feed prices are likely to be lower than in 2008, but high cost will persist for a much longer time.

The grain crisis of 2011 appears likely to eclipse the severity of the 2008 event, but in a different way. In 2008, prices spiked to punishingly high levels that led to a short-lived panic followed by plummeting grain prices. This time, instead of record-high levels, high prices are likely to be somewhat lower than in 2008 but persist for a much longer time. This will be more like a war of attrition in comparison to the blitzkrieg of 2008.

The inevitable subsequent fall in grain prices may be delayed for more than a year.

Corn is the best example of this long war of attrition. In 2008, corn spent just five weeks above $6 per bushel ($240 per ton) in Chicago during June and July and then fell to $3 by the end of 2008. This year, corn has been above $6 per bushel for five weeks. It is possible that corn could average $6 for the entire crop year of 2010-2011 and even for crop year 2011-2012, a total of 104 weeks.

This is a much more damaging scenario for the world's animal industries than the five-week duration in 2008. The likelihood of corn ever again falling to $3 per bushel is only slightly short of impossible. As can be seen in Figure 1, 2010-2011 will much worse than 2007-2008 and could be followed by a crop year that is just as bad.

Price of grain

The price of grain is high this year due to the usual problem of a mismatch between supply and demand. The supply of wheat was affected by drought in Russia and Argentina and by too much water in the United States. Russia, normally a large exporter of grain, shut its ports. Corn production in Argentina was reduced by drought. In the United States, excessive rainfall reduced yields and led to a draw down of U.S. reserves.

On the demand side, a recovering world economy is consuming more feed grains including, most notably, China. In addition, unsustainable subsidized burning of food, a.k.a. ethanol production, continues to expand unabated. Ethanol will consume 40% of the U.S. crop this year, corresponding to 125 million metric tons. At the end of the current crop year on August 31, 2011, there will be virtually no corn left in the U.S.

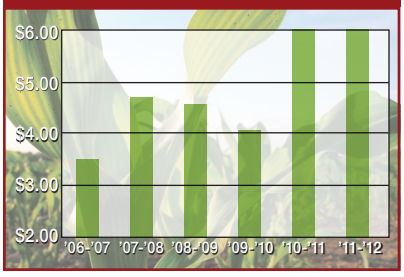
As bad as the current situation is, it could get even worse. Corn prices, and indeed all grain prices, from now on will be driven by the prospects for the 2011-2012 U.S. corn crop.

At least 14 billion bushels (355 MMT) of corn are needed to allow prices to decline from current levels. In order to accomplish this, 92 million acres of corn will need to be planted and those acres will have to yield 166 bushels of corn per acre. For comparison, in this crop year, 88 million acres were planted with a yield of 153 bushels per acre. These increases in acres and yield would seem, at first glance, attainable given high corn prices and the normally better yield after a year with a poor yield. However, at this point, the goal appears to be difficult to attain.

Yield of 166 bushels

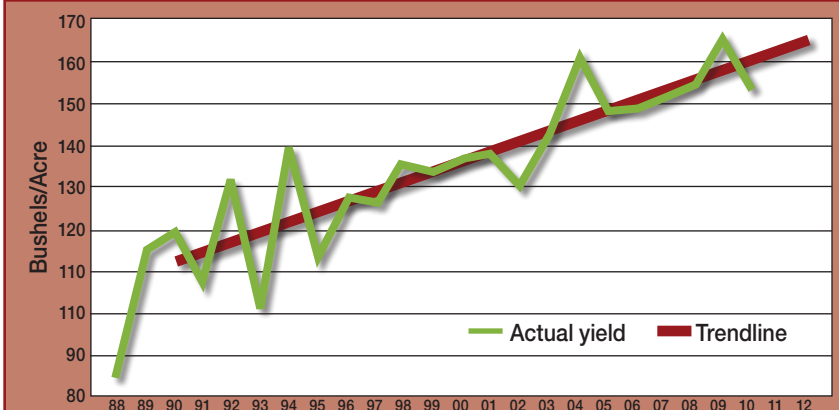
As can be seen in the depiction of corn yields (Figure 2), a yield of 166 bush-

FIGURE 1: Average price of corn in Chicago *($/Bushel by crop year)*



2010-2011 will be much worse than 2007-2008, and could be followed by a crop year that is just as bad.

FIGURE 2: US corn yield actual vs 1991-2010 trendline



Source: CME Group

A yield of 166 bushels would fall above the trend line.

els would fall above the trend line. Even in 2012 a yield of 166 bushels per acre would be considered exceptional. It is also important to note that the Midwest is primarily non-irrigated cropland and output depends on timely rains. Throughout recorded history, droughts occur with regularity in the American Midwest. During the period between 1971 and 1988, for example, there were four years when the crop was reduced due to drought and yet for the last 23 years no prolonged drought has occurred. The Midwest is clearly overdue for a crop-reducing weather event.

Although long-range forecasting is notoriously inaccurate, many experts consider that the northern Corn Belt will be too wet and too cool for an early start to planting this year. As a result, there will be significant delays in planting in some areas. The snow will take a long time to melt and the ground

Grain crisis

TABLE 1: Corn *(billions of bushels)*

	2009-2010	2010-2011	2011-2012
Harvest	13.1	12.4	13.5
Ethanol	4.6	5.0	5.2
Feed	5.2	5.2	5.1
Exports	2.0	2.0	1.9
Total Use	13.1	13.5	13.5
Ending Inventory	1.7	0.7	0.7
Chicago Price	$160	$240	$240
	$4.00	$6.00	$6.00

With 91 million acres and a yield of 162 bushels, a harvest of 13.5 billion bushels can be expected at this time.

TABLE 2: Acreage

	Price Increase Last 12 months	Acres 2010 (millions)	Acres 2011 (millions)
Cotton	100%	11	14
Wheat	60%	54	57
Soybeans	50%	77	77
Corn	100%	88	91

Given high prices for soybeans, wheat and cotton it is unlikely that corn will be able to increase by four million acres from the 88 million planted last year. A net gain of 3 million acres would appear to be more likely this year.

will take a long time to warm up.

Under the current La Niña system, the summer is likely to be warmer and drier than normal. As a result, late-planted corn and soybeans will be vulnerable to summer dryness. Just how much La Niña will impact crop production is unknown and depends on timing. Nevertheless, the scenario projected by meteorologists suggests that 166 bushels is no sure thing this year. The best that can be anticipated at this point is the trend yield of 162 bushels.

92 million acres

What about the amount of land going into corn? Given high prices for soybeans, wheat and cotton, it is unlikely that corn will be able to increase by four million acres from the 88 million planted last year. It is already known that record-high prices for cotton will impact corn acreage in the Southern states. Therefore, a net gain of 3 million acres would appear to be more likely this year.

With 91 million acres and a yield of 162 bushels, a harvest of 13.5 billion bushels can be expected at this time. This corresponds to the same use of corn this year. With more corn going to ethanol, less will be available for animal feed and exports, and the ending inventory will be no better than the record-low level this year. If the projected scenario proves to be true, corn prices will continue to be unusually high through the 2011-2012 crop year.

If the preceding scenario proves to be correct, the expected world increase in production of animal protein will be trimmed once again. Meat prices will be higher and the resulting demand from consumers will be lower than otherwise would be expected. The production of beef will continue to decline worldwide and the expected increase in the production of pork and chicken could be reduced or delayed for a year.

A silver lining to the dark cloud of high grain prices is that there will be a powerful incentive to increase grain production around the world. Within a year or two at the most, significant production increases can be expected and the price of grain will surely decline. The difference from 2008 is that the drop may not come quite as quickly.

[FeatureStory *by Simon M. Shane*]

U.S. agricultural subsidies questioned

Of particular concern is the implication that subsidies are disproportionately assigned to larger operations

The New York Times published an editorial on Jan. 15, 2011, questioning the continued value of agriculture subsidies. Given the need to reduce the federal deficit, the commentator suggested that the 112th Congress should seriously question the $10 to $30 billion annually to support aspects of agriculture.

Some of the components of agricultural subsidies include $5 billion in direct payments, $7 billion in marketing loans and up to $4 billion each for crop losses and subsidies to purchase crop insurance.

Hidden subsidies

Of particular concern was the implication that subsidies are disproportionately assigned to larger operations. The 2010 proposal to limit direct payments to farmers with an income in excess of $500,000 was soundly rejected. It is a fact that although the aggregate dollar value of subsidies goes to large integrated corporate farming enterprises, small farms, beloved of the current USDA administration, are the least productive in the U.S. Based on dollar per unit of output, these farms are effectively over-supported compared to the large operations.

There are a number of hidden subsidies that benefit agriculture. The U.S. Army Corps of Engineers maintains the river transport system that allows shipment of grains from the Midwest to poultry and hogs in the Southeast and to our export terminals along the Gulf. The interstate highway system also benefits agriculture, as do subsidies to the rail infrastructure critical to transporting grains and agricultural products.

The editorial continues with the observation that the farm lobby is so strong and bipartisan that radical changes to the current subsidy system are unlikely. It is possible that the misplaced initiatives of the Obama Administration to support "small farmers" will be rejected, despite the change of leadership in the House.

The ethanol program

The most egregious misuse of taxpayer funds is represented by the biofuels program, which is emerging as a factor contributing to inflation. During the first week of 2011, daily ethanol production attained 37.3 million gallons in comparison to gasoline demand of 370.4 million gallons. This means that if all ethanol were to be added to gasoline in the given week, the inclusion rate would only be 10%.

This is viewed against the demands of the ethanol lobby to increase blending to as much as 15%. It is obvious that despite subsidies for incorporating ethanol into gasoline, there is an economic "blend ceiling," which limits national use of the product, principally derived from corn. Given the figures reported by the ethanol industry there is currently an inventory equivalent to a 10-week supply at present use rates.

The net result of our misguided ethanol program will be an ongoing escalation in the price of corn, which various agriculture economists have estimated is inflated by 50 cents per bushel due to diversion. The price of corn as a commodity will also be influenced in the short term by hedge fund speculation and international demand, including the requirements of China for hog and poultry feeds. The situation is also exacerbated by an anticipated reduction in supply of coarse grains associated with reduced yields in many corn-producing nations following the transition from an *El Niño* to a *La Niña* producing unseasonal droughts and floods.

The future of GMOs and ethanol:
www.WATTAgNet.com/16689.html

It is projected by USDA that 35% of the 2011 corn crop will be diverted to ethanol production.

It is evident that there are distortions in our production of agricultural commodities brought about by frequently conflicting policies that cater to vested interests. If we are to solve the disparity between federal income and expenditure it will be necessary to rationalize our energy, food and healthcare policies.

Critically evaluating the expenditure on agricultural subsidies and supplanting the renewable fuels initiatives, which is based on corn, would be logical starting points. [FM]

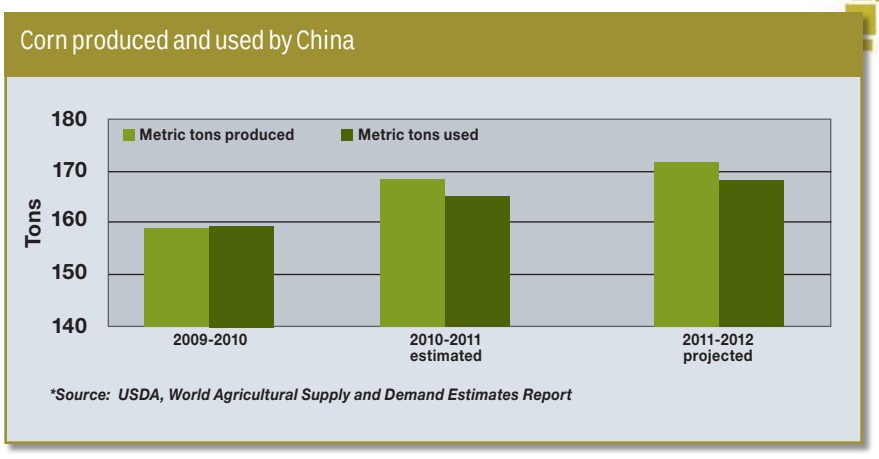
[Markets *by Rex A. Runyon*]

China unlikely to import US corn

Despite initial reports, experts disagree over what will happen in regard to China, corn exports and corn prices in 2011.

Trying to understand what lies ahead this year for corn prices is no easy task, particularly when one factors in possible exports to China. Earlier this year, the *Financial Times* forecast China to import the largest amount of corn in nearly 15 years. A month later, Bloomberg, citing the United Nations Food & Agricultural Organization, reported that corn imports by China may total 2 million metric tons in the year to June 30. *The Wall Street Journal* subsequently reported that exporters had already made deals with China for 116,800 metric tons of corn to be delivered before August 31. On that same day, Reuters reported that a prolonged drought in China could also put pressure on global supplies and raise prices.

For many, it seems only a matter of time before a global battle for limited corn supplies begins. However, despite these reports, not everyone is in agreement as to what will ultimately happen in regard to China, corn exports and corn prices in 2011.



Historically, China has produced as much corn as it uses. However, some in the industry wonder if this will change in the future.

Experts disagree

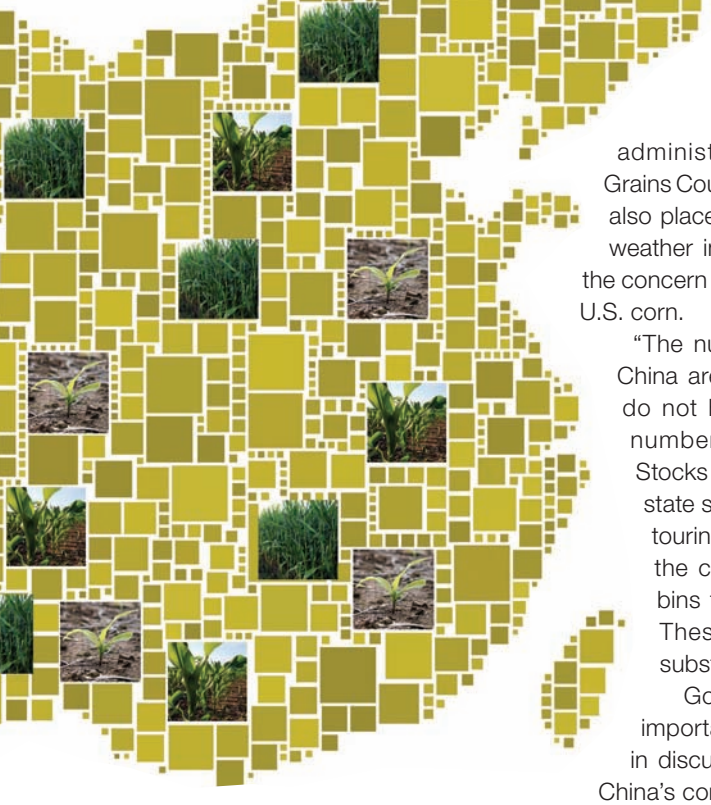
According to Tom Elam, president, FarmEcon LLC, an agricultural and food industry consulting firm in Carmel, Ind., the China factor in corn is interesting. However, it is not nearly as important as crop size.

> "The numbers coming out of China are soft. They do not have the credibility of numbers the U.S. puts out."
>
> - Eldon Gould

"The major question is how large the U.S. corn crop will be – that is the 64 thousand dollar question," Elam says. "The yield of acreage of U.S. corn will be the dominant factor and influence on price."

According to Elam, China maintains a pretty substantial supply of "safety stocks." He believes that China could draw down those stocks or, depending on how high or low prices are here, they could buy from us. "However, I don't see them very interested in our corn – or anyone's – at today's prices."

International poultry economist Paul Aho, who operates a consulting service, Poultry Perspective, in Storrs, Conn., agrees. "The weather is the story when it comes to the supply and price of corn. How much land and what kind of yield we will have are the questions to answer. China is not the big story this year. If we do have a corn problem in 2011, we cannot blame China."



USDA numbers

The USDA's World Agricultural Supply and Demand Estimates offer the federal government's assessment of U.S. and world crop supply and demand prospects as well as U.S. prices for the 2011-12 season. The WASDE report released on May 11 revealed that China is actually producing as much corn, or nearly as much, as it uses. In 2009-2010, China produced 158 million metric tons and used 159 million metric tons. In 2010-2011, estimates are 168 million metric tons produced and 164 million metric tons used. This trend should continue in 2011-2012 with projections at 172 million metric tons produced and 168 million metric tons used.

A 52.4 million metric ton increase in global corn output to reach 867.7 million metric tons will account for 84% of the year-to-year increase in coarse grain production in 2010-11. Foreign corn production is projected to increase by 25 million metric tons with the largest increases expected in China, Argentina, Russia, Mexico and the Ukraine, according to the WASDE report.

China's reserves

Former Risk Management Agency administrator and U.S. Feed Grains Council officer Eldon Gould also places more importance on weather in the Midwest than on the concern over Chinese importing U.S. corn.

"The numbers coming out of China are soft," he says. "They do not have the credibility of numbers the U.S. puts out. Stocks of grains in China are a state secret. Yet, reports from touring officials indicate that the country has huge grain bins full of wheat and corn. These supplies are pretty substantial," Gould says.

Gould suggests that one important point to remember in discussing the possibility of China's corn imports is that China likes to maintain ample reserves so that it is not at the mercy of the market, another reference to the previously mentioned "safety stocks."

Political motivations

Gould says he suspects that China's motives for buying or not buying corn are politically motivated. "To keep their domestic prices reasonable, they are not above spreading information to drive prices one way or the other. They are a player in the global economy, the same one in which we are in; however, not everyone plays by the same rules that we do or believes that everyone should."

Gould also believes that the size of the U.S. corn crop will be the big corn story, together with what impact the weather plays.

Possible reversal ahead

Still, there is no question that the demand for grains in China has been accelerating over the years. Thus far, China's ability to produce has kept up. How long this will continue remains to be seen.

Elam says that eventually China will have to import more grains or do something to improve the productivity of its land. "Their corn yields are significantly lower than in the U.S.; therefore, they may have some room to expand domestic production as well," he says.

China recently announced that it would replace grain with more economical materials in its ethanol production. The move was made in response to concerns over food supplies and the fact that ethanol is competing with production needs. This is a telling move from the nation that is the world's third-largest ethanol producer, just behind Brazil and the U.S. Until now, China has relied on wheat and corn for its main ethanol feedstock.

Dr. Lester Brown, president of the Earth Policy Institute, believes that China may soon reverse its "self-sufficiency" policy on corn, as it had done previously with soybeans. He believes that China will look to the global market for massive grain supplies. "To import those quantities of grain," Brown reported, "China will necessarily draw heavily on the United States, far and away the world's largest grain exporter."

If this scenario takes place, Brown predicts higher prices "not only for products made from grain, such as bread, pasta and breakfast cereals; but also for meat, milk and eggs, which require much larger quantities of grain to produce." [FM]

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To see more comments from Paul Aho regarding supply and demand of corn, read *The grain crisis of 2011* at www.WATTAgNet.com/20734.html

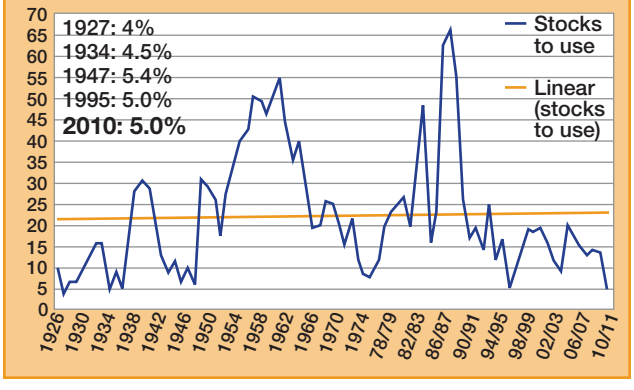
Forecast by Ken Jennison

Feed ingredient forecast for 2011

Ethanol production, feed consumption are having a big impact on the market.

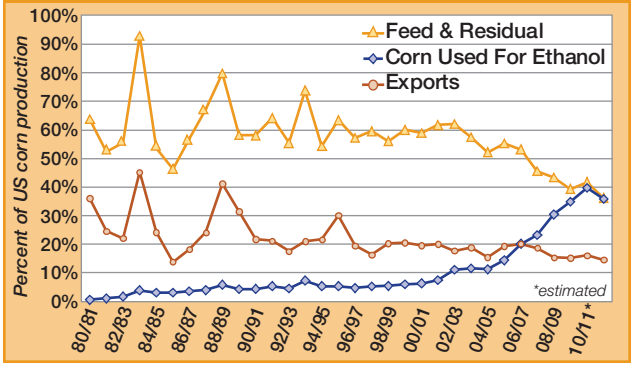
WEB ONLY:
To hear and view Tim Brusnahan's presentation in its entirety, go to www.WATTAgNet.com/ondemandwebinars.aspx to access the archive of the webinar

CHART 1: US corn stocks to usage ratio *(1926 - 2010)*



The US corn stocks to usage ratio is currently at a low point -- a historically rare occurrence, even as far back as 1926.

CHART 2: Percent of U.S. corn production utilized for exports, ethanol, & feed



Since 2002, corn used for ethanol has steadily increased while corn used for feed and residual has steadily decreased.

Current consumption of US corn and soybeans is a great deal higher than industry analysts expected, according to Tim Brusnahan, vice president of Brock and Associates, speaking at the recent WATT Online Animal Forum: Feeding the Globe. The production of ethanol, together with several other factors, appears to be at the heart of current fluctuations in the feed ingredients market.

Planting intentions for 2011

Referencing the recently released USDA report on 2011 planting intentions, Brusnahan noted that of the eight major crops there was an overall increase of 8.6 million acres planted versus last year. Corn plantings came in at 92.2 million acres versus a pre-trade estimate of 91.8 million acres. On the soybean side, acreage expected came in slightly less than the pre-trade market had planned on, and wheat as a whole came in slightly higher, with the exception of durum wheat, which came in slightly lower.

USDA grain stocks report

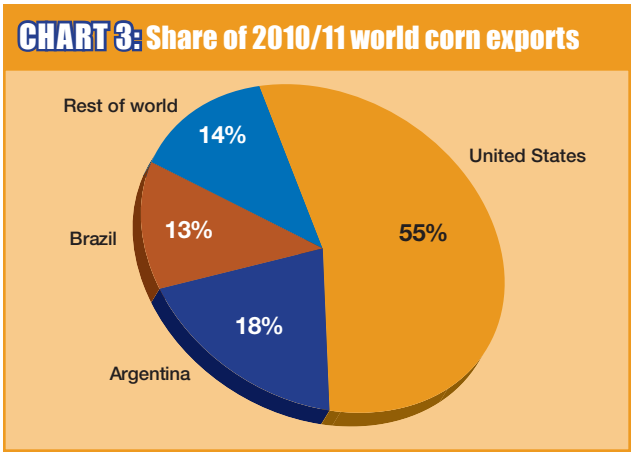
The recent USDA grain stocks report was also cause for a good deal of concern in the industry. As of March 1, the amount of corn remaining in the US from last year's harvest is 6.52 billion bushels. This is 1.2 billion bushels behind last year and below pre-trade estimates of 6.69 billion bushels. In addition, soybeans are at 1.248 billion bushels, which is 22 million bushels less than last year and below pre-trade estimates of 1.3 billion bushels. Consumption of corn was at an all-time high this past quarter and soybean consumption was near an all-time high.

Corn futures prices are currently around $7.00 in the nearby contract, which is representative of the 2010 crop year. This is far above the $5.50 to $6.00 level, which is a more typical value for the stock. As a result, based on the current market conditions, Brusnahan's firm is predicting that crop prices for corn will continue to be volatile for another year and a half.

Corn usage

Brusnahan noted that the current stock to usage ratio for corn is at five percent as a result of ethanol production and feed consumption. From an historical point of view, a five percent usage ratio is very low, even if one looks as far back as 1926. Not surprisingly, this low usage ratio is causing worldwide concern. In addition, Brusnahan noted that getting back to a usage rate in the

CHART 3: Share of 2010/11 world corn exports



Since the US exports the majority of the world's corn, any major problems with a US crop has the potential to impact the globe.

20 percent range is highly unlikely. He said he believed that a ratio in the 10 percent range was far more possible if farmers can get in a really good crop this year.

Ethanol industry

Corn quality for the production of ethanol was very strong in the second half of 2010, which resulted in a close correlation between corn and ethanol prices. Profitability for ethanol producers has been very good in the last six months and the ethanol industry is running at almost 100 percent capacity.

Exports have also become an important part of the ethanol equation. Demand from the EU has been strong, and demand from Brazil has been particularly strong because sugar prices there have become too high. In addition, demand for DDGS is increasing. Some DDGS is being exported, though the majority of it is being consumed in the US. It should be noted that there was a brief spike in demand for DDGS from China in mid-2010, but that has currently tapered off. In addition, US pork producers are beginning to use DDGS because of the high price of corn.

Global supply and demand

Brusnahan noted that while the supply of corn worldwide has tightened, we are in no way running out. Globally, we have a 15 percent stock to usage ratio. He did point out that since the US is the primary producer of corn, if US production declines it will have a global impact. He also noted that while China's imports and exports have been inactive the last few years, their corn supplies are low. He said if the US were to have a particularly good corn crop it would not be a surprise to see China import some of it.

World soybean demand has been relatively stable, when taken as a whole. Soybean exports have been running steady, with the majority going to China.

Supplies of wheat look fairly good. US supplies are "fairly adequate," and globally there will most likely be some improvement, as it is unlikely that the US, Canada, Europe and Russia will all have a bad crop year at the same time.

[FeatureStory by Simon Shane]

US farm prices for corn, soybeans increase

Forecasts remain constant with previous estimates

The U.S. Department of Agriculture WASDE report for Dec. 10 is little changed from the previous estimates in November. Imports of corn increased by 5 million bushels and exports declined by a similar quantity. The publication of the report has had little impact on the CBT quotations for corn.

With respect to soybeans, yield was decreased slightly impacting production by less than 1%. Ending stocks declined by 48% to 165 million bushels mainly due to an increase in exports.

Soybean meal supply and utilization remained fairly constant from the previous estimate.

Consistent with domestic and international trends, average farm prices for corn, soybeans and for soybean meal increased, as shown in the tables below. [FM]

December USDA estimate for 2010/2011 corn harvest		
Harvest Area	81.3 m acres	
Yield	154.3 bushel/acre*	
Beginning Stock	1,708 m bushels	
Production	12,664 m bushels	
Imports	15 m bushels	
Total Supply	14,262 m bushels	Proportion of Supply
Feed & Residual	5,300 m bushels	37.5%
Food & Seed	1,380 m bushels	9.7%
Ethanol Diversion	4,800 m bushels	336%
Domestic Use	11,480 m bushel	80.49
Exports	1,950 m bushels	13.6%
Ending Stocks	832 m bushels	5.83%
Av. Farm Price	$4.80- $ 5.60 bushel	

Imports of corn increased by 5 million bushels and exports declined by a similar quantity.

Soybean Meal	
Beginning Stocks	302 tons
Production	39.533 tons
Imports	165 tons
Total Supply	40,000 tons
Domestic Use	30,500 tons
Exports	9,200 tons
Total Use	39,700 tons
Ending Stocks	310 tons
Av. Price	$350

Soybean meal supply and utilization remained fairly constant from the previous estimate.

Soybeans		
Harvest Area	76.8 m acres	
Yield	43.9 bushel/acre	
Beginning Stock	151 m bushels	
Production	3,375 m bushels	
Imports	10 m bushels	
Total Supply	3,536 m bushels	Proportion of Supply
Crushings	1,665 m bushels	49.6%
Exports	1,590 m bushels	47.4%
Seed	88 m bushels	2.6%
Residual	29 m bushels	0.9%
Total Use	3,371 m bushels	95.33%
Ending Stocks	165 m bushels	4.67%
Av. Farm Price	$10.70 - $12.20 bushel	

Soybean yield was decreased slightly impacting production by less than 1%.