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U.S. crop supply
The latest round of USDA updates to its World Agricultural Supply and Demand Estimates and Crop Production reports were updated on Oct. 28th. Corn acreage is now estimated at 85.9 million acres, with harvest expected on 78.2 million acres. Soybean area is estimated at 75.9 million acres planted and 74.4 million acres harvested. National yield estimates are 153.9 bushels per acre for corn and 39.5 bushels per acre for soybeans. Corn production is projected at 12.033 billion bushels, 39 million bushels below the September estimate. For soybeans, production is estimated at 2.938 billion bushels, 4 million above September estimates. These estimates still point to the 2nd largest corn crop and 4th largest soybean crop the U.S. has ever seen.

Overall, compared to earlier estimates corn yields were increased in the major producing states as shown in Figure 1. Illinois was bumped up 5 bushels per acre, while Minnesota and Nebraska yields were increased by 4 bushels per acre. Looking at the number of ears per acre, record ear counts were seen across most of the upper Midwest. In fact, Kansas and Nebraska were the only states that were not at record ear counts.

Figure 1. Corn Yields (bushels per acre) and the Change from Last Month. Source: USDA, NASS
Soybean yields across most of the northern U.S. have been adjusted downward since September, with Illinois being the major exception. Nationally, soybean yields are projected to be 1.2 bushels below last year’s level, but the shift of over 10 million acres to soybeans in 2008 has boosted soybean production.

For Iowa, corn harvested area is now projected at 12.5 million acres with an average yield 172 bushels per acre. This leads to an estimated production of 2.15 billion bushels, down 218 million bushels from last year. Soybean harvested area is estimated at 9.6 million acres. With yields projected at 46 bushels per acres, Iowa is expected to produce 441.6 million bushels of soybeans. This would be a decline of just over 7 million bushels from 2007. The increase in soybean area this year was pretty much offset by the yield decline we experienced this year.

At the end of September, USDA updated the grain stocks situation. In that update, both corn and soybean stocks were increased for the 2007 crop year. Corn stocks for 2007 were upped 48 million bushels, based on lower feed, food, and seed use. The total corn ending stocks for 2007 are set at 1.624 million bushels. Soybean stocks for 2007 were increased 65 million bushels, based on higher production and lower crushing use, putting the total ending stocks...
at 205 million bushels. The projections for 2008 show corn ending stocks falling to 1.088 billion bushels and soybean ending stocks holding at 205 million bushels. Thus, the crop stock situation looks to remain very tight.

**World crop supply**

For the 2008 crop year, the worldwide production of corn is projected at 30.9 billion bushels, up 0.3 percent from last month. Besides the U.S., corn production estimates increased in the European Union by 1.7 percent. Projected corn production in Brazil and the former Soviet republics was lowered by 3.5 percent and 1.6 percent respectively. The Brazilian drop was attributed to lower corn plantings for the main summer corn crop, which is being planted currently. Worldwide soybean production is projected at 8.8 billion bushels, up 0.6 percent from last month. The vast majority of the increase is due to the U.S. There were small increases in projected soybean production for the European Union and Canada. Production for Argentina, Brazil, and China were held unchanged.

Reports out of South America indicate the combination of higher input costs and lower crop prices may hamper crop production growth there. Estimates from the Brazilian National Commodities Supply Corporation put Brazilian soybean area at 21.5 to 21.9 million hectares (53 to 54 million acres). USDA had released an earlier estimate of 22 million hectares. The Agriculture Secretariat of Argentina has projected soybean planted area of roughly 18 million hectares (44.5 million acres), up nearly 10 percent. Drought conditions and rising costs were seen as factor leading producers away from corn and wheat and to soybean. And officials in Paraguay expect soybean acreage to be in line with last year’s level.

**Crop demand**

On the demand side, corn feed demand is projected at 5.3 billion bushels, up 100 million from September, partially reversing an earlier downward adjustment. Lower corn prices are seen as the major reason for this shift. Corn demand from ethanol is projected at 4 billion bushels, up 1 billion bushels from last year. The ethanol industry has continued to grow, but the pace of growth has slowed. Lower corn prices imply lower production costs for ethanol plants, but plants are also seeing lower ethanol prices as U.S. consumers have reduced their fuel demand. Corn exports are projected at 1.95 billion bushels, down 50 million from September and down 485 million from last year. As Figure 3 shows, corn exports and outstanding sales are off of last year’s pace, but they are comparable to the pattern for 2006. With total corn usage estimated at 12.585 million bushels, the corn stocks-to-use ratio for 2008 stands at 8.6 percent, well down from 12.7 percent in 2007.
Figure 3. The Pace of Corn Exports (percentage of total marketing year exports and sales)

Soybean crush demand is estimated at 1.76 billion bushels, off 41 million bushels from 2007. Export demand is also lower than last year, at 1.02 billion bushels. However, export pace has been brisk, exceeding what we have seen over the past couple of years. In the mid-September USDA reports, soybean stocks-to-use ratios for 2007 and 2008 were below 5 percent. In these latest reports, those ratios were raised to 6.7 percent for 2007 and 7 percent for 2008. So the soybean stock situation remains tight, but not nearly as tight as it previously looked.

The corn and soybean markets, like many commodity and stock markets, have taken a pounding over the last couple of months. Concerns about the general economy both here in the U.S. and worldwide have weighed heavily on market trading and have been a significant factor to the slide in crop prices. USDA significantly updated its season-average prices for corn and soybeans since September to $4.75 per bushel for corn and $10.45 per bushel for soybeans. The corn price is off 75 cents per bushel, while the soybean price is down $1.90 per bushel from September's estimates. Futures prices point to stronger crop prices as we move toward next spring and summer. Basis levels for both crops have moved back toward historical averages. The combination of these price movements implies the potential for better crop returns for farmers who maintain ownership of their crops later in the marketing year.
Factors outside of agriculture will continue to strongly influence agricultural prices. The financial market turmoil is the dominant factor across many markets. Crop agriculture over the past couple of years has enjoyed strong demand for food, feed, and fuel use. But the concerns about the general economy lead to concerns about future crop demands both here and abroad. As Figure 5 shows, the outlook for overall fuel demand has dropped significantly over the past few months. Credit markets have tightened and, in some cases, ceased to function. Much of the funding for agricultural production and trade worldwide depends on liquid credit markets.

**The outlook for 2009**

Many of the storylines for the crop markets in 2008 will continue in 2009. Tight stocks and strong demands for corn and soybeans will provide reasons for another healthy competition for acreage this coming spring. The ethanol industry will continue to grow as additional plants are finished out. These plants will be needed to meet the Renewable Fuels Standard targets over the next couple of years. Figure 6 displays the Renewable Fuels Standard targets for 2009-2011. As the graph shows, 10.5 billion gallons of conventional biofuels (mainly corn-grain-based ethanol) and 500 million gallons of biodiesel will be needed in 2009. Those amounts of biofuels translate into 3.75 billion bushels of corn and 345 million bushels of soybeans. Energy prices and the
outlook for the general economy will strongly influence crop prices. And market volatilities will remain high as agriculture's linkage to the energy markets grows stronger.

Input costs had increased dramatically in 2008. And while diesel prices and some wholesale prices for fertilizer have begun to decline, that decline may not work in to Iowa farm costs until later in 2009. So while Iowa crop prices are likely to remain historically high, production costs will also reach historical highs. Crop margins will be much tighter than we have seen over the past couple of years.
Figure 6. Renewable Fuels Standard Targets