

Situation and Outlook for Wheat, Corn, and Soybeans

Gerald A. Bange

Chairperson, World Agricultural Outlook Board
Office of the Chief Economist, U.S. Department of Agriculture

Introduction

As chairman of the World Agricultural Outlook Board (WAOB), I am responsible for overseeing the coordination, review, and clearance of all commodity forecasts released by the U.S. Department of Agriculture (USDA). The *World Agricultural Supply and Demand Estimates (WASDE)* report is the primary source of information used by world commodity markets to discover prices. It is the Board's responsibility to ensure that USDA estimates and forecasts are unbiased, based on sound information, and released in a timely manner.

In the brief time I have with you today, my objective is to identify the major factors driving the current commodity outlook. To do this, I will limit my remarks to recent developments in the wheat, corn, and soybean markets. I will differentiate the situation today from 3 years ago when crop prices briefly escalated to record levels. And finally, I will explain why USDA is again forecasting prices to remain strong or be record high for some commodities. Along the way, I will highlight the major forces which underlie the monthly supply/demand forecasts published by USDA.

This text reflects forecasts published in the October 8, 2010, *WASDE* report. The November report was issued yesterday. In my oral presentation, I will update those numbers if significant changes have been made.

Overview

Unlike other sectors of the economy, agriculture is especially vulnerable to the vagaries of weather and government policies both here and abroad. In addition, changes in input prices, transportation costs, technology, and a host of other factors also affect the outlook. A number of these factors are currently influencing the markets for the major field crops produced and traded in the United States. With about 90 percent of U.S. cropland planted to wheat, corn, and soybeans, these crops are critical to U.S. agriculture and exports of these crops are critical to the world market.

This past summer, weather problems in the Former Soviet Union (FSU) countries, particularly in Russia, helped drive export sales and prices for U.S. wheat. It should be noted, however, that the wheat supply situation is strikingly different from 2007/08 when world stocks were at very low levels and wheat prices set record highs. Because U.S. and foreign stocks were ample going into the 2010/11 marketing year, record wheat prices are not expected this year. The situation for corn, however, is different. As a result of declining yield prospects for U.S. corn and continued strong domestic and export demand, the corn supply and demand situation is expected to be the

Presented at the Agriculture Outlook Americas 2010 conference, November 10, 2010, by Dr. Gerald A. Bange, Chairperson, World Agricultural Outlook Board in Boston, Massachusetts.

Note: The PowerPoint graphs and charts used in today's presentation are posted on the USDA/Office of the Chief Economist/World Agricultural Outlook Board web site: <http://www.usda.gov/oce/speeches/index.htm>.

tightest since 1995/96 when crop problems and heavy export demand left stocks extremely low and prices soared to record levels. This year, U.S. corn prices are expected to be record high, on average. And, given the linkage between soybean and corn prices and China's seemingly insatiable appetite for soybeans from the United States and South America, soybean prices are expected to remain strong by historical standards.

Wheat

This year, extended drought in the FSU combined with record heat to devastate summer crops, particularly in Russia and Kazakhstan, and to a lesser extent Ukraine. In recent years, these countries had become increasingly active wheat exporters. Russia and Ukraine have also been active exporters of coarse grains including corn and barley. Prior to this year's drought, these countries had played a significant role in expanding global wheat production. Corn and barley production had also expanded sharply in 2008/09 and 2009/10 in Russia and Ukraine. Summer weather problems in EU-27 have also played a role in tightening world wheat supplies as untimely dryness in western Europe and too much rain in eastern Europe trimmed wheat and coarse grain production for EU-27. In Canada, wet spring weather reduced planted area for wheat and coarse grains reducing available supplies for export for this major world exporting country.

Although up sharply from their recent lows in June, wheat prices had generally stabilized during September as large carryout supplies in the United States provided a buffer for production shortfalls elsewhere. Russia's export ban in early August pushed prices sharply higher through early September as continued drought reduced prospects for fall seeding of 2011 winter wheat. Prices, however, have remained well off highs set in early 2008 when world stocks for the 2007/08 marketing year dropped to a 26-year low. As the FSU countries, particularly Russia, have withdrawn from the world market, what were once burdensome supplies in the United States, have allowed U.S. exporters to compete in North African markets that were largely captured by low-priced Russian and Ukrainian wheat in 2009/10. Increased exports from Argentina and Australia are also expected to help meet world demand as is competitively priced wheat from EU-27 and Canada. The ample ending stocks held by the major wheat exporting countries, including the FSU have kept global ending stocks for 2010/11 from sliding to the minimal levels experienced in 2007/08. USDA currently projects global wheat ending stocks at 175 million tons, up 50 million tons from the recent low in 2007/08. This has helped check the upward movement in wheat prices, however, rising prices for corn and soybeans are now supporting wheat values.

Corn

In late September and early October, prices for the major field crops gyrated following releases of USDA reports. These releases included a higher-than-expected September 1 corn stocks estimate and a lower-than-expected October corn production forecast. The September *Grain Stocks* report, released September 30, pushed prices down the 30-cent-per-bushel trading limit. Within 2 weeks, the October 8 *Crop Production and World Agricultural Supply and Demand Estimates (WASDE)* reports pushed prices up the trading limit and led to further rises in corn, wheat, and soybeans in the following days. While much debate has swirled around these USDA

reports, both the corn stocks estimate and the corn production forecast are consistent with factors that have affected old-crop corn usage and new-crop corn yields. USDA's reports provided accurate and timely information to the market; however, the stocks estimate was widely misinterpreted by the trade in the first few days following its release.

USDA reported old-crop corn stocks as of September 1, the start of the 2010/11 September-October marketing year, 300 million bushels higher than the average of pre-report trade expectations. These additional supplies were first viewed as adding an additional 300 million bushels of corn to available supplies for 2010/11. Many in the trade and press incorrectly speculated that USDA had included new crop corn harvested before September 1 in the corn stocks figure. In response, USDA stated publicly that its survey is carefully designed to exclude new crop corn from the September 1 figure. Nevertheless, taken by itself, the higher than expected September 1 stocks number implied to many market participants that corn feed use during the June-August quarter was historically low. While the implied corn feed and residual fell sharply, a similar drop was not seen in soybean meal usage. In fact, domestic soybean meal usage (nearly all of which is for feeding) during the June-August quarter was actually up from the previous two quarters suggesting that actual corn feeding did not actually drop during the quarter.

The market eventually correctly surmised that corn feeding in the last quarter of the 2009/10 marketing year was higher than implied by the September 1 stocks number. Based on this year's rapid harvest pace as of September 1, nearly 300 million bushels of additional new-crop corn was available for use before the start of the 2010/11 marketing year compared with the previous 2 years. In reality, early usage of 2010/11 corn reduces available supplies for the current marketing year. This is because the 2010/11 production estimate includes corn that was already used before the start of the marketing year. To offset this early usage, feed and residual usage will have to rise for the 2010/11 marketing year, particularly during the September-November quarter. This situation was very similar to what happened between the 2006/07 and 2007/08 marketing years.

Prices moved higher ahead of the October 8 *Crop Production* report partly on increasing awareness that early new-crop usage had actually reduced supplies offsetting any additional old-crop corn carried into the 2010/11 marketing year. Prices were also rising ahead of USDA's October 8 crop forecasts as growing indications of disappointing yields, particularly in the central Corn Belt, were raising expectations about a substantial cut in forecast production by USDA. The October yield forecast was 6.7 bushels per acre lower than the September forecast and 4 bushels per acre lower than the average of trade expectations, dropping production nearly 500 million bushels and more than 300 million bushels lower than expectations. Further tightening supplies, USDA increased the 2010/11 feed and residual projection by 150-million bushels. Together these changes over the course of 2 weeks dramatically shifted the 2010/11 supply and demand outlook for corn.

Given these developments, corn prices have risen sharply since early October. Although this year's forecast yield and production remains the third highest on record, rising demand, particularly for corn to produce ethanol, is boosting demand to record levels. This, combined with strong export demand with less available feed-quality wheat in the world as a result of

Russia's export ban and uncertainty about wheat availability in Ukraine, are pushing U.S. corn ending stocks to their lowest levels in 14 years.

The increasing use of ethanol, mandated by the Energy Independence and Security Act of 2007, is driving the demand for corn. The mandate for corn-based ethanol has risen from 4.7 billion gallons for 2007 to 12.0 billion gallons for 2010. Corn used for ethanol in the United States has risen from less than 10 percent of total U.S. corn usage in 2001/02 to a projected 35 percent for the 2010/11 marketing year. For 2011, the Renewable Fuel Standard (RFS) that can be satisfied with corn based ethanol (conventional) increases to 12.6 billion gallons. This growth in required usage will continue to put pressure on prices as the market seeks to encourage corn plantings sufficient to meet these goals. The RFS that can be satisfied with corn-based ethanol reaches a maximum 15.0 billion gallons in 2015. Growth in corn yields will be necessary to support increases in demand for feeding and exports as well as ethanol.

The 15.0-billion-gallon level for corn-based ethanol may be difficult to reach given the sharp decline in gasoline consumption that began with the world economic downturn in 2008. Prior to that time, U.S. gasoline consumption appeared well on track to surpassing 150 billion gallons by 2014. At this level of fuel consumption, E-10 (10 percent ethanol and 90 percent gasoline) blends, combined with a small, but increasing level of E-85 use would have been sufficient to reach the maximum 15-billion-gallon RFS mandate for corn-based ethanol. At current levels of fuel consumption, maximum ethanol usage with an E-10 blend may be reached before the 15-billion-gallon level. The 2013 RFS for corn-based ethanol is mandated at 13.8 billion gallons. Recently, EPA approved the use of E-15 blends for car model years 2007 and newer. Given that 2007 and newer cars constitute only about 15 percent of the vehicle fleet, it is unlikely that retailers will invest in pumps and equipment to capture this small segment of the market.

The tight supply situation for 2010/11 now being realized with this year's lower corn yields is expected to keep substantial pressure on corn prices. Ending stocks for 2010/11 are expected to drop to the equivalent of 24 days of use by next September. This is the tightest stocks level since 1995 when they fell to 18 days of use. At this level, carryout will be sharply lower than in recent years and prices will need to remain strong to encourage additional corn acreage in 2011 and as a protection against downside yield risks during the 2011 growing season associated with normal weather events.

Soybeans

The 2010/11 marketing year for soybeans is characterized by near-record beginning stocks resulting from record global soybean production during 2009/10, record global demand, and relatively high prices for soybeans and products. Based on a projected yield of 44.4 bushels per acre and with 76.8 million harvested acres, soybean production is forecast at a record 3.41 billion bushels, up 49 million bushels from 2009/10. Soybean supplies are projected at 3.6 billion bushels, 2 percent above 2009/10.

Soybean crush is projected to decrease 5 percent to 1.67 billion bushels, reflecting a modest increase in domestic soybean meal use that is more than offset by declining soybean meal export

prospects. U.S. soybean meal exports are projected to decrease as South American supplies recover from the drought-reduced harvest of spring 2009.

Domestic consumption of soybean oil is projected to increase as higher biodiesel use of soybean oil combines with modest growth in food use. Biodiesel production is projected to use 15 percent of total soybean oil production for 2010/11 compared with 9 percent in 2009/10. Soybean exports are projected at a record 1.52 billion bushels, up 19 million from 2009/10. Ending stocks for 2010/11 are projected at 265 million bushels, up 114 million from 2009/10, leaving the stocks-to-use ratio at 8 percent compared with 4 percent for the prior year. Despite large supplies available this fall, continued strong growth in protein and vegetable oil consumption in China and relatively tight corn supplies in the U.S. are expected to support soybeans and soybean product prices during the 2010/11 marketing year.

Income growth in China has increased the demand for meat that, in turn, has increased the demand for livestock feed. At the same time, higher incomes have boosted vegetable oil consumption. In addition, China appears to be building soybean stocks, now estimated to about equal domestic soybean production. China imported over 50 million tons of soybeans in 2009/10. Over the past 10 years, China has accounted for 93 percent of the increase in global soybean trade, and currently accounts for 58 percent of global imports. Put another way, China now imports 20 percent of total global soybean production. Over the next 10 years, China will remain the world's leading importer of soybeans, with imports possibly reaching 75 million tons or higher. With little growth projected for domestic production, China's dependence on foreign supplies will continue to rise to meet growing demand for livestock feed for meat production and for soybean oil.

Global bioenergy policies will also have a strong influence on oilseeds markets in 2010/11 as major vegetable oil exporting countries ramp up biodiesel production. The 2007 Energy Act mandates that U.S. biodiesel use must reach 800 million gallons by 2011, and rise to 1 billion gallons by 2012. For 2009/10, soybean oil-based biodiesel accounted for about 230 million gallons of biodiesel production. When other fats and oils are included, biodiesel production reached just over 450 million gallons. Soybean oil-based production is projected to reach 400 million gallons in 2010/11, enough to meet the 2011 mandate assuming soybean oil accounts for about 50 percent of total production as it has in the past 2 years. With soybean oil exports projected at 2.5 billion pounds, soybean oil ending stocks are projected to decline to 2.37 billion pounds, the lowest level in 6 years.

A sharp increase in biodiesel supplies will be needed to meet the 2012 mandated levels of biodiesel use for the U.S. laid out in the 2007 Energy Act. While the mandate can be achieved without severely impacting the U.S. soybean oil market, lower soybean oil exports are likely as supplies are diverted from foreign markets to domestic biodiesel production. As a result, importers may increasingly turn to South America for supplies. However, rising mandates for biodiesel use in South America will limit supplies available for export from those countries. Limited supplies for export and rising global demand for vegetable oils suggests higher prices for all vegetable oils in the years ahead.

Thank you.