

# **Situation and Outlook for Agricultural Commodities**

## **Mississippi Delta Council Business Roundtable May 23, 2008**

I am pleased to be here today to speak to the Roundtable. Thank you for the invitation.

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 USDA. The *World Agricultural Supply and Demand Estimates (WASDE)* report is the primary source of information used by world commodity markets. 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.

I think it is safe to say that, at no other time, have we seen such price volatility and media interest in agricultural markets. In the presentation that follows, I will outline the factors driving these extraordinary developments and give the Department's best assessment of where the sector seems to be headed.

Today, any discussion of the commodity situation and outlook has to begin with a reference to recent developments in world energy markets. World crude oil prices now exceed \$125 per barrel. Given prospects for continued high petroleum prices and the growing global demand for bio-energy, there is no doubt that energy uses for crops will account for a growing segment of demand. The demand for ethanol and biodiesel will support commodity prices, especially for corn and soybeans, as these commodities increasingly compete for acres and attempt to bid acres away from each other and other crops. The competition for crop land likely will support prices across the board.

In the United States, rising energy prices have resulted in significant policy changes including implementation of production incentives and mandated consumption goals for biofuels. As a result, ethanol and biodiesel production capacity has grown rapidly. In the longer term, commercial production of ethanol from cellulosic sources may reduce the upward pressure on corn and soybean prices. As yet, however, an economically feasible cellulosic alternative has not been identified, although extensive research is underway in both the public and private sectors.

Many observers attribute rising world food prices to the increased use of grain and oilseeds crops for renewable fuels production. It should be noted, however, that there are other factors which may be even more significant. First, the unprecedented increases world energy prices that are driving the demand for renewable fuels are, at the same time, rippling through the entire food marketing system in the form of higher transportation and processing costs. Second, world wheat consumption has exceeded world wheat production in 7 of the last 8 years. This reflects several years of below normal yields in major exporting countries which have culminated in

abnormally tight ending stocks levels and sharply higher prices. And third, but not least important, many traditional feed grains, wheat, and rice exporting countries have imposed export restrictions in an effort to pre-empt or stem the rise in domestic food prices. This has contributed to a panic atmosphere in some markets which, in turn, has helped elevate prices to record levels.

Add rising labor costs growth in demand from rising consumer incomes to the above list and it is clear that renewable fuels are only one of many factors contributing to higher commodity and food prices.

### **2008 Crop Acreage Prospects**

This crop year, record prices and large year-to-year gains in net returns for corn, soybeans, and wheat, taken as a group, have attracted area from other crops and uses. In addition, a net reduction of 2 million acres in the Conservation Reserve Program will contribute to the overall acreage increase.

According to USDA's March 31 *Prospective Plantings* report, combined planted area for the three major U.S. field crops (corn, soybeans, and wheat) is expected to reach a 24-year high in 2008. Corn plantings, while down from last year, are expected to remain at a historically high level as substantial year-to-year price gains continue to support favorable corn returns despite rising fertilizer and other input costs. Soybean plantings for 2008 are expected to rebound sharply as returns have improved year-to-year with rising prices. Total wheat plantings are expected to increase as high wheat prices last fall boosted winter wheat seedings, and record prices for spring wheat encourage hard red spring wheat and durum plantings in the Northern Plains.

The most accurate indication of U.S. crop acreage for the current year will be presented in USDA's June *Acreage* report. It should be noted that history has shown that U.S. farmers often elect to make significant changes in their plans between the March *Prospective Plantings* report and the June *Acreage* report.

### **Corn**

The U.S. corn market in 2007/08 is being dominated by growth in domestic utilization as corn-based ethanol production grows at a record pace. In anticipation of strong prices, U.S. producers planted 93.6 million acres to corn in the spring of 2007, the largest corn area since 1944, and 15.3 million more acres than 2006/07. The U.S. yield averaged just below trend at 151.1 bushels per acre. However, at 13.1 billion bushels, 2007/08 production was record high; and supplies reached a record 14.4 billion bushels, up 1.9 billion from 2006/07, and 1.2 billion higher than the previous record in 2005/06.

The 2008/09 U.S. feed grains outlook is for lower production, strong domestic demand, and lower ending stocks. The 2008/09 corn crop is projected at 12.1 billion bushels, down 7 percent from the record 2007/08 crop. Acreage is forecast at 86 million and yield is projected at 153.9 bushels per acre, 1 bushel per acre below the 1990-2007 trend based on the slower-than-average pace of planting as reported in *Crop Progress*.

Total U.S. corn use in 2008/09 is projected down 2 percent as reductions in feed and residual use and exports more than offset a continued expansion in ethanol production. Feed and residual use is projected down 14 percent as corn feeding declines with increased production of distillers'

grains, higher corn prices, and reduced red meat production. Corn exports are projected down 16 percent as U.S. supplies face increased world competition with increased foreign production and a sharp drop in EU-27 imports.

Corn use for ethanol was 2.1 billion bushels in 2006/07, the equivalent of 5.7 billion gallons of ethanol. This marketing year, an estimated 3.0 billion bushels of corn will be used to produce approximately 8.1 billion gallons. In 2008/09, expected plant capacities suggest that 4.0 billion bushels of corn will be used to produce approximately 10.8 billion gallons of ethanol. The slowing pace of plant construction and expansion and lower capacity utilization are expected to modestly dampen growth in ethanol corn use. With total corn use expected to exceed production by 635 million bushels, ending stocks are projected down 45 percent. At 763 million bushels, ending stocks would be the lowest since 1995/96. Thus, the season-average price is projected at \$5.00 to \$6.00 per bushel, well above the current year's forecast record of \$4.10 to \$4.40 per bushel.

### Ethanol Corn Use Expands Rapidly

Looking further into the future, U.S. corn use is expected to continue to increase as the demand for corn for ethanol production grows to satisfy the higher mandated ethanol use in the Energy Independence and Security Act of 2007 (2007 Energy Act). This Act mandates that U.S. gasoline consumption must include 9 billion gallons of renewable fuel by calendar year 2008, rising to 15 billion gallons by 2015. The current pace of plant construction and expansion indicates that ethanol production capacity in the United States will surpass the 2008 mandate sometime this spring with capacity topping 11 billion gallons potentially as early as September of this year. Plants under construction and plant expansions will add an additional 5.1-billion-gallon capacity during the next 18 to 24 months, bringing annual production capacity to 13.6 billion gallons.

### Soybeans

The rapid rise in U.S. ethanol production boosted corn prices last year and led to an unprecedented shift in planted acres from soybeans to corn in 2007. Last year, U.S. producers reduced planted soybean area by 16 percent, or 11.9 million acres. In addition, the expanded use of biodiesel around the world, especially in Europe and the U.S., is having a dramatic impact on global vegetable oil markets. As a result, soybean and other vegetable oil prices have risen sharply.

Reduced 2007/08 soybean production, increased demand for biodiesel use, and strong export markets for soybean meal and oil will reduce soybean stocks in the United States by 76 percent this marketing year, helping to drive soybean prices to the highest level on record. Thus, the record high U.S. soybean stocks in 2006/07 that helped to buffer the impact of lower plantings for the 2007/08 marketing year will largely be depleted this year. As a result, prices remain firm and U.S. acreage is expected to recover sharply in 2008. The recent *Prospective Plantings* report indicates 2008/09 U.S. soybean acreage will rise nearly 18 percent to 74.8 million. Like corn and other crops, actual acreage planted will be shown in the June *Acreage* report.

The 2007 Energy Act mandates that U.S. biodiesel use must reach 500 million gallons by 2009, and rise to 1 billion gallons by 2012. This year, soybean oil-based biodiesel will account for about 380 million gallons of biodiesel production. When other fats and oils are included, biodiesel production is projected to exceed the 500-million-gallon level mandated for 2009 by

the 2007/08 marketing year, well ahead of schedule. However, reaching the 1-billion-gallon level by 2012 will present a greater challenge.

Based on figures reported by the National Biodiesel Board in the fall of 2007, annual existing production capacity for biodiesel stands at 1.85 billion gallons per year with another 1.37 billion gallons of annual capacity planned for development by the end of 2008.

Only about 25 percent of existing capacity is currently being utilized. With soybean oil prices rising so sharply, net returns for producing biodiesel are not favorable. With current soybean oil prices near 50 cents per pound, net returns are negative for many plants even with the \$1.00 per gallon tax credit for blending. In the market environment expected for the balance of 2007/08 and into 2008/09, food processors are likely to continue to bid vegetable oil prices to levels that leave biodiesel production margins negative. If not, food processors' vegetable oil supplies would be at risk due to the substantial idle biodiesel production capacity.

To meet the 2012 mandated levels laid out by the 2007 Energy Act, a sharp increase in imported vegetable oil will be needed. These imports will either be in the form of vegetable oil already processed into biodiesel or as food grade vegetable oil used to replace other oil that will be used to make biodiesel in the U.S. There simply is not enough domestically produced vegetable oil to meet food needs and biodiesel mandates by 2012.

U.S. oilseed production for 2008/09 is projected at 93.0 million tons, up 16 percent from 2007/08. Higher soybean production accounts for most of the increase. Peanut production is also projected higher, while production of sunflowerseed, canola, and cottonseed are each projected to decline from 2007/08 levels. Based on a yield of 41.2 bushels per acre and planted area of 74.8 million acres with 73.8 million harvested, soybean production is projected at 3.1 billion bushels, up 520 million bushels from 2007/08. Soybean supplies are projected at 3.3 billion bushels, up just 3 percent from 2007/08 despite higher planted area. Most of the production gains are offset by sharply lower beginning stocks.

Soybean crush is projected to increase less than 1 percent to 1.85 billion bushels, reflecting a small increase in domestic soybean meal use and a projected decline in soybean meal exports. Domestic consumption of soybean oil is projected to increase only slightly as higher biodiesel use of soybean oil is mostly offset by a continued decline in food use. Biodiesel production is projected to use 15 percent of total soybean oil production for 2008/09 compared with 14 percent in 2007/08. Soybean exports are projected at 1.05 billion bushels, down 40 million from 2007/08. Ending stocks for 2008/09 are projected at 185 million bushels, up 40 million from 2007/08, leaving the stocks-to-use ratio at a relatively low 6 percent.

The U.S. season-average soybean price for 2008/09 is projected at \$10.50 to \$12.00 per bushel, compared with \$10.00 per bushel in 2007/08. Prices are expected to remain firm due to relatively strong corn and soybean oil prices. Soybean meal prices are forecast at \$280 to \$340 per short ton, compared with \$315 per ton for 2007/08. Soybean oil prices are projected at 50 to 54 cents per pound compared with 52 cents per pound for 2007/08.

Global oilseed production for 2008/09 is projected at 423 million tons, up 32.2 million tons from 2007/08. Oilseed production is projected to recover from the first year-to-year decline in global oilseed production since 1995/96. U.S. oilseed production gains account for 40 percent of the global increase. Total foreign supplies are projected to increase by 4 percent from 2007/08.

Global oilseed ending stocks for 2007/08 are projected at 56.7 million tons, down 0.5 million tons from last month. Most of the decrease is due to lower projected soybean stocks in the United States resulting from a 15-million-bushel increase in projected exports. Soybean stocks for Brazil and Argentina are projected at a combined 39.8 million tons, down 1.5 million from 2006/07.

Over the next 10 years, China will remain the world's leading importer of soybeans. China's imports are projected to exceed 50 million tons. With little growth projected for domestic production, China's dependence on foreign supplies will rise to 75 percent from 70 percent in 2007/08.

In coming years, expanded soybean production in South America is expected to satisfy the growing global demand for oilseeds and products as competition from corn limits soybean area in the United States.

## **Wheat**

The global wheat situation remains extremely tight. Below-trend yields in major exporting countries such as Australia, Canada, European Union, the United States, and Ukraine substantially reduced world wheat supplies for a second straight year. Despite record prices, world exports for the current year are projected down only 1 percent from 2006/07. Global wheat ending stocks are projected to decline again in 2007/08, falling 11 percent from last year. World production has fallen short of consumption in 6 of the past 7 years and is expected to do so again in 2007/08. World ending stocks are expected to be down 47 percent from 2000/01 and at their lowest level in 30 years. For many importing countries, the United States became the only available source of wheat. This further reduced domestic U.S. supplies. As a result, U.S. ending stocks have declined to the lowest level in 60 years.

In the United States, cash wheat prices reached record levels for all classes of wheat in February and March. Wheat prices are expected to remain very strong through the spring, supported by increasingly tight world supplies. With indications of sharply higher seeded acreage around the world for 2008, wheat prices, particularly for lower quality wheat, are expected to moderate but remain historically high well into the 2008/09 marketing year supported by strong export demand and high corn and soybean prices. Even as world stocks return to more normal levels with higher world output in the coming years (assuming normal weather), wheat prices will be supported at relatively high levels by strong feed grain and oilseed prices and competition for acreage.

The 2008/09 U.S. wheat outlook is for higher production, lower exports, and increased domestic use. USDA forecasts all wheat acreage at 63.8 million acres, up 3.4 million from 2007/08, and the highest in 10 years. Total production is projected at 2.4 billion bushels, up 16 percent from 2007/08. The survey-based forecast of winter wheat production is up 17 percent as area and yield are higher than last year. Spring wheat production is expected higher with seeded area up 10 percent in the March 31 *Prospective Plantings* report. Combined durum and other spring wheat production is projected at 614 million bushels, up 12 percent from 2007/08, based on 10-year harvested-to-planted ratios and trend yields. Total U.S. wheat supplies are projected up only 4 percent because of historically low carryin.

Total wheat use is projected down 5 percent for 2008/09 as lower exports more than offset increased domestic use. Food use is projected at 960 million bushels, up 10 million from the

current year, reflecting steady growth in domestic demand. Feed and residual use is projected at 230 million bushels, up sharply from the 60 million projected for 2007/08. Larger supplies of soft red winter wheat and higher corn prices boost wheat feeding. Exports are projected at 975 million bushels, down 24 percent from 2007/08. Ending stocks for 2008/09 are projected at 483 million bushels, more than double the current year's projected 239 million. The national average farm price for 2008/09 is projected at \$6.60 to \$8.10 per bushel, compared with the current year forecast of a record \$6.55 per bushel. Wheat prices will be supported by farmer forward sales and early season export demand.

Global wheat production for 2008/09 is projected at a record 656 million tons, up 8 percent from 2007/08, and up 5 percent from the previous record in 2004/05. Higher production is projected for most of the world's major exporting countries including Australia, Canada, EU-27, Russia, and Ukraine. Strong world prices and favorable weather in most of EU-27 and FSU-12 have raised production prospects for 2008.

## **Rice**

U.S. rice production in 2008/09 is projected at 197.0 million cwt, nearly the same as 2007/08. Planted area is estimated at 2.77 million acres as reported in *Prospective Plantings*, up only 9,000 acres from 2007. Average rice yield is projected at 7,145 pounds per acre, down 40 pounds per acre from 2007, but the second highest on record. Imports for 2008/09 are projected at a record 22.5 million cwt, up nearly 5 percent from revised 2007/08. Beginning stocks in 2008/09 are estimated at 21.6 million cwt, down 45 percent from 2007/08.

U.S. domestic and residual use for 2008/09 is projected at a record 126.0 million cwt, 1 percent above 2007/08. Exports are projected at 98.0 million cwt, 14 percent below 2007/08. Tighter supplies and higher prices will constrain exports in the new marketing year. Ending stocks in 2008/09 are projected at 17.1 million cwt, 45 percent below 2007/08, and the lowest stocks since 1980/81 (16.5 million cwt). The stocks-to-use ratio at 7.6 percent is the lowest since 1974/75 (6.3 percent). The season-average range for 2008/09 is projected at a record \$18.50 to \$19.50 per cwt, compared to a revised \$12.85 to \$13.15 per cwt for 2007/08. Tighter domestic supplies along with expected high global prices will support prices during the year.

Global 2008/09 rice production is projected at a record 432 million tons, up 5 million from 2007/08. World disappearance (consumption and residual) is projected at a record 428 million tons, up 3.6 million tons. Large crops are projected for most of Asia assuming normal weather.

Global exports for 2008/09 are expected to be about the same as 2007/08 at about 27 million tons, but down 3.4 million from 2006/07. India's 2008/09 exports are projected at 2.0 million tons, down 0.5 million from revised 2007/08, and down 4.0 million tons from revised 2006/07. It is assumed that India will maintain export restrictions on non-basmati rice through most of the 2008/09 marketing year. Global ending stocks are expected to increase 5 percent from 2007/08 to 82.6 million tons — the largest stocks since 2002/03. The stocks-to-use ratio at 19.3 percent is up from last year's 18.5 percent and is the highest since 2003/04.

## **Cotton**

The 2008/09 U.S. cotton projections include sharply lower production and ending stocks compared with 2007/08. Production is projected at 14.5 million bales, down 25 percent from 2007/08, based on planted area in the *Prospective Plantings* report, combined with historical

average abandonment and yields. Domestic mill use also is reduced 300,000 bales from 2007/08 to 4.3 million bales, but exports are raised slightly to 14.5 million. Ending stocks are projected at 5.6 million bales, a 43 percent reduction from the beginning level and 30 percent of total use.

A combination of slightly lower production and slightly higher consumption is expected to reduce world stocks in 2008/09. World production is forecast at 118 million bales, 2 percent below the current season, as higher foreign production partially offsets a reduction in the United States. World consumption is projected at 127 million bales, a growth rate of 2 percent, reflecting a slight recovery from 2007/08, but well below the recent 5-year average growth. For China, production is forecast at 35.5 million bales, marginally below the revised 2007/08 level. Strong but decelerating growth in China's consumption results in higher imports and lower ending stocks; higher trade by China also supports an increase in world trade. World ending stocks are projected to fall nearly 10 percent to about 55.5 million bales.

After declining for several years, price volatility in the cotton market has risen since 1997, as measured both by intra-season price changes and by the daily volatility of the cotton futures market. To some degree, the increased volatility reflects globalization of the cotton market, which makes prices subject to a greater number of influences, including growing dependence of the U.S. market on exports (see Chart 2), worldwide weather, demand by China, the strength or weakness of the dollar, etc. However, this picture has been complicated over the past year by sharply higher grain and soybean prices, which have affected cotton prices because of competition for acreage, despite the fact that current cotton supplies are adequate to meet demand. In other words, a *prospective* shortage of cotton has boosted prices.

Further, price volatility in the cotton market rose sharply in recent months especially during the period February-April 2008. The reasons for this are not clear, however, it is clear that open interest in the market tripled between November 2005 and March 2008. The increase primarily reflects the activities of hedge and pension funds. While the effects of the increased investment are not well understood, it is possible that the influx of fund money partially accounts for increased volatility.

Futures prices spiked on March 3-4, 2008, showing unprecedented volatility. The use of the "synthetic close," which rose to \$0.90 on March 4, resulted in difficulty by the trade "shorts" in meeting margin calls. On March 3<sup>rd</sup> and 4<sup>th</sup>, as prices rose, the growing threat of forced liquidations appears to have resulted in a panic that caused prices to spiral upward. On the 4<sup>th</sup>, the synthetic high rose to \$1.08. It does not appear that this event resulted from any fundamental development in the cotton market. The CFTC has been asked to identify the causal factors that resulted in these unprecedented price fluctuations.

An examination of the differences between the nearby futures contract and the average spot market price published by the Agricultural Marketing Service shows that the basis widened from just over 4 cents during the 2006/07 marketing year to just over 9 cents for March-April 2008. During this period, the futures market rose to a level well above what the fundamentals would suggest. It appears that the basis rose, ie., widened, as the market attempted to bring actual transaction prices in line with supply and demand fundamentals.

A logical response to the increase in the basis has been an increase in stocks certificated for delivery against futures. Certificated stocks doubled between March 17 and May 12, reaching nearly 1.4 million bales. They are now between 5 and 6 percent of open interest.

It is agreed by most analysts that the events described above may be considered a “market failure” that raises risks for participants. Because there is no guarantee that a similar run-up will not occur again, market participants have expressed a reluctance to use futures for hedging purposes because of liquidity issues. As we look to the immediate future, this uncertainty may continue to pressure the basis to higher levels than traditionally seen in the industry.

### **Livestock and Poultry**

Total U.S. meat production in 2009 is projected to decline about 1 percent. Beef production in 2009 declines on tighter supplies of cattle. Cow inventories declined in 2007, and with relatively high cow slaughter expected in 2008, cattle inventories will be smaller and result in fewer cattle marketings during 2009. Marketable supplies of cattle also will tighten as producers begin retaining calves from this year’s calf crop to rebuild herds. Pork production is expected to decline as producers reduce sows farrowing later this year and into next year in response to poor returns. Additionally, hog imports are expected to be lower reflecting reduced Canadian inventories. Broiler production in 2009 will be slightly higher as production declines in late 2008 and early 2009 due to high feed costs, but then rebounds later in the year.

Total meat exports are forecast to increase in 2008 and 2009. The recently announced agreement to re-open South Korea to imports of U.S. beef is expected to support increased exports beginning in mid-2008 and expanding through 2009. Pork exports for 2008 are raised as markets in Asia increase sharply. But pork exports are forecast to decline in 2009, especially if China’s domestic pork supply situation improves. Broiler exports continue to increase. Beef imports in 2009 are expected to increase as U.S. cow slaughter declines. Pork imports are expected to continue to decline gradually.

In 2009, livestock and poultry prices are generally forecast higher due to lower meat supplies. Cattle prices are forecast about the same as 2008. Hog prices are forecast higher due to tighter supplies and continued strength in domestic demand and relative strong exports. Broiler prices will increase, reflecting tighter supplies in the first part of 2009.

### **Catfish**

The U.S. catfish industry is being pressured by higher input costs, lower farm prices, and increasing competition from imported catfish and related species. Imports of catfish, basa, and tra last year totaled 85 million pounds; on a farm-weight basis, that is about 30 percent of total U.S. supply in 2007. About 80 percent of these imports are coming from Vietnam and China, with most of the remainder from Thailand. At the current pace of imports and potential for a sharp decline in U.S. production, the import market share will be larger than 30 percent in 2008.

Since 2003, the volume of processed U.S. catfish has declined 25 percent, and USDA expects volume to decline again in 2008, although sales were up sharply in April. Prices are expected to trend higher, as they have since December 2007. However, for January to April 2008, prices for catfish averaged 71 cents per pound, 15 percent below a year earlier.

Although catfish prices have strengthened in recent months, feed prices have increased sharply from last year. In April, catfish feed in the Delta region averaged about \$400 per ton. Nationwide, feed prices are up about 20 percent compared with a year ago and are likely to rise again in 2008. A 1.6-pound catfish today returns about \$1.14 to the producer. Given current



feed prices, feed accounts for 75-80 percent of the value of the fish. The remaining 20-25 percent contributes to labor, transportation, other inputs, and returns to capital and management.

### **U.S. Food Price Outlook**

In the United States, consumer prices for food are expected to increase 4.0 to 5.0 percent in 2008 compared to the 4 percent increase in 2007 (Fig. 12). Processing, transportation, and marketing costs that are subject to volatile energy costs and other factors in “core” inflation will contribute about 2 percent to retail food prices. Commodity prices at the farm level are expected to increase less than last year.

On a seasonally unadjusted basis, the January-April average CPI for food is up 4.8 percent from a year earlier, which is in the ERS forecast range (4-5%) for 2008. Retail dairy products prices were above pre-release expectations. Also, prices were strong for carbonated soft drinks, cereal and bakery products, pulses, canned vegetables, and fats/oils. Basic ingredients for these products are affected to varying degrees by prices for wheat, corn, and soybeans.

### **Tables and Charts:**

The attached charts and tables provide additional details. **Note: For additional details, see the May 9, 2008, WASDE report. This report may be viewed at <http://www.usda.gov/oce/commodity/wasde>**