

# December 2007

## Economic Analysis Team Market Update



### The General Economy

By Bob Young, Chief Economist

About the only thing that seems to be certain with respect to the future course of the general economy is the notion of at least a coming slowdown relative to the performance we observed in the first three quarters of 2007. Some have continued to raise the specter of things getting so bad that we may actually tip into negative growth territory. (There's an economist term for you – negative growth)

Third quarter numbers for overall growth in the general economy came in stronger than a lot of people anticipated. At an annualized rate of 4.9%, it caught a lot of people by some surprise. The figures were strong enough to move the Federal Reserve to state at the October 31 meeting, "The Committee judges that, after this action, the upside risks to inflation roughly balance the downside risks to growth." One of those risks is the current rapid rise in mortgage delinquencies and the potential number of loan delinquencies.

Numerous borrowers will see their loans reset over the next 9-18 months, moving even more home mortgages into delinquency and potentially even foreclosure. Foreclosed homes typically sell at a 25-30% discount compared to other homes in the market, dragging down housing prices for even the good borrowers.

If you believe the financial press reports, thinking has changed considerably since the last meeting of the Federal Open Market Committee. Continued problems in the financial markets deriving from the sub-prime lending mess are being discussed daily with some discussion now moving over to how the issue is coming through on car loans and how it will affect some state and local governments that used the derivatives as investment tools to park money.

The results of efforts to get a handle on this issue are having mixed reception. A privately financed effort created to try to serve as a conduit of funds to buy some of these loans instruments was originally envisioned to start with a solicitation of \$100 billion. It now appears that fund will only be about half that size. Lending institutions that are not able to move products into this fund or some other funding source will likely be forced to bring these loan amounts back onto their books. This will reduce their reserves and limit the supply of funds they have available to lend to other qualified borrowers. It is this potential limit in credit availability and flow of funds that is causing significant concern.

This credit problem at the consumer level is already showing up as a sharp decline in net borrowing by the household sector. First quarter 2006 showed \$1.2 Trillion in net borrowing on an annualized basis. Third quarter 2007 had the same number down to \$691 billion. A significant chunk of these funds represent a decline in 'mortgage equity extraction' – read that as home equity loans that allowed consumers to extract part of their home equity for short term spending. Mortgage equity extraction has fallen 50% from its peak.

This was a fine strategy when housing prices were rising and by some measures provided the funds for upwards of 5% of consumer spending. Remove those monies and consumer spending starts to feel pressure.

Higher gasoline prices are taking an additional \$30 billion per month out of consumers pocket books compared even to August levels of this year. Moody's Economy calculates a cash-flow measure of income for households that includes salaries and wages as well as equity extraction and other consumer credit. It is at its lowest level in over a decade.

Add all this together and you have strong expectations of a slowdown in consumer spending in the coming months, possibly even out to the middle of next year. Consumer spending typically makes up roughly two-thirds of the general economy. Exports have been very strong with the weak dollar and better economic activity in other countries. Many business balance sheets are still in strong shape with a significant amount of cash on hand to deal with slow-downs and possibly even to make investments. Job growth has certainly weakened, but is staying in the 1% range.

Bottom line is an economy that is very fragile. Many have talked about the probability of a recession now approaching the 50% mark. This is certainly possible, but my expectation is that we stay slightly on the positive side for the next few months before things start to settle out and the economy moves back toward recovery. Hang on for what could be a rough ride in 2008.

### Crop Outlook

By Terry Francl, Senior Economist

### Crop Acreage in 2008

As previously discussed, the market is in a bidding war for crop acreage. Harvest time prices only dipped briefly this fall and then came roaring back for all the major crops, except cotton. As this article is being written 2008 corn futures prices are trading in the \$4.20-4.50 per bushel range, soybeans at \$11.50-11.80 and wheat from \$9.50-11.00.

The big battle shaping up is between corn and soybeans, although wheat is certainly a strong player compared to last year. The bottom line is how much can farmers make per acre given the respective crop prices, yields and production costs. While the soybean/corn price ratio is much stronger in favor of soybeans this year, 2.35 versus 1.85 a year ago, the average returns per acre still favor corn by approximately \$100 an acre. This is especially true when considering the higher yielding Corn Belt area where it is not uncommon to grow 200 bushel plus corn,

compared to 65 bushel soybeans. The current average national yields are 153 and 41.3, respectively. However, wheat followed by second crop soybeans can be the most profitable if summer weather allows 25-30 bushel soybean yields.

At this juncture it appears that either corn prices must decline relative to soybeans or soybean prices must increase relative to corn, the more likely scenario. But the reality is that there are only so many acres available. Farmers did add a couple of million acres to plantings in 2007 and although it may be more to a push, they are likely to do that again in 2008.

As of mid-December 2007, this is what the planted acreage for 2008 may look like for the four major crops:

Crop	2004	2005	2006	2007	2008
Corn	80.9	81.8	78.3	93.6	88.0
Soybeans (Double crop)	75.2 4.5	72.0 2.8	75.5 3.9	63.7 5.0	69.5 6.5
Wheat	59.7	57.2	57.3	60.4	64.5
Cotton	13.7	14.2	15.3	10.8	9.5

Many other analysts have a lower corn number, 85-87 million acres, and a higher soybean number, 70-72 million acres. Their concern is that the high cost of inputs for corn, nitrogen fertilizer and seed will move the acreage more towards soybeans. However, until the price, yield and cost variables result in a lower profit per acre, corn seems to have the inside edge. Moreover, many farmers have a long standing bias towards raising corn.

What might influence these numbers between now and next spring? Obviously it will be price trends of the major three crops, but what will influence prices? Planted acreage and growing conditions in the southern hemisphere, especially for soybeans. Farmers are finishing up soybean planting in Brazil and other South American countries. The estimated increase in Brazilian planted acreage ranges from 5% to 10%. If the

planted numbers come in on the low end of the range and there are any growing problems, beans in the teens are almost insured. If plantings swing to the high end and growing weather is favorable, soybean prices could drop back to the \$10 level until the situation in the United States is better defined.

The demand for wheat and corn remains strong, reflecting increased world demand and tight supplies. Such things as passage of the Energy Bill, currently being debated in Congress, could certainly have an impact on corn prices (ethanol) and soybean oil prices (biodiesel). Likewise, macroeconomic factors, like the value of the dollar and the price of crude oil, are also important variables that could affect prices and, ultimately, planting decisions.

The outlook for cotton is a further decline in acreage. Of course if the drought in the Southeast should continue into the spring—all long range forecasts assume normal weather—then cotton, which is a more drought tolerant crop, may hold on to more acres in 2008. In 2007 many farmers who planted more corn and/or soybeans in that area experienced disappointing yields due to the drought. Yet if corn, soybean and cotton prices remain close to their current levels there will be a strong economic incentive to abandon more cotton acres.

One message should be clear to crop producers; these are very good price levels. Consequently, risk management plans should be developed to not only market old crop inventories, but also to pre-sell some of the 2008 crop, perhaps a third to half of normal production prior to planting.

On the other hand, caution should be applied about committing future crops, particularly for the 2009 or 2010 crop years. There are price schedules for corn in the Midwest going for \$4 per bushel plus from some ethanol plants on through 2010. While that is an attractive price, changes in the value of the dollar, energy prices and world politics could theoretically create a situation that could drive corn prices to the \$5-\$6 level. 2009 sales should probably be held to the

25-35% level and 2010 sales to the 10-15% level. Keep in mind the hedge-to-arrive situation that developed in 1996 and realize although the odds may be slim, it is possible again.

#### December WASDE Report

The December USDA WASDE report indicated slightly tighter supply/demand conditions than market analysts had anticipated. Ending stocks for corn for the 2007/08 crop year were reduced 100 million bushels reflecting that amount of increased exports. The soybean ending stocks number was reduced by 25 million bushels due to higher exports, 20 million bushels, and a slightly higher domestic crush, up 5 million bushels. Wheat ending stocks were also reduced 32 million bushels, 25 million more exports and 5 million increased domestic food use. These adjustments push the already low soybean and wheat carryover stocks and stock-to-use ratios even lower. Even the corn number which remains relatively comfortable keeps getting lowered.

Cotton was the only crop where there was an updated yield report in December and it was revised up another five pounds per acre. Consequently, cotton production was raised 125,000 bales and since demand was unchanged 80% of that went towards higher ending stocks. In contrast to the rest of the major crops, cotton stocks continue to grow, albeit marginally this time. The December WASDE report is available at the following link:

<http://www.usda.gov/oc/commodity/wasde/index.htm>

## Livestock Year in Review

By Jim Sartwelle, III, Livestock Economist

Many folks in the livestock business, except for dairy producers, will be glad to see 2007 in their rearview mirror. If the old saying about great trials yielding great successes holds true, 2008 will be a banner year for swine and beef producers and horse owners. With no further fanfare, here are the top ten headlines of a most eventful year.

### 10. Outside the U.S., Animal Disease Concerns Abound

Great Britain continued to have difficulties during the past year, with outbreaks of foot and mouth disease and bluetongue. China experienced a severe occurrence of Porcine Reproductive and Respiratory Syndrome (PRRS, or "blue ear disease") that significantly reduced their pork production. These high-profile cases highlight the importance of protecting our domestic livestock from both accidental and malicious introductions of foreign animal diseases and shine a spotlight on the efforts USDA-APHIS and other state and federal agencies make to protect our domestic livestock herds on a daily basis.

### 9. No Beef Cow Herd Expansion...Again

2007 marked the ninth consecutive year of positive returns to cow-calf producers, according to the Livestock Marketing Information Center. Despite clear signals to cow-calf producers to expand the nation's beef cow herd, we are likely to see that herd decrease in number for the year. Acute drought in the Southeast and the attendant herd liquidation will more than offset modest herd building in other regions. Longer term, we submit that (1) increased production efficiency at all levels of the beef chain, (2) relatively high costs for supplemental feed and forage, and (3) rapidly shifting land use patterns (from livestock production into recreational/residential uses) sound the death knell for the traditional cattle cycle. When you can produce more beef each year from a nearly static cowherd, the boom and bust patterns appear ripe for breaking.

### 8. Runaway Milk Markets

2007 was the year that a long-term drought significantly curtailed Australia's dairy output. The Aussies' inability to service the demand for milk products in Oceania and beyond proved a bonanza for U.S. producers and merchandisers. Mix in a weak U.S. dollar and the end of a glut of highly-subsidized dairy product supply from the European Union, and you had all the ingredients for the best milk marketing year in history.

### 7. Livestock Competition Issues Take Center Stage in Farm Bill Debate

For the first time in the 70-plus year history of federal agricultural programs, livestock issues have a highly visible spot in the farm bill debate. While not contained in the House of Representatives farm bill, the Senate is currently debating proposed legislation that would be inarguably the most significant change in the regulation of livestock markets since the Packers and Stockyards Act was passed in 1921. Interested livestock producers should watch the House/Senate conference committee's activities closely.

### 6. Canadian Border Reopens for Beef

On November 19, the United States resumed importation of live cattle over the age of 30 months and removed the final restrictions from importing beef from Canada. Despite concerns from several groups that hordes of Canadian slaughter cattle would head south when the border reopened, the stringent protocol requiring proof of age for imported cattle has rendered such fears unfounded. USDA estimates right at 100,000 head of slaughter cows and bulls will enter the US from Canada for processing each year from 2008 through 2013. Assuming an exceptionally conservative cull rate of 10%, we will see a miniscule part of a more than 3 million head non-fed slaughter come from the north. The slight impact the border reopening will have on

non-fed slaughter prices should be a price gladly borne by an industry that needs this policy move to spur Japan, Korea, and other nations to respect our own OIE status for BSE.

#### 5. Horse Slaughter Goes Dark

We entered 2007 with three modern equine processing facilities operating in the U.S. 2008 dawns to dark doors at those facilities. The culprits? Legislative bodies, courts, and "concerned activists" who sized this issue up as a gateway to their larger goal of significantly downsizing meat, milk, and egg consumption and production in the US. The real victims are thousands of horses who have seen their value drop to near zero this year. The paltry efforts those groups have made to actually care for abandoned animals reveal their true agendas.

#### 4. Rocky Road for Beef and Pork Exports

Net pork exports were positive for the 13th consecutive year, despite a nearly 25% drop in export value to Mexico. This reflects the tremendous job America's pork producers have done increasing product quality and consistency. Exports of beef, while not yet recovered to pre-BSE levels, will near \$2.5 billion for the year. There are encouraging signs on the near horizon: Russia has resumed beef trade with the US, and trade negotiators are hopeful 2008 will find Korea back in the game and Japan closer to meaningful beef trade levels.

#### 3. Brazilian Firm Purchases #3 U.S. Pork and Beef Packer

In late May, it was announced Swift and Company, the nation's #3 beef and pork packer, would be sold to the Brazilian meat processing giant JBS S.A. With the mid-July completion of the acquisition, JBS became a true behemoth: the largest beef exporting firm in the world. With processing operations in Brazil, Argentina, Australia, and the U.S., JBS Swift and Company's formation is an obvious sign of shifting dynamics in the international meat trade.

#### 2. Livestock Producers Deal with High Feed Costs

From October 2006 to December 2007, cash corn prices in cattle feeding country increased by \$1.25/bu, driving the cost of producing fed beef cattle up sharply and killing feeding margins. Dairymen have had some of the euphoria that comes with \$20-plus milk dampened by high forage prices. Hog producers have felt the feed price crunch, as well. Producers have adjusted as best they can, feeding the byproducts of biofuels production and reevaluating traditional production systems. Cattle feedlots are being expanded in the traditional Corn Belt feeding areas of eastern Nebraska, Iowa, and South Dakota to capture the ration-cheapening benefits of feeding wet distillers grains. In the face of rising feed prices, however, U.S. dairy producers increased their milk production, broiler production increased, and carcass weights increased for both cattle and hogs.

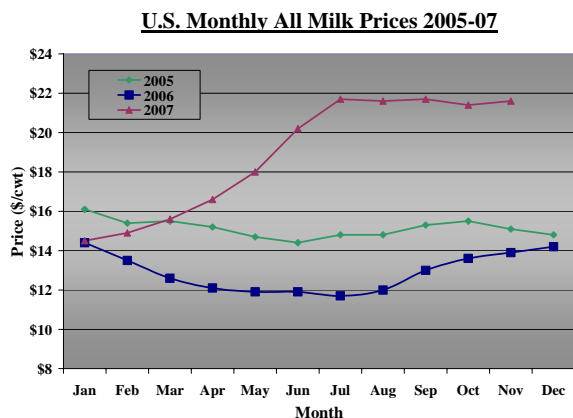
#### 1. Smithfield, Burger King and Others Yield to Animal Rights Interests

Late in January, Smithfield Foods announced a ten-year phase-out of gestation stalls in its production system. This came on the heels of the November 2006 Arizona ballot initiative to ban the use of both sow stalls and veal hutches. Smithfield's move is evidence the U.S. livestock production system is entering uncharted waters, altering or abandoning production practices that have never been proven detrimental to animal health or welfare. Under pressure from activists, Burger King announced it would purchase a significant amount of its pork and eggs from stall- and cage-free production systems in March; Wendy's followed in July. Whether these decisions signal the triumph of public relations and interest group pandering over science and ethics remains to be seen. Suffice it to say, animal care headlines will remain with us for some time as producers fight back, projecting their message of stewardship and treatment of the animals under their care.

## Dairy Outlook – Year in Review

By Allison Specht, Trade Economist

This year's Christmas wish for dairy producers is for 2007's market conditions to repeat in 2008. The dairy sector has been one of the shining stars of the U.S. agricultural industry this year. Generally, high prices occur times of low supplies, but this mantra was did not hold true in 2007. The U.S. dairy industry experienced record prices in conjunction with record milk production.



No year-end report would be complete without a discussion of the industry's vital signs. The average monthly all-milk price from January through November was \$18.89. This is a 46 percent increase from 2006, when the average all-milk price was \$12.90. As of October, there are 9.17 million cows in the U.S. dairy herd. This is an increase of 62,000 cows over last year. Total U.S. milk production for fiscal year 2007 (October – September) was 184.2 billion pounds of milk – up 1.8 percent from fiscal year 2006. This production increase closely follows the 2 percent increase trend of recent years. Thus, the national herd is getting larger and more efficient. This begs the question, “What will we do with all the milk?” The answer: *export it*.

This market update will focus on one of the primary reasons for this year's success – international trade. While dairy producers often protest imports of foreign milk protein concentrates (MPCs) and cheeses, U.S. dairy exports grew to \$2.5 billion in value in fiscal year 2007 from \$1.76 billion last fiscal year.

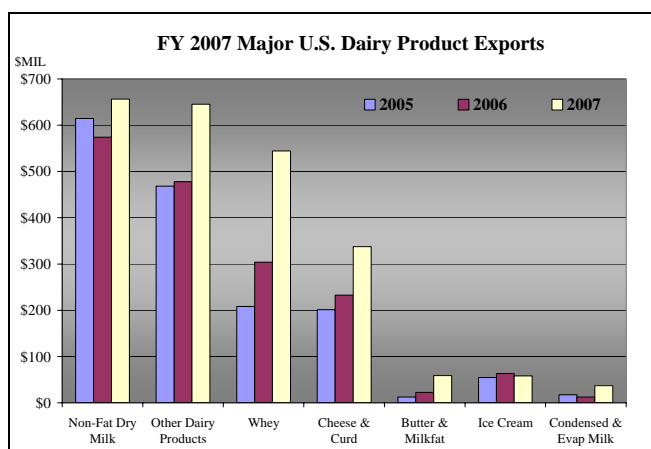
This is a 39 percent increase. According to the U.S. Dairy Export Council, 11.2 percent of domestic milk production (on a total milk solids basis) was exported during the first half of 2007. The average for 2006 was 9.2 percent. More of our milk production is being exported than ever before.

The international landscape for dairy exports has changed in recent years. International demand for dairy products is outpacing supply. Australia has experienced a prolonged drought that has depressed milk production. While forecasts are calling for rain soon, Aussie producers have slaughtered many dairy cattle they could not feed, so it will take time to rebuild the herd to pre-drought levels. The European Union restructured its dairy program to reduce export subsidies, thus their member states will have less incentive to export. Production is shifting within in EU, and focus is turning to supplying internal demand. New Zealand is trying to expand production rapidly but are faced by two significant constraints: land (because most dairy cattle intensively grazed which keeps cost of production low) and ability to acquire cattle. Argentina's government has placed price controls on food products, including milk, and the cap may force dairy farmers out of production. Canada's supply management system has made our neighbor to the north a net importer of dairy products.

While the U.S. remained a net importer of dairy products in FY 2007, the trade balance for dairy products improved significantly. We had a negative trade balance of \$194.3 million in FY 2007, down from \$843.1 million in FY 2006. The trade balance indicator does not directly measure competitiveness because the classes of imports and exports differ. However, the dramatic rise in exports compared to imports is a positive sign. U.S. producers have several major advantages over the competition. First, our significant resources of land, water, climate, and access to production technology and feed

supplies make U.S. milk production profitable and highly competitive internationally. Second, the decreasing value of the U.S. dollar has made our products *less* expensive and made our competitors' products *more* expensive in the international marketplace. Third, the U.S. government is continuing to negotiate trade agreements that will increase access to important markets, like Peru and South Korea. Finally, rising incomes in China, India, and other developing nations will increase further the global demand for dairy protein products. Although US dairy consumption has stalled somewhat, the check-off is finding new uses for milk and promote existing products.

Although the outlook seems positive, a reversal of fortunes could occur if our competitors regain their market shares sooner than expected. While most U.S. processors had only focused on meeting domestic demand, the growth in world dairy prices is encouraging them to produce more attractive products for export, like dried whey products and skim milk powders. Domestic cooperatives that own processing facilities are involved in joint exporting ventures. However, a large question looms in the distance. "Does our current federal dairy program encourage exports?" The dairy industry should continue to promote and encourage international trade expansion – our milk prices depend upon it.



## Crop Revenues Adjusted for Inflation and Production

Marc Allison

AFBF Economic Analysis Intern

For all graphs: This data is all deflated using a GDP implicit price deflator from the Economic Research Service. The farm price data used in the revenue equation is the national average yearly price received by farmers as published in the Crop Production Historical Track Records by the National Agriculture Statistics Service. The yield data used is national average annual yield from the same publication. All yields were held constant and prices were deflated using a base year of 2006. This resulted in a real revenue per acre figure that was then indexed for year 2006.

### Farm Prices and Revenues

Commodity futures prices hit 30-year highs! National average corn yields on pace to be second highest on record! U.S. agriculture exports on pace to break \$91 billion! Farm income projected to reach record \$87.5 billion in 2007! These might be just some of the recent headlines relaying agriculture's successes this year. Although this has been a very good, even great, year for most farmers, these prices have been the exception much more than the rule since the Great Depression.

Commodity prices are historically much more volatile than most other prices. Although not the case this year, one argument of many farmers is that commodity prices have not near as much as all other prices since the Great Depression. Consider soybeans for example. Soybean prices averaged \$1.86/bushel in 1928-29. Using the long-term inflation rate of 3.5%, prices should be in the range of \$28.00/bu. if soybeans indeed did follow the long-term inflation rate. This makes the \$11.00/bu. futures price look like a bargain for consumers!

Some might ask how farmers have remained overall profitable for such a long period. The answer lies in the second half of the revenue equation (Revenue = Price \* Yield). Commodity prices may not have risen along the same lines as most other products for the last eighty years but major improvements have been seen on the yield side of the equation. Consider those same 1928-29 years. National average soybean yields were

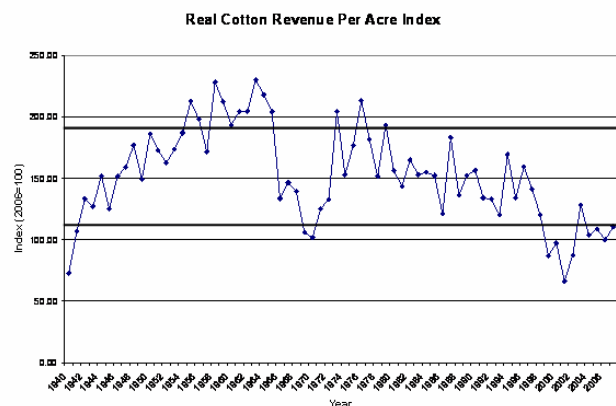
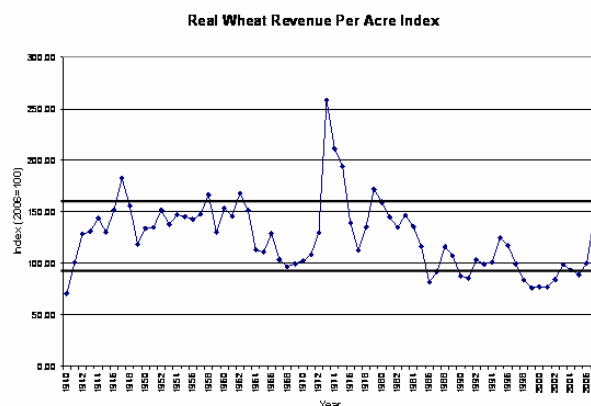
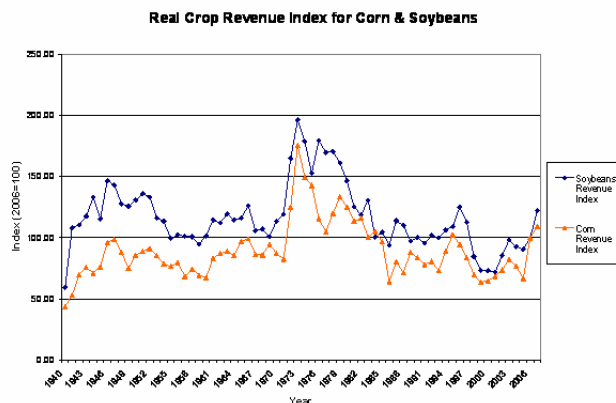
13.6 and 13.3 bu./acre in those years, compared to last year's average of 42.7 bu./acre and this year's projected yield of 41.4 bu./acre. Those improving yields can be attributed to a variety of factors, most notably seed and chemical technology, improved tillage practices, precision farming, and irrigation practices. These, among many other factors, have allowed farmers to maintain profitability even when prices are all over the map.

### Analysis of Real Crop Revenues

Real farm prices may have been volatile for the past eighty years but real crop revenue has remained much more steady when compared to prices. Corn and soybean per acre revenues seem to run fairly consistent with one another, mostly because they contend with one another for acreage and per acre revenues must remain competitive to ensure a sufficient quantity of each is produced. In a situation like we had this previous crop year, higher corn prices resulted in a gain of about 13 million acres, with about 11 million of those acres coming from soybeans. That shift forced soybean prices to rise significantly to gain back some of that lost acreage when it comes time for next year's planting.

Wheat revenues have also followed along the same lines as corn for about the last forty years. Cotton, on the other hand, does not really appear to follow any of the other three crops and it tends to make more exaggerated movements (in both directions) when compared to corn, wheat, and soybeans.

Standard deviation calculations also show the relative stability of farm revenues over time. Sixty-eight years were measured in the calculations (1940-2007). In the individual index charts below, the solid black lines represent one standard deviation from the mean in each direction. For soybeans, 52 of 68 (76% years' revenue was within one standard deviation of the mean. If you look at two standard deviations, it encompasses 63 of the 68 years (93%). Corn revenue was within one standard



deviation about 78% (53 of 68) of the time and within two standard deviations about 94% (64 of 68) the time. For wheat, 51 of 68 (75%) years' were within one standard deviation and 66 of 68 (97%) years were within two standard deviations. Cotton had the more erratic revenue of the four crops. Only 43 of 68 (63%) years were within one standard deviation. If you expand to two standard deviations, those numbers do improve to be along the same lines as the other three crops at 96% (65 of 68). These observations confirm the observations from the charts. Corn, wheat, and soybeans tend to have a more stable per acre revenue in the long-term, while cotton's revenue can be a bit more volatile.

As the charts show, real crop revenues per acre have remained steady for the most part since 1940 even with all of the variations in crop prices. The one exception to that statement is that three of the four crop revenue indices (corn, wheat, and soybeans) were greater than one standard deviation below the mean from 1998 through 2002. The last of the four crops, cotton, has only been within one standard deviation once since 1999, with that occurring in 2003, which validates crop farmer's arguments of tough times in the last decade up until this year.

