

# Agricultural Outlook

Purdue Cooperative Extension Service

September 2005

## 2006 and Beyond!

### The Year Ahead .....

Where is the Indiana agricultural economy headed in 2006? The answer is toward weakening income, but first we have to put that into context. The reason is the extraordinary income levels of 2004 when the state's production sector reached record income of nearly \$2.4 billion. The previous record income was in both 1996 and 1997 when annual incomes were near \$1.4 billion. Thus, total state net farm income in 2004 was 70% higher than the previous record. To put \$2.4 billion of income in perspective, the average yearly income for the previous 10 years had been around \$1.0 billion.

Purdue estimates for 2005 are for much more modest incomes of around \$1.1 billion. While down sharply from last year's record, many Indiana crop farmers feel fortunate to have seen their income prospects recover after their mid-

summer fears of major crop losses. Crop yields in 2005 are expected to be below average for corn and near average for soybeans. Livestock, milk, and poultry prices are somewhat lower than 2004 as well. Costs of crop production were up sharply in 2005, cutting into farmer margins. Large variations in individual farm incomes can also be anticipated given wide ranges in yields from farm-to-farm across Indiana this fall.

Finally, what about 2006? At this early point, we see continued sharp increases in costs of crop production lead by higher fuel, fertilizer, and interest rate increases. Unfortunately, crop prices are not expected to rise by enough to cover these surging costs. The outlook for the animals sector turns down as well with 2006 prices dropping for beef cattle, hogs, milk, and turkey. Purdue



estimates of 2006 Indiana net farm income suggests further declines to \$700 to \$800 million. With record high land values and cash rents, surging input costs, and struggling grain prices, 2006 looks to be a year of severe cost/price squeeze for crop farmers and thinning returns for animal producers.

From this background of struggling margins, the farm production sector will turn to the Federal Government for continued, or enhanced support, while the administration and many foreign countries are asking the U.S. to reduce their governmental farm supports. Thus the background for writing the 2007 farm bill is being set.

There is much more in this report on specific sectors of the Indiana agricultural economy and we hope you will read those of interest to you.

### Will Katrina Blow the Economy Off Course?

Larry DeBoer

The U.S. economy is completing its fourth straight year of expansion. Despite Hurricane Katrina, by this time next year that number should be five.

Output rose 3.6% above inflation over the past year, the unemployment rate fell half a point to 5%, and inflation remained stable at 2.5% per year. Short term interest rates rose, but long term rates fell. The economy appears to have reached capacity in 2005, which means the level of output when resources are fully in use and inflation is stable.



With output at capacity, policymakers aim at growth consistent with long-term growth in the labor force, the capital stock, and productivity. This rate is around 3.3% per year, slightly less than GDP growth during the expansion so far. Higher interest rates and higher energy prices should result in slower consumption and investment growth in 2006. Hurricane Katrina will reduce growth somewhat during the rest of 2005, but added construction spending

after Katrina should increase growth in 2006. Expect GDP to rise 3.4% above inflation during the next year.

Matching output growth with rising capacity implies no change in either the unemployment rate or the inflation rate. The hurricane will raise the unemployment rate in the near term. Expect the unemployment rate to remain near 5% by this time next year. Oil price changes make inflation predictions problematic. Katrina has created a near term oil price spike, and growing demand in China will keep oil prices at historically high levels for the foreseeable future. Still, the inflation rate should remain around 2.5% over the next twelve months.

The Fed has increased short term interest rates by 2.5 percentage points in ten quarter-point moves since June 2004. These increases will probably continue through early 2006. Since Katrina will dampen growth and increase inflation, the Fed's interest rate decisions should not be affected very much. Expect the interest rate on 3-month Treasury bills to rise from 3.2% now to 4.3%

by August 2006.

Long term interest rates have fallen as short term rates have risen. Alan Greenspan calls this oddity a "conundrum." Its cause is probably the vast purchases of Treasury bonds by China and other Asian countries. China buys up dollars to hold the value of the yuan down, and then lends those dollars back to the U.S. In July, however, China decided to tie the yuan to several foreign currencies, not just the dollar. The dollar may be allowed to fall against the yuan. This implies fewer Treasury bond purchases, which should cause U.S. long term interest rates to rise. The 10-year Treasury bond interest rate should finally begin to rise in 2006, from 4.3% now to 5.3% by August 2006.

One threat to continued expansion is a sudden collapse of the value of the dollar, which would require much higher interest rates in order to fund the U.S. trade and budget deficits. Another threat is a bursting of the housing bubble, which would cause a drop in consumption spending and construction employment. Neither is probable, but both are possible.

## New Farm Bill Just Two Years Away!

Allan Gray

Once again LDP's will be important for corn this harvest, so a brief review of those provisions is in order. LDP's are available on eligible grain when the posted county price is below the county loan. It appears that LDP's will be available on corn this fall, but not on soybeans. Producers should review the provisions for obtaining LDP's with their local FSA office and make sure they have the correct forms. It is of value to remember that LDP's are based upon yesterday's market. Thus, on a day when market prices move higher, one can get yesterday's higher LDP and today's higher cash price.

A second provision is also helpful. Producers can "lock in" a payment rate for 60 days. This is done at the FSA office with a form CCC-697. The grain must be put under loan and on the day selected, the repayment rate is locked-in for 60 days. This is called a "request to lock in a market loan repayment rate." If prices move higher within the 60 day period, one can still get the locked-in payment rate. If market prices move lower, the "locked in" rate expires after 60 days and regular LDP/MLG rates then apply. Interest rates for commodity loans at FSA offices are set at 4.875% in September.

The 2006 and the 2007 crops will be the last two covered by the current farm bill. The 2002 Farm Bill is set to expire in September of 2007. So, Congress must begin considering what if any changes need to be made. The three key drivers are expected to be our international trade agreements and negotiations, the federal budget deficit, and the political landscape.

The first driver concerns the U.S. trade agreements and negotiations. In particular, the U.S. is facing sanctions from the World Trade Organization (WTO) for its cotton programs and tough negotiation battles with developing countries in WTO over the level and types of subsidies provided to farmers.

Brazil won a complaint that the U.S. cotton program is illegal under WTO rules because of the structure of Loan Deficiency Payments (LDP's). The U.S.'s loss on the cotton ruling means that soybeans, corn, wheat, and other program crops may be subject to

changes as well in the 2007 Farm Bill. In the WTO other countries are pushing the U.S. to further reduce supports to U.S. farmers. The U.S. administration wants to take the position to lower subsidies in the U.S. in exchange for broader access to markets in places like Africa. For this to happen, it is likely that the U.S. will have to alter, if not eliminate, the LDP program. A change in the LDP program would likely impact cotton and all other crops that use LDP's.

Federal budget deficits are expected to also be a major driver. Current federal budget deficits are highly publicized and indeed quite large. The administration has quoted the objectives of reducing the federal deficit and even returning to budget surpluses over the next 8 to 10 years. However, Congressional actions to date have had little impact on the budget deficit, and the war in Iraq and now Katrina seem to suggest little progress in the short-run.

What implications does this have for the 2007 Farm Bill? It is likely that agriculture will have substantially less money to spend for the 2007 Farm Bill. This is especially true when you consider that Congress only has control of about 35 percent of the federal budget; the rest of the budget being locked up in entitlements such as Social Security, Medicare, and Medicaid. With a reduced amount of money available, Congress, and the farm community, may be forced to make tough choices about what programs get considered and the level of funding.

The third major driver is the change in the political landscape. A recent Purdue analysis looked at the change in the membership of the House and Senate Agriculture Committees between the 2002 Congress and the current Congress that will write the 2007 Farm Bill. Some very interesting insights come from this analysis. First, the major leadership in the House Ag Committee during the 2002 Farm Bill came from Rep. Combest (R) and Rep. Stenholm (D), both from the heart of cotton country in Texas and seasoned veterans at writing Farm Bills. In the new House Ag Committee, Representative Goodlatte (R) from Virginia is the chair of the committee. While he was on

the committee during the 2002 Farm Bill, he has not provided the leadership to write a Farm Bill. Plus, his interests are likely to be quite different from that of the previous leadership. Add to this the fact that more than 70 percent of the House Ag Committee is made up of new members, and you realize that the House Ag Committee is clearly behind in experience.

The Senate Ag Committee on the other hand has had much less turnover than the House. The new Senate Ag Committee chair is Sen. Chambliss (R) from Georgia. He too has not lead a Farm Bill but, Sen. Harkin (D) from Iowa is the ranking minority member and does have experience. With more experience in the Senate, expect to see greater leadership on the new legislation. Because Senators represent a much broader constituency than Representatives, it is possible that the influence of specific constituencies (West Texas Cotton for example) will be reduced. This could lead to a Farm Bill that is broader in its coverage of farmers but with less support available for any particular constituency.

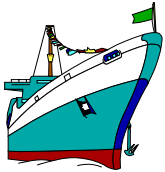
At this stage, the specific details of the 2007 Farm Bill are anybody's guess, but, three broad directions seem to have the highest probability: (1.) The next Farm Bill is likely to have less spending and thus less support for farmers; (2.) It is likely to increase programs that reach a broader set of constituents including environmental programs such as EQIP and the Conservation Security Program (CSP); and (3.) Expect to at least see some changes in the form and/or level of the LDP program to bring U.S. programs into better compliance with WTO guidelines.

The 2007 Farm Bill environment is shaping up to be a struggle between producers' desire for increased support and the opposing needs to cut federal government spending and to come into better compliance with WTO rulings which are moving to reduce farm supports and trade barriers over time. Producers should all watch with interest as the debate unfolds and take an active role by contacting their Representatives and Senators to make their wishes known.

## Exports Move Upward to Record

Philip Abbott

Agricultural exports from the U.S. are now projected by USDA to reach \$62 billion in fiscal 2005, and set a record at \$63.5 billion in fiscal 2006. USDA bases its improved export forecast on the relative weak dollar and improving prices.



The quantity of U.S. corn exports has been flat from 2004 to 2005 (July to June), with price declines lowering export value by 11%. For soybeans, quantity exported expanded by 15%, but prices were lower by 21%, lowering export value 9%. Beef exports have fallen \$1.2 billion from fiscal 2003 to 2004, and another \$1 billion from 2004 to 2005, due to trade restrictions following the BSE incidents. On the other hand, pork and poultry exports have increased (\$650 million in 2004 and \$985 million in 2005) to partially offset the loss in beef exports, and due to limitations on Asian exports from Avian influenza. Health and safety concerns continue to dominate meat trade outcomes, and large changes are not anticipated for next year.

Agricultural imports are now forecast to be \$ 57.5 billion in fiscal 2005 and \$ 61 billion in 2006. While the August import forecast is down slightly from the earlier forecasts, agricultural imports continue to surge. Fruit and vegetables, the largest category of U.S. imports, are up about 9% from fiscal 2004, the same rate of increase as is found for all agricultural imports. Rapid growth in imports has raised concerns that the U.S. might become a net agricultural importer. That may happen on an annual basis in the next few years. A weaker dollar makes imports more expensive and should cause some reduction. However, that has not happened as Americans continue to have a rabid appetite for foreign agricultural goods.

The recent 2.1% upward revaluation of the Chinese yuan has drawn lots of attention, since the yuan had been fixed relative to the dollar since the mid 1990s. But, trade effects are likely to be small unless substantial further revaluations occur, and the Chinese government has indicated that will not happen soon.

There is no evident progress in WTO Doha Round negotiations since the July 2004 framework for modalities was established. Trade reform via the WTO has been accomplished recently through the dispute settlement mechanism. The U.S. Brazilian cotton dispute outcome suggests potential adjustments are needed in U.S. rice and soybean programs, as well. The EU is reforming more rapidly its sugar program as a result of its dispute with Brazil. The U.S. recently won a dispute to lift Mexican taxes on high fructose corn syrup which prohibited imports.

Bilateral free trade agreements continue to be a preferred path to trade reform. The US just ratified the CAFTA-DR Free Trade agreement, which is believed to bring benefits widely to the U.S. agricultural sector. The American Farm Bureau predicted those benefits could reach \$1.5 billion. Because TRQs limit export expansion from CAFTA-DR, competition with U.S. sugar and ethanol is not expected to increase significantly.

## Food Price Increases Remain Small

Corinne Alexander

Faced with sharply higher gasoline and energy prices, food shoppers were seeing some relief at grocery stores. Food price increases so far in 2005 are much smaller than 2004. This is due to abundant supplies of many food products that had been in short supply last year due to events such as the hurricane damage to Florida fruit and vegetable crops; the import restrictions on beef due to BSE in the Canadian and U.S. herds; and a smaller egg-laying flock.

A second factor favoring smaller food prices increases is increased competition and downward price pressure exerted by warehouse stores and supercenters that are capturing a larger share of food retail dollars. However, Katrina will likely have a measurable impact on some food prices. Early reports suggest that coffee, bananas, chicken, and seafood will all see increased prices because of damage to

coffee stored in warehouses, chicken processing facilities, fishing equipment, and import facilities for bananas. The largest overall impact on food costs may come from higher transportation and energy costs as they are passed on to consumers.

Grocery store prices rose 1.4% from July 2004 to July 2005, a much smaller increase than last year's rise of 4.8%. This food price increase is well below the 1995-2005 average annual food and beverage retail price increase of 2.5% and will be less than the energy price increase of 14% and the 2.1% non-food-and-energy consumer price rise.

Restaurant prices are expected to increase at 3% for the rest of 2005, and then more slowly in the 2-3% range for 2006. With grocery store price increases being much smaller than restaur-

ant price increases, dining at home is a money-saving strategy.

Rising prices over the last 12 months have been led by the energy sector with gasoline prices up 20%, natural gas up 10% and electricity up 6%. Many food product prices have fallen. The most dramatic retail price decreases are occurring in the dairy and egg sectors that had record high prices last year with a 16% decrease in the price of butter, an 11% decrease in the price of milk, and a 7% decrease in the price of eggs. The largest food price increases have been for fresh tomatoes, lettuce, coffee and grapes. Fresh fruits and vegetable price increases are due in part to increased demand and to cool spring weather that affected production in Florida, California and Mexico.



## Will Oil Go Back to \$40 Per Barrel??

Wally Tyner

The big question most of us are asking is, "Are high oil prices here to stay?" The answer is, of course, that no body knows. But it is of value to examine the major forces underlying the price increase of the past year and assess the extent to which those forces are likely to continue. Crude prices in the 1990's generally traded in a range from \$15 to \$25 per barrel. From 2000 to 2003 that trading band increased to \$20 to \$40 per barrel. However, in May of 2004 oil pierced through the \$40 ceiling and has moved almost steadily higher to a peak near \$70 after Katrina's destruction. Moderation in fuel prices post-Katrina and reduced seasonal demand after the peak summer driving season seem to favor a consolidation of prices at a sub-\$70 level.

Oil prices, like any other commodity, are determined by supply and demand. In contrast to previous supply-short price surges, current high prices are led by increasing demand. While the world has continued to add to oil reserves, they have not been increased at the pace needed to keep up with increasing demand.

The largest demand increases this decade have come from China, India, and the United States. Energy

consumption is closely linked with economic growth, so when economies grow rapidly, energy consumption also tends to grow rapidly. For the past few years China has been growing 8% to 10% per year, a very fast pace. About 1/3 of the total global increase in oil demand has come from China.

Another large developing country, India, has been growing about 6% per year, so its oil demand has increased substantially as well.

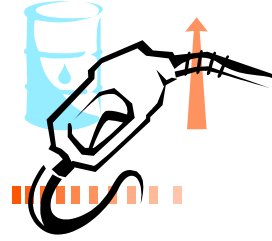
Meanwhile, the US has been growing at 3% to 4%, which is faster than historical growth. So, we have a substantial increase in global oil demand with only modest increases in supply – thus, prices have increased.

Will this continue or will we return to \$40 oil? If the global economy, particularly China, India, and the US continue to grow at current rates, it is likely oil prices will remain high. However, if growth in these countries were to slow substantially or a global recession were to ensue, then demand and oil prices would fall. Clearly, economic recession is not a positive way to lower oil prices as an economic slowdown

would be worse than high oil prices. In addition, over time, fuel efficiency can increase, consumption per person could drop, and alternative energy sources can increase supply.

With the passage of the Energy Bill this summer, Agriculture is being asked to play a larger role in supplying fuel with the establishment of a 7.5 billion gallon Renewable Fuels Standard (RFS) by 2012. The 7.5 billion bushels includes ethanol, bio-diesel, and other bio-based fuels. However the largest portion will be supplied by ethanol especially from corn.

How much is 7.5 billion gallons? In 2004, the U.S. consumed about 140 billion gallons of gasoline. With a 2% annual growth this would rise to about 165 billion gallons by 2012. At that point, 7.5 billion would represent between 4% and 5% of usage. While ethanol and other bio-fuels cannot replace a large portion of the usage, even small amounts can be helpful in moderating fuel prices as we continue to seek longer-term solutions to the world's energy dilemma.



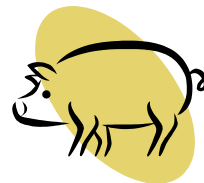
## Hog Outlook Still Looks Positive

Chris Hurt

After spending much of the summer worried about the potential for high price feed, pork producers breathed a sigh of relief with the USDA August crop report. That report gave the indication of sufficient corn supplies and that soybean supplies would be larger than anticipated. From mid-July highs, anticipated costs of hog production dropped \$4 to \$5 per live hundredweight. Cost for the coming year now appear to be around \$40 per live hundredweight with prices over the next year averaging in the \$45 to \$47 range. This signals a continuation of profitable margins for most of the coming year.

Supplies have remained moderate this year as they are virtually unchanged from last year. Hog production

has now been profitable since the spring of 2004. Producers have indicated they do not plan to expand. In the most recent hog inventory report from June, producers said their farrowing plans for summer and fall were down slightly. Demand, after seemingly hitting a snag in mid-summer, has now rebounded. Exports remain strong which are up 24 percent so far this year. Pork exports this year represent 13 percent of our domestic production. Part of the continued strength in exports is related to our beef export restrictions. At this time, there seems to be no reso-



lution in sight with the Japanese on BSE testing. This suggest pork's strong export pace will continue.

Price expectations for the fall are for live prices to average about \$44 in the fourth quarter. Some improvement is expected in the winter quarter to an average around \$47 with the spring quarter's prices once more moving back to near \$50 on average. Prices are expected to moderate \$3 to \$4 next summer based upon anticipation of greater expansion showing up in the upcoming September 30<sup>th</sup> report.

The combination of lower anticipated feed prices and stronger late-summer hog prices provided a more positive long-term outlook. This may finally set in motion a U.S. expansion.

However, even with expansion getting underway this fall and winter, the additional market supplies are not expected to show up until the fall of 2006. This means that the next year should be profitable for producers. Profits over the past year averaged an estimated \$13.70 per live hundredweight. In the coming

year, profits are expected to average \$5 to \$7 per live hundredweight.

Corn appears to be low priced for this harvest, and this favors purchasing and filling all available space at harvest time. On soybean meal, if the South American crop returns to near normal, meal prices may be lower after

February. Therefore, producers may want to consider booking meal at harvest only for delivery through February and then watching the development of the South American crop this winter.

## Cattle Prices to Edge Downward From Records

Chris Hurt

Beef supplies will rise in the coming year as a result of expansion in the beef herd, an influx of more Canadian live cattle, and higher marketing weights. As a result, cattle prices are not expected to be able to maintain their record high levels from the past year.

The cow herd has finally begun expanding after moving downward since 1995.

At mid-year, both beef and dairy cow numbers were up about 1%.



Even more growth appears to be on the way with an increase of 4% in beef heifers being retained to go back to the brood herd, and 3% more dairy heifers. The 2005 calf crop is estimated to be 37.8 million head which is up .5%. Expansion has finally begun as a result of a period of strong returns for cow-calf operations, and the abating drought in the western

Plains and Mountain States.

The Canadian border reopened on July 18, 2005. In 2002, the last full calendar year of live imports from Canada, the U.S. imported 1.7 million head, approaching 5% of U.S. slaughter. Since that time, the size of the Canadian calf crop has increased by 300,000 head, but their slaughter capacity also grew by 900,000 head. So, this may mean that just under a million head of cattle could flow to the U.S. annually. This would increase U.S. beef supplies about 3%.

Finished steer prices (Nebraska based) are expected to average around \$83 to \$84 in the final quarter of 2005. If so, the average 2005 yearly price of finished Nebraska steers would be near \$85, very close to the same level as both 2003 and 2004. First quarter 2006 prices are expected to average in the mid-\$80s and drop to the low \$80s for the second quarter. Current futures prices are somewhat higher than these forecasts.

Calf prices would be lower as well. This fall, Oklahoma City 500-550 pound steers are expected to trade in the \$115 to \$130 per hundredweight range.



Heifer calves are expected to be in the \$110 to \$125 range. This would be about \$3 per hundredweight lower

than last year. Eastern Corn Belt calves are often \$3 to \$5 lower than these benchmark prices on the Plains.

Beef cow expansion is expected for the rest of the decade with brood cow numbers peaking in the 2010 to 2012 period. Calf prices should be profitable over the next several years, but with margins reaching their lowest returns around the cyclical peak of the brood cow herd in the first several years of the next decade.

## Milk Prices to Slip

Mike Schutz

The dairy markets in 2005 have been a bit hard to read. Milk production continues to climb compared to last year. In Indiana, July milk production was up 7.7 percent compared to 2004. This is more than the national increase of 3.9 percent over July 2004.

*In 2004, Indiana charged into the top ten states for milk production per cow!*

What's driving all of this production? Realistically, it is a combination of more cows and more milk production per cow. For

July 2005 compared to 2004, milk cow numbers were up 6,000 head to

156,000 in Indiana. Across the top 23 dairy producing states, milk cow numbers have increased by 48,000 head. Even the farmer-funded Cooperatives Working Together (CWT) program that removed around 33,000 cows in 2003 and 51,000 cows in early 2005 from the national herd has not slowed the ex-

pansion brought on by higher prices since April 2004. Largely in response to higher milk prices, numbers of dairy cows going to slaughter has lagged well behind the five-year average throughout most of 2004 and 2005.

Furthermore, the United States has recovered from the heifer shortage arising from closing of the Canadian border. In fact, going into 2005, USDA estimated that there were 113,000 more 500-pound dairy replacement heifers than there were going into 2004. Considering that the

maximum number of heifers imported from Canada per year never exceeded 75,000, the supply of heifers no longer appears to be slowing expansion of the US herd.

Milk per cow has also risen dramatically. In 2004, Indiana charged into the top ten states for milk production per cow! Increased milk production per cow in 2005 has been bolstered by generally excellent quality feeds from the 2004 harvest and a competitive milk-to-feed price ratio along with supplies of Posilac<sup>®</sup> (BST) returning to normal historic levels.

Fortunately, dairy markets have been able to absorb most of the large increase in milk production. The question remains as to how long demand will be able to keep ahead of the

rapidly increasing supply of milk.

Several factors may help to keep prices relatively stable, at least in the short term. There is little indication that cow numbers or total milk production will slow down. As the 2005 harvest progresses, the effects of spotty growing conditions and a relatively long period of unabated heat and humidity will become clearer. Exposure of cows to long periods of heat and humidity often reduces milk production to some extent well into the fall. The third round of bids by the Cooperatives Working Together program seeks to reduce the national herd by 70,000 cows



representing future milk production of 1.9 billion pounds. Bids for that program are being accepted through September 16<sup>th</sup>.

While the sheer volume of milk production will cap milk prices to some extent; as long as economic conditions are favorable and dairy product sales remain brisk, no major downturns in prices are expected. For 2005, USDA is forecasting an annual all-milk price of \$15.05, only one dollar off last year's record price of \$16.05. However, the outlook is not quite as good for the first half of 2006, with the average all-milk price expected to be around \$13.35. Still, that is better than the \$12.11 and \$12.50 of 2002 and 2003, respectively.

## Crop Costs Add New Fears

Allan Miller

Uncertainty associated with the outlook for farm input prices this fall and for the 2006 crop year increased considerably in response to the shock to energy prices caused by Hurricane Katrina. Gasoline and diesel fuel prices had been rising steadily since the beginning of the year. Tight oil supplies, continued economic



growth, limited excess production capacity, and concern about potential supply disruption were likely to push gasoline and diesel fuel prices higher even without Katrina. The timing of Katrina was the classic worst case scenario coming right before the Labor Day Holiday, a time of high gasoline demand.

World oil demand is forecast to grow at a 2.1% annual rate from 2005 to 2006, Non-OPEC production increases are expected to cover 39% of this demand growth. OPEC countries had already ratcheted up production earlier this year in response to the tight supply situation, and they will likely attempt to increase production to the extent possible in response to Katrina, but having more oil in the Gulf right

now wouldn't help particularly since the U.S. industry will have to bring refining and transmission capacity back on line first. Spare oil production capacity worldwide is at its lowest level in three decades and is primarily limited to Saudi Arabia, and consists, at least in part, of less-desirable heavy oil. In addition, worldwide refinery capacity has been hard pressed to keep up with the demand.

Diesel prices jumped sharply in response to Katrina and are likely to stay high until the infrastructure situation in the Gulf and along the Gulf Coast improves. The impact of Katrina on farm machinery operating costs in Indiana this fall may be limited to the extent that Indiana farmers have already laid in their fuel supplies for this fall. According to the USDA, Indiana farmers' expenditures for fuels comprised 3.3 percent of their total production expenditures in 2004. This 3.3 percent translated into \$180 million in 2004.

Propane inventory in the U.S. was at 65.3 million barrels as of August 12, which was up 23 percent from a year earlier due to strong imports earlier

in 2005. Most of the supply need for fall crop drying was probably already in the Midwest before Katrina hit. Since the first of the year, retail prices for commercial propane have been relatively stable and have increased at a slower pace than the much more volatile diesel fuel. Katrina is expected to have a more limited impact on the price of fuel for drying corn this fall than on the price of diesel fuel. As the winter heating season arrives Katrina's impact on all fuels used for residential heating, including propane, may be more pronounced.

Nitrogen fertilizer prices may also be affected by Katrina. Natural gas is used in the production of nitrogen fertilizers. Natural gas is expensive to transport and so most of natural gas used in the U.S. is produced in and around North America. The price of natural gas in the U.S. has been high enough for the last two to three years that much of the U.S. supply of nitrogen fertilizer has shifted offshore and is being imported from areas of the world like the Caribbean where natural gas is less expensive. Spot prices for natural gas surged after Katrina with prices closing in on \$13 per MMBtu, but have dropped back to closer to \$11 since.

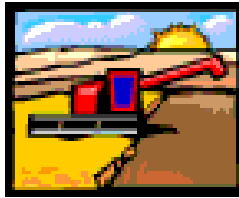
Capacity to convert gas to nitrogen fertilizer in the U.S. has been idled while global fertilizer companies are making large investments in more modern and efficient plants in places like Trinidad.

The fact that much of our supply of nitrogen fertilizers is imported should somewhat buffer the direct impact of Katrina's damage to natural gas production capacity, but in the short run nitrogen prices will undoubtedly increase as the result of Katrina.

Worldwide supplies of nitrogen are expected to continue to be tight. Nitrogen fertilizer production worldwide is forecast to increase at a marginally faster rate than demand over the next few years, such that the price spike following Katrina should moderate with the passage of time.

Retail nitrogen fertilizer prices in the U.S. will likely be higher this fall and next spring as a result of Katrina. After spiking upward in the

short-run, the key question will be how soon and how much nitrogen prices will decline with the passage of time. A cold winter will put upward pressure on natural gas prices and will delay the anticipated return to pre-Katrina price levels. Phosphate and potash fertilizer prices are also expected to be higher in 2006 with potash prices increasing by a greater percentage than phosphate fertilizer prices. Worldwide demand for potash was up sharply in 2004. Seed prices, interest rates, and machinery prices are also expected to be higher in 2006.



Farmers cannot pass the higher costs directly on to their customers, so profitable corn and soybean production becomes increasingly difficult. Neither can farmers necessarily just buy

fewer inputs, because this tactic can actually increase costs per bushel when production and revenues fall more than the cost of the inputs. The current situation does however reward producers who make pricing and production decisions that reduce costs per bushel produced. Fuel prices, like the prices for corn and soybeans, can vary widely based on time, place, and other factors, so a carefully planned "purchasing" program for acquiring farm inputs can reduce costs.

The out-of-pocket costs of producing corn and soybeans in Indiana have been consistently higher on a year over year basis since 2002. The total variable costs of producing corn and soybeans in rotation on average Indiana farmland are forecast to increase at least 12 percent in 2006 relative to 2005. This is based on the assumption that Katrina's impact on fuel and fertilizer prices will be relatively short-lived.

## Huge Crop Costs Increases, But Stick With Rotations for 2006

Craig Dobbins and Alan Miller

For the past two years Indiana crop farmers have been faced with sharply higher prices for critical crop production inputs. The first items to increase in price were fuel and nitrogen. For 2006, increases in fuel and nitrogen prices along with seed, phosphate, potash, machinery, and short-term interest rates are all contributing to higher expected production costs. There also is continued concern about the effect that Asian Rust may have on soybean production costs in 2006.

The impact hurricane Katrina has had on fuel prices and the affect that Asian Rust might have on the 2006 soybean crop indicates that variability is likely to be the norm for 2006. The percentage increase in selected production costs for corn, soybeans, and wheat

produced on average soils is presented in the Table 1 below. These increases reflect the difference in estimates reported in the 2005 Purdue Crop Guide and our forecasts for 2006.

Fuel costs are expected to be much higher. Fertilizer costs are also expected to be higher, but the increase is expected to be more moderate than last year. The higher expected phosphate and potash prices result in a larger percentage increase in fertilizer for soybeans than corn. The increase in total variable production costs for corn and soybeans is expected to be 11% and 12%, respectively. The production costs for wheat are expected to increase 8%.

Mid-August future market prices and trend line yields for 2006 were used to provide an estimate of harvest-time revenue. Combining these revenue estimates

**Table 2. Estimated harvest revenue, total production costs, and contribution margin for selected crops on average soils**

Item	Continuous Corn	Rotation Corn	Rotation Soybeans	Wheat	Wheat DC Beans
Revenue	\$303	\$337	\$275	\$215	\$368
Total production cost	\$226	\$205	\$128	\$105	\$205
Contribution Margin (Revenue minus Total production cost)	\$77	\$132	\$147	\$110	\$163

with the 2006 cost estimates provides the contribution margins in the Table 2. These estimates are based on the assumption that continuous corn will yield only 90% as much as rotation corn.

These estimates indicate that in areas where wheat and double crop soybeans are an alternative this alternative provides the largest return followed by soybeans and then rotation corn. The larger return to soybeans may be in part the increased risk associated with soybean production because of Asian Rust. The production cost estimates do not contain any expense for the treatment of Asian Rust. These 2006 estimates indicate that for most Indiana farmers there is little reason to shift from their standard crop rotation.

**Table 1. 2006 increase in selected production costs for Indiana crops on average soils**

Item	Rotation Corn	Rotation Soybeans	Wheat
Fertilizer	13.6%	19.2%	4.0%
Seed	2.9%	5.6%	-
Dry & Handling	23.5%	-	-
Fuel	50%	50%	50%
Total variable production cost	11.4%	12.2%	8.2%

## Land Values Not Yet at the Top!

Craig Dobbins

Farmland values in the state continue to move higher. The 2005 Purdue Farmland Value Survey reported an increase of 8.5% to 11.1% for Indiana farmland. The value of average farmland was estimated to be \$2,945 per acre. This increase was the latest in a series of increases that started in 1987. Since 2003, Indiana farmland values have increased 17% to 20%.

*The 2005 Purdue Farmland Value Survey reported an increase of 8.5% to 11.1% for Indiana farmland.*

Several forces are pushing land values higher. One force is the limited supply of land for sale. Even though prices have risen sharply over the last two years, 84% of the 2005 survey respondents indicate that the amount of land for sale is the same or less than last year. Other forces in the market influence the demand for farmland. Sales of farmland to developers for subdivisions and commercial property continue in many areas. Some of this money is then used for real estate exchanges (purchases) in other areas. If structured properly, these transactions

can be done in a way that allows sellers to avoid paying tax on the capital gain.

This type of transaction provides the buyer with cash and a deadline by which the replacement property must be purchased. Given other available investments for non-farm investors, farmland's annual return combined with the expected increase in value often provides an attractive investment alternative. There also continues to be a strong demand for sites that will provide good rural residences. Finally there is demand from farmers seeking to expand the size of their farm. A common thread stimulating many of the demand forces is low long-term interest rates.

Will the upward movement in farmland values continue? Until long-term interest rates increase, it is expected that farmland values will continue to rise. A gradual increase in long-term rates will slow the development demand, provide non-farm investors

with more attractive investment alternatives, and raise the cost of buying a country home site. It is expected that in the year ahead farmland values will continue to increase, but the increase is expected to slow to 4% to 6%.

What could derail a continued increase in land values?

Here is one list of things to watch: (1.) A sharp rise in long-term interest rates;

(2.) A reduction in government price support payments; (3.) A reduction in the annual rental income because of continued pressure on margins from production cost increases and/or crop price declines; and (4.) A sharp rise in real estate taxes. If you are a farmland owner or a prospective buyer, it is important to assess the probability that each of these events might occur, the likely market response, and the impact on your financial situation.



## Cash Rents Only a Touch Higher

Craig Dobbins

Like farmland values, the Purdue Land Values survey indicated that cash rents in 2005 moved higher. The increase in cash rents was 2.7% to 3.4%. The estimated cash rent for average land was \$126 per acre. As with farmland for sale, the supply of land to rent is limited and the demand strong as farmers seek to increase the size of their farms. This means that farmland owners are in a strong bargaining position.



Projected crop budgets constantly indicate a squeeze on crop production margins, but rents have continued to increase. Since 2000, the annual increase in cash rent for average Indiana farmland has averaged 2.3%. Over the past two years, the price of crop produc-

tion inputs has risen sharply. This increase in price has been led by increases in fuel and fertilizer prices, but there have also been increases in seed and some chemical prices. In 2004, the increase in costs was partially offset by good corn and soybean yields. Yields in 2005 will not help offset production cost increases and it appears that 2006 will be another year of increased production costs for corn and soybeans.



While many things will change between now and next fall, the cost-price relationship indicates continued pressure on crop margins. In an

effort to lower per unit costs many farm operators are striving to increase the number of acres being farmed. This will keep the demand for cash rental land strong, but the ability of tenants to absorb the declining margin may be coming to an end. Cash rents are expected to increase 0.5% to 1.0% for the 2006 crop year.

## Corn Storage Offers Handsome Rewards

Chris Hurt

After a hot and dry summer in many parts of Midwest, Indiana yields are expected to be 149 bushels per acre which is only 2 bushels below trend. By region, the most negatively impacted regions of the state were in the northwest, west central, as well as the southeastern and south central regions of the state. Given the weather concerns in mid-July many producers are relieved to have yields reach these levels.

Nationally, corn acreage was up by nearly 1% this year and yields of 143.2 bushels per acre were about 3 bushels below trend. USDA has estimated total production to be 10.6 billion bushels which is sharply below last year's record 11.8 billion bushel crop. Given the heat and dryness this summer, there remains yield uncertainty. The market will anxiously await true yield numbers from combines in coming weeks.

With large ending stocks of 2.1 billion bushels from the huge 2004 crop, this year's crop will provide abundant supplies of 12.8 billion bushels. Usage is expected to reach 10.7 billion, but this will still leave ending stocks unchanged at a burdensome 2.1 billion bushels on August 31, 2006. USDA expects the average season's price received by farmers to be \$1.90 per bushel compared with \$2.06 for the 2004 crop.

Two events have resulted in sharply lower cash bids in recent weeks. The first is the huge supplies of old crop corn in the western Corn Belt, some of which must still find its way to market before the new crop harvest begins. The second is the recent Gulf Hurricane.

Hurricane Katrina caused basis levels on the Ohio River to drop as much as 20 to 25 cents below what they would have been in her absence. The impact in central Indiana appears to be a decline of about 4 to 6 cents and only 2 to 3 cents in northern Indiana. Fortunately, the Midwest was not yet at peak harvest activity, and basis should improve in coming weeks. If the basis is going to improve, this means producers delivering to River markets may want to try to delay harvest activity as long as is

reasonably possible, and to attempt to find storage for early harvested crops.

As a result of the weak bids at the gulf and other terminal locations, LDP's are very high (either 38 or 43 cents on September 9 in all Indiana counties). Around the state, there is a wide range in the implications. In the Southeast, cash bids plus the LDP are currently near or even below county loan levels. In this area, there is little advantage to do an LDP and price now. In the Southwest, LDP's are working better and providing about 10 to 12 cents above county loans. In the central and northwest part of the state, LDP's plus current bids are providing about 20 to 25 cents above the county loans. The Northeast portion of the state has the strongest current advantage where LDP's plus current bids are 25 to 35 cents above the county loans. These areas of the state may want to advance harvest activity in order to gain LDP's as soon as possible and also price grain.

If grain bids recover on the Ohio and Mississippi Rivers in coming weeks, these will tend to cause LDP's to decrease. Therefore, taking LDP's as soon as possible should be a consideration this year.

Harvest corn prices in the central and northern sections of the state are expected to be in the \$1.65 to \$1.80 range. Returns to storage should be very strong with prices next spring moving up to \$1.95 to \$2.10. Early summer prices are expected to be a few cents higher. Carry in the market from harvest to late March is currently about 33 cent per bushel and about 39 cents into next June. The 33 cents is based upon an 18 cent futures premium from December to May plus an expected 15 cent basis gain.

The strategy this year is to secure a big LDP, and then store and earn the large carry in the market. Three ways to earn the carry are to LDP and then forward contract for delivery next spring or early summer. Secondly, store

and sell futures for next May or July, and third store and speculate on price recovery. The lowest risks are the first two. It is strongly suggested that producers use the first two strategies on at least a portion of their crop. This is because in very large crop production and carryover years, such as this one, speculative price recovery can be very weak.

Those without storage will want to consider commercial storage space as well. The carry is large so check on storage charges and the level of deferred bids to see if pricing for later sales might cover commercial storage charges and interest costs.

Those delivering to River markets should LDP early and store. If grain export system can return to near normal this fall, basis will improve as much as 30 to 35 cents from current levels by next spring and summer. This strongly favors storage.



# Soybeans Should be Stored as Well!

Chris Hurt

Soybean acreage was down 3% this year as the fear of rust caused some shifting to alternative oilseeds and to corn. In September, USDA estimated national yields to be 39.6 bushels per acre resulting in a crop of 2.86 billion bushels, some 70 million bushels more than August. When combined with the 295 million bushels of carryout from the 2004 crop, available supplies are 3.16 billion bushels which is the second largest in history.

Yields in Indiana were set at 45 bushels per acre, a one bushel drop from the August estimate. Yields appear to be near their five year average for most of the state, except for the east central and southeast where they are 4 bushels lower. Mid-August rains proved helpful to achieving near average yields after a hot/dry spring and early summer. Yield results will remain somewhat uncertain until combines begin to roll.

Usage is expected to reach 2.95 billion bushels for the 2005 crop which is somewhat lower than last year and assumes South American crops will return to near normal next spring. Much larger crops in South America will cut into U.S. export demand for soybeans and meal next spring and summer. Ending stocks at the close of the 2005/06 marketing year are expected to be 205 million bushels, an increase of 25 million from the August estimate.

Brazilian reports suggest some reduction in planted acreage this fall, with nearly unchanged acreage in Argentina. South American yields will be an important determining factor in U.S. price direction this winter and next spring.

Soybean acreage will likely be up 2% to 3% in 2006. This is as a result of smaller outlays for input costs for soybeans compared to corn. In addition, since soybean rust was not a problem this summer, producers have gained confidence that it may not be as bad in the U.S. as feared prior

to 2005 crop planting.

The U.S. average farm price for the 2005 soybean crop is expected to be in a range from \$5.15 to \$6.05, or about \$5.60 at the mid-point. Indiana cash bids at harvest are expected to be in the \$5.40 to \$5.60 range in central and northern Indiana. Cash bids are expected to recover to around \$5.80 to near \$6.00 by early December in the central and northern sections. If the South American crop is near normal cash prices may reach their peak in the late winter or early spring around \$6.10 to \$6.25.

Current bids at Ohio River markets are depressed and have been similar to central Indiana. If the lower Mississippi can return to near normal grain movement, river bids should move to 15 to 20 cents higher than central Indiana levels.

Soybean prices are not expected to be low enough for LDP's to be working this harvest season. However, cash prices may only be 30 to 45 cents away, and if the South American crop should be above normal and U.S. acreage increases next summer, then LDP's on soybeans could return next summer.



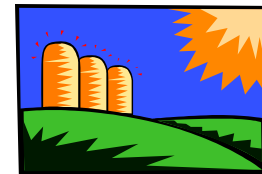
Most producers are discouraged that they did not forward price more beans and disappointed with current low bean prices. This means there will be a strong push to store as many bushels as possible. There is sufficient carry in the market to cover on-farm storage costs for soybeans. As of this writing (September 9), there was about 22 cents premium in futures from November to May, and with a 15 cent basis gain, this would be 37 cents of carry for storage into late-March. Carry for storage to June is about 41 cents.

to on-farm storage are about 23 cents per bushel for storage until late-March. Anticipated returns above interest costs for corn storage are higher: 29 cents until late-March, and 33 cents until June. Thus, if on-farm storage is limited, the market is sending the signal to store corn first and soybeans second. With abundant on-farm storage, store both corn and soybeans.

Those who do not have on-farm storage should check storage rates and forward bids at their elevators. This may be a year when forward bids are sufficient to cover the commercial storage charges and interest costs. As of September 9<sup>th</sup>, commercial storage until December or March appeared to cover costs. However, longer-term storage into late-spring or summer did not appear to be profitable.

Those who elect to store soybeans but also need operating capital should consider using the soybean loan program available at the FSA office. Interest rates in September are 4.875% per year.

Like corn, soybean marketing has some special considerations around Ohio River markets.



At these locations, basis should improve by 25 to 35 cents from current levels. Adding this to 22 cents of futures increases from November to May, and the carry is 47 to 52 cents per bushel. This strongly favors storage, so look at all alternatives available for on-farm storage, including temporary storage.

*The U.S. average farm price for the 2005 soybean crop is expected to be in a range from \$5.15 to \$6.05, or about \$5.60 at the mid-point*

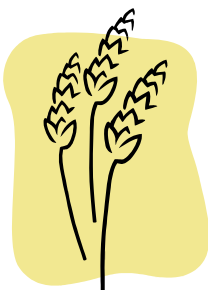
Net returns after interest costs

## Wheat Seeding this Fall?

Chris Hurt

Wheat usage continues to struggle with reductions in exports and no growth in domestic use. National winter wheat acreage will likely increase 2% to 3% this fall as producers look for a crop with more moderate total input costs than corn or soybeans. These factors, along with larger than expected corn and soybean crops, mean that wheat will likely have a negative price tone this fall and winter.

USDA expects wheat usage from the 2005 crop to drop by about 75 million bushels. This is the second year in a row for declining total wheat use.



Ending stocks are expected to rise to 625 million bushels with U.S. average farm prices of \$3.20 per bushel. This compares with an average of \$3.40 for 2004 crop wheat.

Should you plant more wheat this fall in Indiana? Our Purdue budgets, as detailed in the "Crops Costs..." section show that double crop wheat with soybeans remains the best economic alternative in the southern portion of the state.

However, single crop wheat is not expected to provide as strong of economic returns as either corn or soybeans in 2006 for the central and northern portions. Producers should study their own budgets and continue to watch

input prices and new crop wheat, corn, and soybean price prospects.

Wheat yields in Indiana reached a record of 70 bushels per acre in 2005 and will be another factor that will cause consideration of more wheat acres. Yields in the north central and east central districts were at 77 bushels, and the central district was at 80 bushels per acre. The warm dry spring this year was beneficial to yields. However, that is not the traditional weather for most Indiana springs. Therefore, don't assume minimizing the costs of inputs per acre by planting wheat will maximize crop returns when compared to corn and soybeans in 2006.

*Use of This Information:* This information is based upon current evaluations by USDA and Purdue analyst. While it utilizes the latest known information, future outcomes can be much different due to shortcomings in analytic methods, to inaccurate anticipation of future events, and to unforeseeable new events. Ultimate outcomes are often different than provided in the outlook. Thus, this information should be used in conjunction with other outlook sources and decision makers should always evaluate how a range of potential outcomes would impact their firm or organization.