

PURDUE AGRICULTURAL ECONOMICS REPORT

OCTOBER 2006

Excitement, Change, Optimism: Here Comes 2007

Excitement, change, and optimism could all describe the anticipation of 2007 in agricultural circles. Indiana biofuels is the headline story for 2007 as Indiana agriculture enters the energy business in a big way. The advent of four new Indiana ethanol plants and more biodiesel capacity in 2007 will require more acres of corn maybe more soybeans, higher crop prices, and lots of feed co-products for animal agriculture.

But there are many other important issues as well. In a nervous world, the U.S. economy has remained about as “cool under pressure” as one could hope. Policy makers are trying to cool inflationary tendencies yet keep growth on a positive slope. There will be a new 2007 Farm Bill, surprisingly what that will look like is not very clear today. Huge increases in crop input costs have been a drag on farm incomes, yet 2007 promises some light at the end of the tunnel.

We are finally back in the beef export business and prospects for animal agriculture have improved in recent weeks. Ethanol means there’s a monstrous increase in the need for corn production in 2007, and beyond. Acres have to move to corn—maybe more that we have seen in modern history. How high will crop price be? What will be the impacts on land values and rents? Indeed, excitement,

change, and optimism well describe our anticipation for 2007.

Indiana Biofuels– Energy Farming

Chris Hurt

Farming for fuel is a new concept for Indiana agriculture. It may be the biggest event to happen since the export boom of the 1970s. Clearly it’s a big event already, with the possibility of revolutionizing everything from what is produced to how it is marketed. There is a broad spectrum however between a “big event” and a “revolution.” Where biofuels will ultimately fall along that spectrum will be determined by events which will unfold in the next few years. The drivers are expected to be found in energy prices, state and federal energy policy, and in technology, particularly the perfection of the process to produce ethanol from cellulose (plant material).

Indiana biofuels are both ethanol (corn) and biodiesel (soybean oil). Ethanol is clearly in the lead. Four plants under construction at Rensselaer, Marion, Clymers, and Linden Indiana will be on-line in 2007 and add to the corn demand from one existing plant in South Bend. These five facilities will utilize about 195 million bushels of corn,

or 16% of 2006 production. The new plants by themselves will consume the equivalent of an addition 12% of state production.

The State of Indiana is working with an additional 8 plants located in Blackford, Jay, Putnam, Posey (2), Tipton, Randolph, and Rush Counties. Our Purdue list indicates at least another 10 more groups considering plant sites.

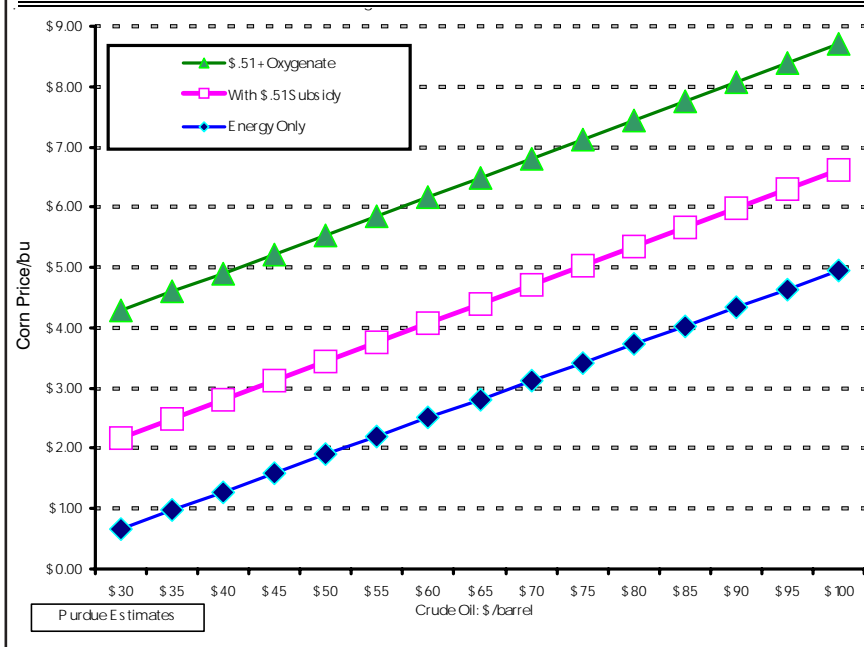
Soy biodiesel is not as far along in its development. The largest facility will be a new soybean crushing facility being built at Claypool in Kosciusko County by Louis Dreyfus Inc. That plant will process 50 million bushels of soybeans per year with potential biodiesel output of about 75 million gallons. Several smaller facilities could bring annual state production to around 90 million gallons which is the soy oil from about 67 million bushels or roughly 23% of 2006 Indiana production.

Why is there such startling interest in fuels from farms? The nearly “gold rush” status is driven by powerful

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Figure 1. Corn Breakeven Price: August 2006 Estimated Costs



profitability, especially for ethanol. Ethanol in the Eastern Corn Belt was not profitable when crude oil was well below \$40 — a level not reached until mid-2004, but becomes very profitable when crude moves above the \$50 level.

Clearly the energy value (BTU's) in ethanol is much more valuable when crude prices are high, but other factors have contributed to ethanol's current "gold status." The federal government provides a \$.51 per

gallon subsidy to blenders who use ethanol. The \$.51 per gallon is equal to about \$1.40 per bushel of corn. A number of policy changes have also made ethanol more desirable. First, the national Energy Bill passed in the summer of 2005 mandated that pre-set levels of renewable fuels use marching upward to 7.5 billion gallons by 2012. Second, 25 states have restricted or outlawed altogether the use of MTBE as a gasoline oxygenate. In addition in May of

this year the federal government stopped providing liability protection for users of MTBE. Thus, for most blenders, the best way to meet the emissions standards in the Clean Air Act is now to use ethanol to blend with their gasoline. Third, more states are passing their own state renewable fuels standards. Minnesota for example mandates all gasoline in the state must be at least 20% renewable. Fourth, a strong national tone to consider moving to as much as 25% renewable fuels by 2025 has gained support as a means of reducing dependence on foreign oil.

An illustration in Figure 1 of the economics of ethanol can be captured in graphic form by looking at the relationship of crude oil prices and the estimated breakeven price that a plant could pay for corn. Costs similar to August 2006 are assumed.

The bottom line in the graph represents the relationship of crude prices and the corn price breakeven without the \$.51 cent per gallon federal incentive. With \$70 oil a plant would breakeven with corn prices at \$3.14 per bushel in this example. With the \$.51 in place that breakeven moves up to the second line or \$4.57 per bushel. Finally, the current demand for ethanol to oxygenate gasoline exceeds the ethanol supply and thus buyers have been paying roughly an extra \$.75 per gallon premium to gain control of the limited supply. Thus, the top line shows that plants could pay about \$6.67 per bushel for corn and still breakeven.

Of course plants have only had to pay \$2.00 to \$2.50 for corn, so this means \$4.00 to \$4.50 of profits per bushel converted to ethanol. Payouts have been less than one year on a pre-income tax basis and less than two years after all taxes are paid.

This summarizes some of the great opportunities in ethanol, and also highlights some of the extreme vulnerabilities. First, as ethanol production rises there will be a point at which the supply of ethanol will meet the amount needed to supply oxygenate to gasoline. The

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oxygenate premium is currently worth an estimated \$2.10 per corn bushel (move down from the top line to the middle line at \$70 oil). Secondly-policy: What if the federal government were to drop their \$.51 cent subsidy. Then the corn breakeven moves down another \$1.43 per bushel (move from the middle line to the lower line at \$70 oil). Finally, what if crude drops from \$70 to \$50? Then the corn breakeven drops another \$1.23 to only \$1.91 per bushel.

In summary, the future direction of ethanol will be highly dependent on state and federal governmental policy and on energy markets. If all factors were to stay as they are today, the exponential expansion of ethanol plants would continue until corn prices were bid up to near their breakeven level. It is much more likely however, that policy and energy prices will also be dynamic, that corn prices will rise and that other constraints will begin to slow down the growth of the industry within a few years. It is clear that the ethanol industry cannot continue to grow on the use of the corn seed as a feedstock source for more than a few more years without hitting huge constraints including extreme competition of corn use for food. The hope is that cellulose based ethanol can then pick up the biofuels cause in the 2010 to 2012 time frame. What we do know is that biofuels are somewhere between a “big deal” and a “revolution.”

Biodiesel Still Emerging

Allan Gray

Biodiesel is a renewable fuel alternative to standard on-road diesel. The primary uses of biodiesel at the moment are as a replacement/extender for diesel fuel and as a lubricant additive to low sulfur diesel fuel. A change in environmental laws associated with sulfur emissions from diesel have caused the industry to move from a standard number 2 diesel to a cleaner burning number 1 diesel

with much lower sulfur emission. However, number 1 diesel fuel has a much lower lubricity than number 2 diesel causing additional wear on diesel engines. By blending number 1 diesel with at least 2% biodiesel the lubricity properties of the fuel can be the same as number 2 diesel fuel. And, since biodiesel contains only small traces of sulfur when burned, the sulfur emission standards can still be met.

In 2005, approximately 75 million gallons of biodiesel was produced in 65 plants scattered across the United States. In contrast, there were approximately 63 billion gallons of distillate fuel consumed in the United States in 2005; the bulk of which was diesel fuel. Thus, biodiesel is a very small proportion of the current distillate fuel market. Current projections indicate that biodiesel production will grow to 225 million gallons by 2015. Even at this growth rate, biodiesel would still be less than 1% of the total distillate fuel market.

Seventy-three percent of biodiesel produced in the United States is produced from soybean oil. The remaining 27% is produced from other vegetable oils, animal fats, and used greases. The ability to use a variety of feedstock's to make biodiesel makes this biofuel market much different than the current ethanol market which is dominated by corn in the U.S. and sugar in South America. The ability to use various feedstock's is one of the reasons that biodiesel production facilities are not as concentrated in the Midwest as ethanol plants.

The economics of biodiesel are not as strong as the economics associated with ethanol production. Current technology allows for 1 bushel of soybeans to produce 1.49 gallons of biodiesel while 1 bushel of corn can produce approximately 2.7 gallons of ethanol. A cleaner conversion for biodiesel is commonly used that shows 1 gallon of soybean oil produces 1 gallon of biodiesel.

Feedstock costs for soy diesel tend to be higher than other fuel sources.

Using typical historical prices of soybean oil you would find the raw feedstock cost would range between \$1.50 and \$2.10 per gallon. This compares to the raw feedstock costs for ethanol from corn of \$0.74 to \$1.11 per gallon if corn prices were \$2 or \$3, respectively. What about crude oil? The raw feedstock for petroleum based fuels; ranges from \$1.19 per gallon with \$50 per barrel oil to \$1.67 per gallon with \$70 per barrel oil. Thus, the feedstock costs for biodiesel are substantially higher than for the conventional feedstock, putting biodiesel at a cost disadvantage to conventional diesel. To offset this cost disadvantage biodiesel production receives a \$1.00 gallon blender's tax credit that allows blenders to pay for the higher biodiesel costs. Given current soybean oil, crude oil, and tax credit levels, biodiesel can be a profitable business. But, the generally higher cost feedstock's from soybean oil make the economics much less robust than for ethanol.

Unlike ethanol, technological improvements that might be made in the production of biodiesel from soybean oil are somewhat limited. The current conversion rate is approximately 1 gallon of soybean oil to produce 1 gallon biodiesel. It is hard to imagine improving the efficiency of that conversion rate.

Technological advances in the biodiesel industry are more likely to come from improvements in the oil production from the renewable source (mainly oil crops). One approach is to improve the oil production from soybeans. This may be possible and several companies are working on this. But, an increase in oil production usually means a decrease in soybean meal production and right now, soybean meal continues to be the larger economic engine in the value of soybeans; making it difficult to envision a large shift in soybean production to focus on oil production. Alternatively, the biodiesel industry may seek alternative oil crops to source their feedstock. For example, at 40 bushel

national average soybean yields, an acre can produce approximately 56 gallons per acre of soybean oil but a typical acre of canola (the primary feedstock for biodiesel in Europe) can produce 111 gallons of oil and a typical acre of castor beans can produce 156 gallons. This means that alternative feedstock's may be the wave of the future for biodiesel production. Of course, agronomic issues will determine where these crops might be grown.

In conclusion, biodiesel is a very small industry compared to its ethanol companion in renewable fuels. Current government policy combined with economics of traditional fuel markets are helping garner interest in growing the biodiesel market. Current projections show that biodiesel may grow relatively rapidly over the next few years but it will likely remain a small part of the overall diesel market. The growth of biodiesel may not have as much impact on Midwestern agriculture as ethanol because there are numerous alternatives to soybean oil as a feedstock. For the foreseeable future soybean oil will likely be the largest feedstock but the search for technological improvements may lead to alternative crops being the primary source for biodiesel production in the future.

General Economy: Slowing Growth?

Larry DeBoer

The U.S. economy is completing its fifth straight year of expansion. By this time next year, that number should be six. But growth will slow. A recession is not probable, but it is possible.

Output rose 3.5% above inflation over the past year, and the unemployment rate fell slightly to 4.7%. Oil price increases pushed the inflation rate up to 3.8%, and the core rate—not counting food and energy—began to rise. Short term interest rates rose, and, finally, long term rates began to rise too.

The housing boom is over. Construction, sales and building permits peaked last year, and have declined since then. There should be little growth in housing construction spending this coming year. Housing price appreciation appears to have stopped. With housing wealth accumulating more slowly, consumer spending growth is likely to slow. These factors, along with higher interest rates and high energy prices, should reduce growth in 2006-07. *Expect GDP to rise 2.5% above inflation during the next year.*

When GDP grows less than about three and a third percent above

inflation, the unemployment rate tends to rise. Not enough jobs are created for new people entering the labor force. *Expect the unemployment rate to rise to 5.1% by next July.* Oil prices may moderate in 2007, which will remove the main source of price increase from the inflation rate. The slowing economy will also contribute to lower inflation. *The inflation rate should drop to 3.2% over the next twelve months.*

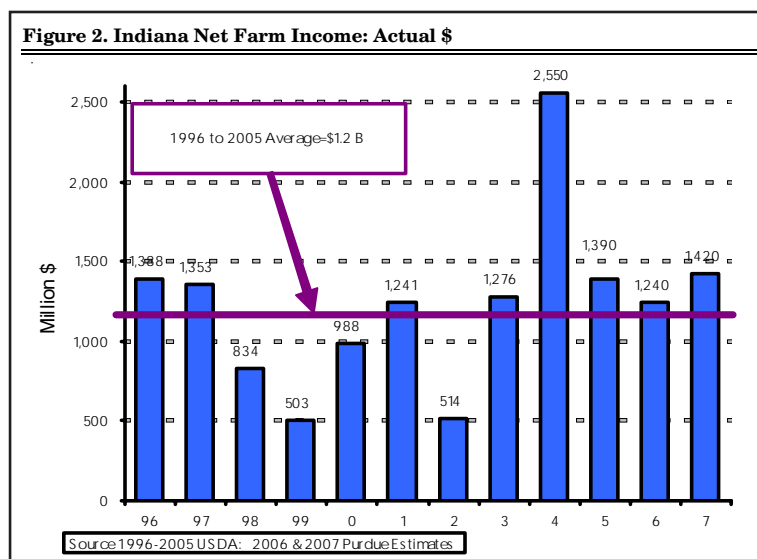
The Federal Reserve appears to have finished its two-year campaign of rising interest rates, and will now watch the data to determine what to do next. If the above forecasts come true, the Fed will make few interest rate moves over the next year. *Expect the interest rate on 3-month Treasury bills to remain near 5% over the next year.* Long term rates finally began to respond to the expansionary demand for loans and perhaps higher inflationary expectations, and despite a recent drop, they still have some catching up to do. *The 10-year Treasury bond interest rate should rise by a point to 5.6% by this time next year.*

Will there be a recession? The leading indicators put the odds at about one in five—possible, but not likely. The economy will be weak enough, though, that one additional “shock” could bring it down. A severe oil supply disruption could cause a recession. So could a widespread crash in the housing market. And the U.S. is still vulnerable internationally. If international investors decide to shun the dollar, cutting loans to the U.S. and causing a spike in interest rates, a recession could follow.

Lower 2006 Farm Incomes, But Near Average

Chris Hurt

Indiana farm income in 2006 is expected to be down about 10 to 15% from last year. USDA set 2005 incomes at \$1.4 billion, and a preliminary Purdue estimate for 2006 is at \$1.2 billion, Figure 2. Since there are several months still to go in the year, these estimates



should be viewed as tentative. Annual net income per farm was \$23,562 in 2005, and that is expected to fall to around \$21,000 for 2006.

Lower incomes are never welcome, but this should not be viewed as an adverse income year. The \$1.2 billion estimated income is very close to the average annual income over the past 10 years. In addition, the year of 2004 had exceptionally high income setting a record of \$2.6 billion.

So why is Indiana farm income dropping when the 2006 yields for corn and soybeans are so high? The two biggest reasons are higher costs for crop inputs, and sharply reduced government payments. Crop input costs were up about 8% in 2006 led by higher fuel, fertilizer, interest, and land costs, an estimated \$260 million across the state.

Direct government payments to Indiana farmers were \$914 million in 2005 and Purdue estimates they will be down by over \$400 million in 2006. The primary area of reduced government payments will be for the corn crop. Corn prices averaged \$1.99 per bushel for the 2005 crop and are expected to be about \$2.35 for the 2006 crop. Thus, the 2006 crop is expected to have much lower Loan Deficiency Payments and probably no Counter Cyclical Payments. For corn, the reduction in government payments are expected to be greater than the added revenue from higher market prices.

Incomes from Indiana animal agriculture are expected to be down as a group in 2006, but will vary by species. Leading the decline will be the dairy sector where milk prices are down 16%. Incomes from hog production will still be very good in 2006, but down somewhat from last year due to 5% lower prices. The beef sector will continue with incomes similar to last year's favorable level, and the egg sector will see improved incomes with 7% higher prices.

For 2007, the state's farm income should rise an estimated 5% to 10%. However, crop enterprises will tend to be favored with 10% or higher income growth, but with the animals

sector dropping by a similar percentage due primarily to rising corn prices.

New Farm Bill Just A Year Away

Allan Gray

The first policy statement is to remind everyone that this fall's crops as well as next year's 2007 crops still fall under the 2002 farm bill. So, the 2008 crop will be the first under the new farm bill.

With the November elections fast approaching any serious discussions of that 2007 Farm Bill have been put on hold in Washington. But, as the new Congress is seated in January a lively debate about agricultural policy will likely begin.

The three main drivers that will determine the fate of the 2007 Farm Bill are trade negotiations, the federal budget, and politics. Trade negotiations in the Doha round of the WTO have stalled with a bleak outlook for a resumption of talks anytime soon. This means that no new agreement is likely to be in place before Congress begins drafting the 2007 Farm Bill. Thus, the U.S. will continue to operate under the current trade rules and likely face the risk of more challenges; like the Brazil challenge of U.S. Cotton programs; if the current counter-cyclical and loan deficiency payment programs are not restructured.

Combine the WTO issue with large federal budget deficits and there is some pressure to make changes to the Farm Bill that will both appease WTO and save the government some money. But, politics are likely to have a heavy influence on this outcome. Until November 4th it seems almost impossible to predict whether Democrats or Republicans will be in the majority when Congress reconvenes in January. But, it is probably safe to say that the majority party will have one of the slimmest margins in history. This slim margin

will make it difficult to get any laws passed that represent major changes to existing programs. This would suggest that changes to the Farm Bill for 2007 will probably be relatively small changes.

With the drivers just identified why would we expect much of a debate to ensue? The drivers only tell us that broad changes in the programs are not likely. But, there are contentious issues within the current Farm Bill structure, even if it is not changed drastically, that will be debated heavily. These include:

- 1) It seems likely that the fruit, nut, vegetable and vine (FNVV) restrictions will be eliminated in the 2007 Farm Bill because they are in violation of WTO rules but, this will likely mean that FNVV producers will need to receive compensation in other forms from the new Farm Bill.
- 2) Payment limitation rules may change to make them stricter, forcing producers to restructure their operations to meet the new limitations.
- 3) The distribution of payments will be a hot issue in Congress as the public becomes increasingly aware that the bulk of subsidy payments are going to a relative few producers that are, on average, fairly wealthy relative to the general population. This issue will provide momentum for looking at alternatives to "spread the wealth" and increase payment limitations.
- 4) The forecasted increases in corn and soybean prices associated with increases in biofuel demand is causing some to ask whether there is a need for the safety net programs of the 2002 Farm Bill. This may provide ammunition for groups such as the environmental lobby and other non-traditional farm subsidy groups to argue for more of

the money for agriculture to be earmarked for their favored programs.

- 5) Any suggested changes in the Farm Bill will have to take on the issue of the impact on land values. Most economists agree that much of farm program payments are eventually filtered into higher land values. Thus, changes in Farm Bill payments could have significant impacts on land values that will have bankers, retired producers, and other agricultural land holding groups worried.

Where do these drivers and issues leave the 2007 Farm Bill? It seems likely that there will be less money available for the House and Senate Ag committees to write the 2007 Farm Bill and that there may be more groups seeking their share of the money. But, the closeness of the two political parties and the lack of solid direction from WTO negotiations suggest that the 2007 Farm Bill will likely look a lot like the 2002 Farm Bill with slight declines in target prices and loan rates and some changes to payment limitations to save money. The savings may then be used to include more farm groups in the programs either through expansion of current programs to more groups, increases in environmental programs which tend to include more groups or increases in other areas of the 2007 Farm Bill such as research or market promotion for non-traditional farm groups.

Of course, with so much of the world and national political picture uncertain right now, any prediction of the future of the Farm Bill is wrought with danger. Suffice it to say that the next year will be an interesting time of discussion, hand wringing, politicking, and deal cutting in Washington.

Ag Exports To Reach \$72 Billion

Phil Abbott

In its most recent Outlook for U.S. Agricultural Trade, USDA has increased its export forecast to a record \$68 billion for 2006. Horticultural products, corn and soybeans account for most of the expansion. Agricultural imports are also forecast to reach record levels, at \$64.5 billion in fiscal 2006. USDA's fiscal year 2007 forecast is for \$72 billion in exports and \$68.5 billion in imports, so the agricultural trade balance is expected to stabilize at \$3.5 billion after shrinking rapidly over the last five years. USDA's 2007 forecast reflects a good deal of optimism, both in export expansion and deceleration of the recent import trend.

The volume of corn exports is expected to expand to 54.5 million tons in fiscal years 2005 and 2006, and soybean export volumes are expected to recover to their fiscal 2005 level of 29.7 million tons. Prices rose 2% in each case from 2005 to 2006, due in part to reduced competition from South American exporters. 2007 corn prices are expected to increase another 13.3%, but soybean prices are expected to fall 3.6%. Beef exports may improve due to the lifting of the Japanese ban on imports from the U.S., as well, and have already begun to show modest recovery from the mad cow incident in 2003. Pork exports are up nearly 10% in 2006 from 2005 levels, and almost 80% over the last five years.

Factors contributing to the rapid export expansion include strong demand – in both domestic and international markets, ample domestic supplies and a weak dollar. Income growth forecasts here and abroad are only slightly lower than the strong recent performance, but uncertainty is emerging especially for U.S. economic growth.

High oil prices confound any forecast. While traditionally we would expect these to contribute to increased production and marketing costs, the expected effects of potential biofuel expansion have dominated. The extent to which future ethanol production may require corn, based on planned capacity additions, could dramatically alter net trade. Also, historically high oil prices have contributed to slower economic growth, higher inflation, and higher interest rates. But oil exporters have been recycling their petro-dollars back into U.S. capital markets, keeping interest rates low, allowing consumption to continue its expansion, and widening global trade imbalances.

Both the agricultural import trend and the high cost of oil imports contribute to the enormous overall trade deficit now faced by the U.S., estimated for 2006 to equal \$880 billion or 6.7% of GDP. The effect of a weak dollar in slowing imports is not yet evident. This trade deficit has led USDA to factor an even weaker U.S. dollar in 2007 into its forecast, however. In recent years, the dollar has depreciated against the Euro (48% since 2000) and Yen more so than against currencies of developing country trade partner and competitor currencies, such as the Chinese Yuan and Brazilian Real. In agricultural trade these bilateral exchange rates are critical.

In the face of strong export growth expectations, WTO negotiations have stalled. After missing the deadlines set at the December, 2005 Hong Kong Ministerial, talks on the Doha Round were suspended in July. That timetable was driven by U.S. Trade Promotion Authority (Fast Track) which expires in June, 2007, since the detailed work to go from a Modalities Agreement to country commitments and ratification is expected to take a year. Farm policy was at the heart of the failure of these negotiations. In order for developing countries to commit to greater access to their industrial goods markets,

they required more meaningful cuts in both EU agricultural tariffs, and U.S. domestic support to agriculture. The U.S. feared that proposed tariff cuts, for both agricultural and industrial goods, would result in little meaningful increase in access to foreign markets.

It is unlikely that WTO talks will resume soon, since the Bush administration is not expected to ask for, and would probably not get, an extension of Trade Promotion Authority. This will put pressure on USTR to complete bilateral agreements which have been the preferred path to trade reform recently. After the June 2007 expiration of Fast Track, trade negotiations may not resume until a new administration is able to secure this authority.

Without completion of a successful WTO Round, the 2007 farm bill will be guided by the 1995 Uruguay Round Agreement in Agriculture, which remains in place. Disputes based on that agreement, including Brazil's successful challenge of the U.S. cotton program, may influence future policy instruments. Cotton policy is part of broader legislation, so legal arguments on the instruments which violate our URAA commitments in the Brazil dispute may extend to rice, soybeans and even corn. Uruguay has already lodged a dispute against rice. The actual impact of this on U.S. policy depends on how effectively Brazil and other disputants can countervail against U.S. trade.

Retail Food Prices

Corinne Alexander

Faced with sharply higher gasoline and energy prices and higher overall inflation, food shoppers continue to see some relief at the grocery stores. The food price increases so far in 2006 are smaller than 2005 due in large part to abundant supplies of many food products. For example, the 2004 US

cattle herd was at its smallest level in 14 years and is now increasing. A second factor in the smaller food prices increases is the increased competition and downward price pressure exerted by warehouse stores and super centers that are capturing a larger share of the food retailing sector; non-traditional retailers that include warehouse stores and super centers accounted for 31% of consumer expenditures in 2003, up from 18% in 1998. However, while there have been no major Hurricanes yet in 2006, there was a devastating heat wave in California that will likely have a major impact on the prices of fresh fruits and vegetables. In addition, food retailers continue to see higher transportation and energy costs that they may pass on to consumers.

Grocery store prices rose 1.5% from July 2005 to July 2006, well below the 1996-2005 average annual food and beverage retail price increase of 2.5%. Restaurant prices are expected to increase at 3% for the rest of 2006. With grocery store price increases being much smaller than restaurant 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 38%, electricity up 13% and natural gas up 7%. Many of the food product prices have fallen. The largest retail price decreases are occurring in the dairy and beef sectors with a 10% decrease in the price of butter and 7-8% decrease in the prices of ground beef, round roast, round steak and chuck roast. The largest food price increases have been for grapes, oranges, potatoes, sugar and apples. For the fresh fruits and vegetables, these price increases are due in part to increased demand, smaller US potato acreage, and citrus crops in Florida that have suffered from canker and hurricanes in 2004 and 2005. The increase in the price of sugar can be attributed to increased world sugar demand due to ethanol production from sugar cane.

Dairy Prices in the Doldrums

Mike Schutz, Animal Sciences Department

It looks like the strong growth in milk production for the past year has finally outpaced demand. The result has been low milk prices at levels not seen since late 2003. Combined with elevated feed prices and dramatically higher fuel prices, Indiana dairies have had a difficult time financially in the summer 2006.

Milk production continues to run ahead of last year, but the gap has narrowed from more than 5% in early 2006 to more like 1.5% in recent months nationally. In Indiana, July milk production was up 4.5% compared to 2005. This is the largest percentage increase for any state east of the Mississippi River but still pales in comparison to the increases in western states like Idaho (+6.4%), New Mexico (+12.6%), and Texas (+7.9%). The actual increases in milk produced in those states would equal a 63% increase for Indiana! For one of the first times in recent memory, California actually decreased milk production compared to a year ago, down 0.3%. The extreme period of heat and humidity that spread from East to West across the US has had some effect on milk production and was especially disruptive to milk production in California.

While there still appears to be plenty of milk available, the dairy industry is tapping the breaks on production by reducing cow numbers and slowing gains in production per cow. Across the top 23 dairy producing states, milk cow numbers have increased by 107,000 head. Furthermore, the United States has recovered from the heifer shortage arising from closing of the Canadian border. In fact, going into July 2006, USDA estimated that there were 100,000 more 500-pound dairy replacement heifers than there

were going into July 2005. Corresponding prices dipped from \$1830 to \$1680, another indicator of the soft milk prices.

Fortunately, strong dairy markets have been able to absorb most of the large increase in milk production. For the first 6 months of 2006, sales of fluid milk (+1.6%), butter (+11.4%), and American Cheese (+4.7%) helped to boost demand and strengthen prices.

The Cooperatives Working Together program seeks to increase export of dairy products. However, it remains to be seen what impact the next rounds of CWT will have on milk prices in the long run. Also uncertain is the future of the Milk Income Loss Contract program set to expire with the current Farm Bill, although payments of \$2.47, \$2.72, \$2.94, \$2.35, \$2.72, and \$2.84 per cwt for eligible milk produced in April through December has been welcome relief during this period of low milk prices.

The slowing milk production is expected to stabilize prices to some extent. As long as economic conditions are favorable and dairy product sales remain brisk, no catastrophic downturns in prices are expected. For 2006, USDA is forecasting an annual all-milk price of \$12.60 to \$12.80, which is more than \$2.00 less than last year's price of \$15.14. For the first half of 2007, prices are expected to remain stable, if lower than hoped at just under \$13.00. If anything, the Chicago Mercantile Exchange Class III prices are somewhat more optimistic, with Class III futures averaging \$12.45 from now through April 2007, or \$12.89 for all of 2007.

Beef and Pork Prospects Brighten

Chris Hurt

Beef producers saw a dramatic outlook improvement on July 27th when the Japanese once again accepted imports of U.S. beef. While the news was not so

dramatic, the price reaction to it was spectacular. Finished cattle prices rose from the high \$70s in late July to near \$90 by early September.

Beef supplies for the rest of 2006 and for 2007 are expected to be up about 2%. Beef cow numbers were up only .3% in July and milk cow numbers were up 1%. The calf crop for 2006 is up only .3%. Thus, much of the 2% increase in beef supplies for 2007 will be from heavier weights.

Beef cow/calf operations are not indicating intentions to expand at this point since they have not increased the number of beef replacement heifers. Drought conditions from the Northern Plains to the Southern Plains also resulted in reduced herds from South Dakota to Texas this year. The dryness on the Plains provides an opportunity for the feed-rich Eastern Corn Belt producers to expand.

While exports have been opened to Japan, South Korea is still considering re-opening as of early September and total U.S. exports are expected to be slow to recover to their 2003 levels. Why? Japan, our largest beef buyer, largely replaced U.S. beef with other products including more beef from Australia and greater U.S. pork and broiler imports. Now, U.S. beef will have to "earn back" that business from other competitors.

This fall, finished steer prices are expected to be in the very high \$80s to low \$90s. A continuation of strong prices is expected in 2007 with first quarter prices averaging in the very low \$90s and mid-to-higher \$80 for the spring quarter.

Feeder cattle and calf prices should be near record highs this fall and winter. The record high quarterly price for 500 to 550 pound steer calves in Oklahoma City was \$136 per hundredweight. Prices this fall are expected to be near those levels. Steer calves in Indiana and Kentucky are expected to be in the \$120 to \$130 range. Heifer calves may be \$5 to \$7 lower. These prices continue favorable profit levels for brood cow operations.

Prospects appear to be very good for cow/calf profitability again in 2007. Why? Exports should continue to build slowly; this year's small calf crop means modest increases in beef production next year; and if the Plains drought improves, more heifers will be retained for expansion.

In 2006, finished steer prices are expected to average about \$86. For 2007 a new record high could be established, breaking the 2005 record of \$87.18. However, rising corn prices may keep calf and feeder cattle from setting records also.

Indiana's major expansion of ethanol production will mean huge supplies of DDG's will become available in 2007. Production by late-2007 in the state will be about 1.7 million short tons. The abundance and low prices for this new feedstuff should stimulate interest in cattle feeding and dairy in the state.

Pork producers are in the midst of what will probably be the longest running period of continuous profits in the past 30 years. This extended stretch of good fortune began in the spring of 2004 and is expected to continue at least through the summer of 2007, and maybe even longer. The period has been led by rapidly expanding pork exports and a lack of breeding herd expansion.

Production in 2006 is somewhat less than 2% higher than last year. For 2007 production is expected to rise by somewhat less than 3%. As of June 1, farrowing intentions were unchanged for this summer and expected to be up only 1% this fall. Over the past three years, the U.S. breeding herd has only risen 2% demonstrating the relative stability of the breeding herd. However, pork production has increased 5% with most of the increase in production coming from higher weaning rates and higher market weights.

Exports have been the key to strong hog prices from the demand side of the price equation. Exports so far in 2006 have been up 15%. Since 2003 when the beef export restrictions went into place, pork

exports have risen 76%. Now, one out of every seven pounds of pork produced in the U.S. is headed toward foreign consumers.

Much like the beef market, hog prices this past summer outpaced expectations averaging near \$53 per live hundredweight. Expectations for the fall and winter are for prices to average \$45 to \$47. Prospects for next spring are for prices to be in the high \$40s, and near \$50 next summer.

These hog prices and moderate corn prices with low meal prices mean hog enterprises are likely to stay very profitable through next summer with profits averaging from \$7 to \$10 per live hundredweight.

Poultry Markets have a Mixed Outlook

USDA

The rate of broiler production has clearly leveled off after many years of rapid expansion. Broiler production was up 2% in 2006 and is expected to rise by one to 2% in 2007. Avian influenza in Europe and other parts of the world late last winter and spring resulted in the inability of U.S. broiler producers to move as much meat into foreign markets. As a result, these inventories were pushed back into the U.S. market with 12 city broiler prices dropping to only 61 cents per pound in the second quarter. Strong exports returned in the summer and prices recovered back to 69 cents for the summer quarter. In 2005 the 12 city broiler prices averaged 71 cents, but that will drop to only 65 cents this year. For 2007, USDA is forecasting an average in the range from 65 to 70 cents, somewhat better than this year.

Turkey production is up 3% in 2006 with prices slightly higher than last year. For 2007, USDA expects production to be up only 1% with prices averaging about 71 cents for 8-16 pound hen turkeys in the Eastern Region. This will be about 3 cents lower than this year.

Egg producers had a rugged year in 2005 with egg prices only averaging 65 cents per dozen in eastern markets. For 2006, production is up only 1% and prices have recovered to average near 70 cents. Further improvement in prices are expected. USDA analysts suggest that egg production in 2007 will be up nearly 2% with prices averaging in a range from 75 to 81 cents.

Crop Input Prices: Any Relief in Sight?

Alan Miller

The cost of growing corn, as indicated by USDA estimates, increased at an average annual rate just slightly in excess of 10% from 2002 to 2006. Indiana crop farmers probably spent something in the neighborhood of \$75 more per acre on average on operating expenses, excluding rent, to grow corn on average ground in 2006 than it cost in 2002. The corresponding cost increases for soybeans and wheat were approximately \$25 and \$40 per acre, respectively. Rising prices for fuels and energy intensive inputs, such as nitrogen fertilizers, drove the higher costs although other important components of cost such as potash and phosphate fertilizers and seeds contributed as well.

With rapidly increasing costs as the backdrop, is any relief in sight for Indiana corn, soybean, and wheat producers in 2007? The answer to that question appears to be YES, at least for corn growers. The Food and Agricultural Policy Institute (FAPRI) forecast in an August 2006 report that the variable costs of producing most major crops in the US are expected to remain constant to slightly lower in 2007 because of lower energy prices. Our preliminary estimates for 2007 indicate that the variable costs of growing rotation corn in 2007 on average ground will be about the same as in 2006, and the cost of growing continuous corn will actually be down a little over 1%.

Our budgets show soybean and wheat variable costs in 2007 up 8% and 4%, respectively.

Lower nitrogen costs are the biggest factor driving expectations for lower variable costs for producing corn in 2007. FAPRI reported in August 2006 that anhydrous ammonia was currently priced in the \$435 to \$450 per ton range, which is significantly below the \$543 per ton reported by NASS in Agricultural Prices in April 2006 for the North Central Region of the US. Lower nitrogen prices are the result of moderate natural gas prices. With this in mind timing of purchases could be important. The supply situation for natural gas is more favorable right now than we have seen for awhile. The inventory of natural gas entering this winter's heating season is expected to be the largest since 1990, and currently the weather forecast calls for a milder than normal winter. Near term futures are currently under \$6 per mcf, which would imply even lower anhydrous ammonia prices than those reported by FAPRI, but mid-winter futures are near \$8 per mcf. A normal to severe winter would drive up prices for natural gas, and thus for ammonia-based fertilizers. Demand for natural gas in 2007 in the US is forecast to grow by four plus percent. The average price of natural gas is forecast to increase from \$7.51 per mcf in 2006 to \$8.30 per mcf in 2007. The situation appears to favor early commitments on price to the extent that favorable forward pricing opportunities are now available.

It is clear that higher prices for potash and phosphate fertilizers during the last couple of years reduced U.S. farmers' consumption of P and K, but that isn't likely to lead to lower prices in 2007. Demand in the U.S. for P and K fertilizers is expected to increase in 2007 in response to higher crop prices and more corn acres. Prices for P and K fertilizers are likely to be flat to higher in response to increasing demand and continued

tight supplies with potash prices likely to increase more than phosphate prices.

The U.S. is the largest exporter of phosphate fertilizer in the world and the phosphate fertilizer production industry in the U.S. is currently operating at or near full capacity. In spite of this, U.S. market share has been declining in the face of growing worldwide demand. U.S. production capacity is actually expected to decline in coming years. The largest single cost component in producing phosphate is ammonia. New additions to phosphate production capacity worldwide will likely occur in areas where natural gas is cheaper than it is in the U.S.

Worldwide potash demand is expected to grow at nearly double the rate that production capacity is expected to increase over the next few years, which should keep upward pressure on potash prices despite the reduced demand in the U.S. Key growth areas are expected to include China, South America, and Southeast Asia.

The US Energy Information Administration (USEIA) has forecast that the West Texas Intermediate crude oil spot price will average around \$70 per barrel in both 2006 and 2007. The oil supply situation in North America this past year has been dominated by supply disruptions, such as Hurricane Katrina and a partial shutdown of production at Prudhoe Bay in Alaska. A significantly improved domestic supply is expected in 2007 as the oil industry adjusts to and overcomes these disruptions, and it is the key reason for lower forecast petroleum prices. At the same time the world supply and demand situation will continue to tighten. World growth in consumption will remain strong while world surplus capacity will increase only marginally, so price volatility is expected to continue.

The price of diesel fuel for highway use may also be propped up by the transition this year to a new ultra low sulfur standard. By October 15,

2006, at least 80% of refiners' on-road diesel product is expected to comply with the standard. The new standard is expected to increase the cost of refining diesel by an estimated five to seven cents per gallon. It could also create some uncertainty associated with questions about whether the new standard will initially lead to reduced supplies. The uncertainty stems from the investment required to retrofit plants to meet the new standard, which may reduce the number of refineries producing diesel for highway use. However, any upward pressure on price from this source is likely to be more than offset in the short run by the larger than normal inventories of distillate fuels. U.S. inventories are currently at the top end of the range of actual inventory over the last five years. The seasonal downturn in demand in early fall has also worked in favor of lower prices recently. Diesel prices are not expected to fall as much as gasoline this fall because of strong global demand for diesel. Seasonal high prices for distillate fuels have typically occurred in the midst of the winter heating season in recent years. The USEIA's September 2006 forecast indicates that highway diesel prices are expected to average three cents per gallon lower in 2007 than in 2006.

FAPRI reported in August 2006 that propane prices are running 10 to 20 cents per gallon higher this fall than a year ago at this time. Thus drying costs this fall are expected to be up. Propane supplies as of early August were only slightly below last year. Propane prices in 2007 are expected to average flat to marginally higher than in 2006.

The trend of steadily increasing seed prices should continue in 2007. From 1995 through 2005 the average price paid for corn seed in Indiana increased \$3.39 per 80,000 kernel bag per year and the average price paid for soybean seed increased \$1.42 per bushel per year. An important contributor to higher prices in Indiana over this period has

been the relatively rapid adoption of genetically engineered (GE) seed varieties, which are generally higher priced. First it was GE soybean varieties. Now Indiana growers are moving to greater use of GE corn varieties. These varieties offer potential benefits in terms of productivity and convenience, which may more than offset the higher seed prices. Stacked gene varieties are expected to account for much of the increase in 2007.

According to the USDA, the average prices paid for agricultural chemicals as a group (all insecticides, fungicides, and herbicides) have been flat over the past several years. Falling prices for generic formulations of popular products such as Roundup have helped hold the average price of agricultural chemicals down. But, herbicide prices broke from the trend over the past year and were up 6% in July 2006. Higher energy prices may be one factor that contributed to the breakout.

Each January the Agricultural Economics Department publishes estimates of the cost to grow corn, soybeans, and wheat in Indiana for the upcoming cropping season. These estimates are published in the Purdue Crop Guide, Purdue Extension Publication ID-166. The publication for 2007 and previous years is available on the Internet at <http://www.agecon.purdue.edu/extension/pubs/index.asp>.

Cash Rents: Which Way ?

Craig Dobbins

Like farmland values, Indiana cash rents have experienced several years of increases. However, the rate of increase has been much lower. The June 2006 Purdue Land Value and Cash Rent survey indicated that on a state wide basis, cash rent for average farmland in Indiana increased by 0.8% from its 2005 levels to an average of \$127 per acre. Top quality land was estimated to have increased by 0.6%

to an average of \$155 per acre. The estimated increase for poor quality land was 1.0% to an average of \$100 per acre. Compared to farmland values which increased by 26% since 2003, cash rent has increased by only 6%.

The past two years have seen sharp increases in fertilizer and fuel costs. Since there was little improvement in crops prices during this period, crop production margins have been reduced. Production costs for corn and soybeans are not expected to decline for 2007. Anhydrous ammonia prices have declined since last Fall, but phosphate and potash fertilizer, diesel fuel, seed, chemicals and interest are all expected to increase. For corn production, per acre production expenses are expected to be about the same as last year. Per acre production expenses for soybeans are expected to be higher than the 2006 level.

The demand for corn and soybeans to make ethanol and bio-diesel appears likely to improve corn and soybeans prices. Some revenue from improved corn and soybean prices will be off-set by the loss of LDPs and counter cyclical payments associated with the government program. Still, improved corn and soybean prices are likely to improve margins from corn and soybean production in 2007. How will this improved margin be divided? Cash rent tenants have absorbed some large cost increases over the past two years. An improved margin could provide a tenant return closer to normal. Landowners have also faced cost increases. An improved margin could provide some additional income for these added costs.

Both tenants and landowners need to prepare projected budgets as they look toward the hope of improved margins. Such an exercise can avoid the emotions from getting too far ahead of the reality. At this time, budgets estimating the potential return available to tenants for land rent payments indicate a better return than those of the last two

years. But, the margin will still be tight. The strong competition for rental land will continue. It is expected that cash rents for the year ahead will increase 1% - 2%.

Farmland Values Continue Their Climb

Craig Dobbins

Since 1987, Indiana farmland has moved steadily higher. The June 2006 Purdue Land Value and Cash Rent Survey indicates that 2006 was another one of those years. On a state wide basis, average quality farmland was estimated to have increased by 7.4%, to an average of \$3,162 per acre. This is the first time its value has been above \$3,000 per acre. The increase in estimated value for top and poor quality farmland was 6.0%. Top farmland had an estimated value of \$3,770 per acre while poor quality farmland had an estimated value of \$2,509 per acre. Current estimated values are well above the previous high established in 1981. Over the past three years, farmland values have increased sharply. Since 2003, the estimated value of average farmland has increased 26%.

The increase in farmland values has been supported by several factors. First there has been a strong demand for developmental land and rural residences. The sales of farmland for development have rippled through the broader Indiana farmland market as these sellers sought to make additional purchases of real estate to avoid paying capital gains taxes (1031 exchanges). Second, farmers seeking to expand farm size have also contributed to the demand. Third, there has been a supportive commodity price support program. Fourth, long-term interest rates steadily declined, reaching historical lows, but these interest rates have now begun to increase. Fifth, the steady upward movement of land values gave people confidence that farmland values would continue to increase.

Today's buyers are willing to accept more of the total return in the form of an expected value increase than in the past. Finally, on the supply side, there are only modest amounts of farmland for sale.

As one looks forward, there are factors that point to a slowing of the increase in Indiana farmland values. Long-term interest rates have been rising and are expected to continue increasing during the year ahead. Even though long-term interest rates are historically low, the higher rates are likely to slow the development demand and reduce the influence of 1031 exchanges. While no one has quantified the strength of the 1031 exchange influence, a decline in development demand will reduce the importance of this influence in the future. Higher long-term interest rates and high gasoline prices may also serve to dampen the demand for rural residences. Higher long term interest rates will also cause the purchase of farmland using debt to be more expensive. In the current market, farmland values need to increase by 6% to 7% each year to provide a competitive overall rate of return. This means that in ten years average farm land values will be \$5,663 - \$6,220 per acre. If farmland buyers reduce their level of expected increase, they will seek to pay less. There will also be more debate about the new farm bill. The increased uncertainty of what changes might be made will make buyers more cautious.

On the side of stronger increases in land is the construction and plans for construction of ethanol plants. There are also plans for a large bio-diesel plant. These new uses of corn and soybeans will likely strengthen corn and soybean prices. If the hoped for improvement in crop returns is realized, some of this return will likely be bid into farmland real estate. How much no one knows. It is also important to consider how much of this expected improvement in return may already have been bid into farmland.

In the year ahead, it is expected that the softening of the development demand and rising long-term interest rates will be a more important influence than the expected improvement in crop production returns. Given these influences, farmland values are expected to increase a bit less than this past year. Indiana farmland values are expected to increase 4% - 6%.

Wheat This Fall? Maybe-Maybe Not!

Chris Hurt

Dry weather across the Plains dropped U.S. wheat yields to just 47 bushels per acre. This included winter wheat in the Southern Plains as well as spring wheat in the Northern Plains. Other countries suffered similar poor crops as well including Australia, Canada, and the former Soviet Union countries. World wheat production is down about 3%.

In contrast to the country and world, our Indiana soft red winter wheat has large, if not burdensome supplies as a result of both favorable yields and weak demand. Thus, basis levels are very wide with bids which have run as much as \$1.00 per bushel under futures prices in Indiana. For those who have storage for wheat, holding those stocks until after corn harvest will likely provide strong returns.

Wheat prices in Indiana averaged \$3.15 per bushel for the 2005 crop and the average Indiana farm price for the 2006 crop is expected to average about \$3.25 per bushel.

Is wheat the crop to seed this fall? Many have assumed the answer is YES given Chicago July 2007 wheat futures have traded above \$4.50 per bushel. But this is misleading since basis bids are so wide for next summer. Rather, cash prices that are 70 to 80 cents under July 2007 futures should be used in budgets.

As usual where wheat can be effectively double cropped to soybeans, it is a strong financial contender for acres in 2007. However, single crop wheat in central and

northern Indiana has expected returns somewhat better than soybeans, but is more than \$40 per acre behind corn on average quality land. Wheat will however look more attractive on low quality soils that have low corn yield potential.

In conclusion, don't just assume wheat is a good crop for 2007 because Chicago futures are well above \$4.00 a bushel. Corn is the dominant crop of choice in 2007, and wheat and soybeans are second and third fiddle. The exception, of course, is acreage that can be double cropped to wheat and soybeans in the southern portion of the state.

Corn Takes 2007 Leadership

Chris Hurt

USDA raised national corn yields to near 155 bushels per acre in their September estimate and the crop size to 11.1 billion bushels, both the second highest after the record 2004 crop. Indiana yields were estimated at 167 bushels per acre, just under the record of 168 bushels in 2004.

World corn production is nearly unchanged from last year, but world ending stocks of corn will be down 27% to the tightest levels since the mid-1970s.

Utilization in the U.S. is expected to boom with the surge in new ethanol plants coming on-line. Corn use for ethanol was 1.2 billion bushels for the 2003 crop and an estimated 2.2 billion for this fall's crop. The current growth rate is at about 600 million bushels of corn use per year, or near 6% of production per year. Corn use for feed will grow very little however as distillers grains substitute for corn feed use. Export demand is expected to remain strong and be at the highest levels since the mid-1990s.

USDA is estimating ending stocks on September 1, 2007 will drop to 1.2 billion bushels from 2.0 billion this fall. This means the burdensome corn inventories will be ending during this marketing year. The U.S. average farm price is expected to be

near \$2.45 per bushel, up from about \$2.00 for the 2005 crop. So finally, the surge in corn demand from ethanol will begin to filter to the farm in the form of higher corn prices. Cash prices are expected to move into the \$2.75 to \$3.00 range by the late winter or early summer of 2007 in the central and northern portions of the state and about 20 cents higher near at Ohio River locations.

But before prices can get much better, there is a record amount of corn to deal with in Indiana this fall in the combination of large carry over stocks and a large harvest. Abundant fall crops are a rich reward for Indiana farmers, but finding a place for all that crop will be a challenge. Market signals are suggesting storage for both corn and soybeans. In early October, expected storage returns after interest are nearly the same for corn and soybeans.

Markets are offering large price premiums for those who will store. Those corn price premiums for delivery into 2007 are in two forms. First, futures markets are offering strong premiums. July 2007 futures, as an example, are about 25 cents per bushel higher than the December 2006 futures. Secondly, basis is depressed this fall at 30 to 40 under the December futures, but is expected to improve to 10 to 15 under July 2007 futures. Huge growth in Indiana corn demand for ethanol use into 2007 should be an added reason for basis levels to improve more than usual. These two factors mean that price premiums for delivery late next winter or into early summer are expected to be about 50 to 55 cents per bushel higher than harvest time prices.

Subtracting about 10 cents of interest per bushel still leaves an anticipated 40 to 45 cents of gross return to pay for grain bin costs if stored on the farm, or to pay commercial storage costs if the corn is at the elevator. In addition, the large growth in corn use for ethanol provides a greater than usual chance that prices will rise more than this.

Assuming there are no LDP's this fall, those who want to store but need cash should consider

putting corn under loan and utilize the moderate FSA interest rate which was 6% in October. These rates are generally somewhat lower than commercial lenders.

For 2007, corn acreage must rise sharply to feed the strong demand with even more ethanol plants. Total use should rise to 12.3 billion bushels or more requiring around 87-88 million planted acres of corn nationally, a whopping 10% increase across the nation. Corn stocks will be tight, and thus weather concerns in the summer of 2007 would result in steep upside price potential.

Futures prices for 2007 will have to bid strongly to get producers to plant that much corn so expect December 2007 futures to be \$3.00 to \$3.25 per bushel. Thus, harvest prices for 2007 could be \$2.75 to \$3.00 per bushel and farmers will finally share in the current ethanol bonanza.

Soybean Price Struggle Continues

Chris Hurt

While the corn surplus will be cleared up in coming months, the soybean market will struggle with excess stocks until the 2007/08 marketing year. Fabulous August weather turned yield potential upward, and USDA set their September estimate near 42 bushels per acre across the country. This means the crop is now expected to reach 3.1 billion bushels, only exceeded by the record 2004 crop. Indiana yields were estimated at 50 bushels per acre just under the 51.5 record of 2004.

World production is expected to be slightly higher than last year, even with acreage declines of about 2% in South America this fall (Brazil will be down about 5%, but Argentina is expected to be higher). Much like the U.S., world inventories are near their all-time record highs, a situation that does not bode well for prices.

Low soybean prices and the weak U.S. dollar should spur exports to record levels of 1.1 billion bushels. Domestic crush is expected to be up about 2% primarily on the growth of demand for oil for biofuels. However, soybean meal production will also grow and face growing competition from distiller's grains in rations. Thus, meal prices may be their lowest since the 1998/99 marketing year.

U.S. average soybean prices for the marketing year are expected to be \$5.40 per bushel, a drop from \$5.68 for last year's crop. Due to the huge volumes of grain to handle this fall, elevator bids in the central and northern sections of Indiana are 30 to 40 cents under the November futures for harvest delivery. This means that cash bids may be in the \$4.90 to \$5.25 per bushel range at harvest...an embarrassingly low price considering costs of production.

For soybeans the most common strategy is expected to be LDP and storage. LDP's will be determined by price patterns this fall, but are expected to be 10 to 30 cents per bushel. The odds favor the largest LDP's in the first-half of October near peak harvest activity. Cash prices are expected to recover quickly after corn harvest is complete. Generally the odds are high for enough price recovery to cover storage costs into December. Spring and early summer prices

may recover back to the \$5.60 to \$5.90 range. Also by next spring the shift to corn acreage for the 2007 crop will be underway with the realization that huge decreases in bean acres will result. This could bolster 2007 crop price, but will have less, but still positive upward impact on 2006 crop prices.

Storage returns look very promising for soybeans. Price premiums for the July 2007 futures versus November 2006 harvest futures are about 45 cents per bushel and basis gain should be about 20 cents per bushel. This provides an expected price gain around 65 cents per bushel. However, interest cost per bushel is about 25 cents, so this provides an expected return to storage space of about 40 cents per bushel.

Odds of major price increases for soybeans during the storage season are more limited than for corn. By spring of 2007, the excess corn inventory will be gone, but not for soybeans. Corn prices for the 2007 crop will have to draw acreage away from soybeans next spring, but the U.S. soybean surplus cannot be reduced until the 2007/08 marketing year.

What about 2007 acreage? It's all about corn for the 2007 crop. Using current 2007 crop futures and Purdue budgets, returns to corn are more than \$50 per acre higher than soybeans on average quality land in Indiana. Soybeans will be relegated to second fiddle on many farms. With the need to increase corn acres by 10% next year, most of that will come out of soybean acres.

This large decline in 2007 bean acres means that 2007 harvest prices will be much closer to \$6.00 rather than this fall's pitiful \$5.00.

Are you Updating an Indiana Farmland Lease?

Gerry Harrison, Extension Economist and Member Indiana Bar

It has been said, "If you do not use a written rental agreement, and you haven't had a problem, you are leading a charmed life." What

are the rights of a tenant and the duty of a landlord concerning required notice to terminate a lease? Should you deliver a notice to quit if you

want major changes in a farmland lease or rental agreement?

If your farmland lease is not in writing, there may be confusion

about rights and responsibilities when there is a need to terminate a lease or renegotiate. While a tenant may feel a need to lower a rent or to shift cost in a share lease, a landlord may be opposed to a rent reduction. Your landlord may be looking for and offered a higher rent from a new tenant.

If your farmland lease is in writing it probably spells-out a notice requirement if the landlord or tenant wishes to terminate the lease. A lease or rental agreement may be for a stated term (typically one year) for which no notice is required under an Indiana term-lease law.

Ample advance notice is a good idea when a lease change is needed or planned—especially from a tenant's business management point of view. Your tenant may need to replace land if a new lease cannot be renegotiated with a landlord. Also, the tenant may do fall activities for the next year's crops.

In Indiana, if no other provision applies, a notice to quit may be timely if delivered before the end

of November. This timing is based on a three month advance notice requirement in the Indiana law for year-to-year leases. End of the lease year may be presumed to be the last day of February according to a Midwest custom, but this date is not part of Indiana statutes. Facts, in a specific situation, may support a year-end date that makes a November notice tardy.

Landlords may hesitate to give or agree to a late summer or early fall notice for a lease termination. A cash-rent landlord may be waiting for a final payment. And with a share lease, the landlord may wait until the crop is harvested. Disagreements arise over amount of rent and other leasing arrangements and events such as sale of the land or death of the landlord. These events normally do not terminate a lease.

Farmland leases may present income and estate tax issues, not just level of rent or various lease term concerns. Many landlords and tenants may be well advised to seek legal and other professional counsel

for a farmland lease including a lease or rental arrangement best suited for the landlord and tenant. More information is in "Legal Aspects of Indiana Farmland Leases and Federal Tax Considerations" online under "Legal Affairs" at: <http://www.ces.purdue.edu/extmedia/agecon.htm>. Lease forms and other leasing information are also available at this site under "Farm Management."

A source of data for cash rents and land values is the *Purdue Agricultural Economics Report* (PAER). The August 2006 report on the annual Indiana land value and rent survey is online at: <http://www.agecon.purdue.edu/extension/pubs/paer/>. At this site you may subscribe to the PAER for a free electronic delivery. U.S. Mail delivery is \$12 per year with a check payable to Purdue University sent to Gerald A. Harrison, Purdue University, Dept of Ag Econ., 403 West State St., West Lafayette, IN 47907-2056. Gerry will take questions by phone (765) 494-4216 or toll free 1-888-EXT-INFO, ext. 44216 or E-mail: harrisog@purdue.edu.

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