

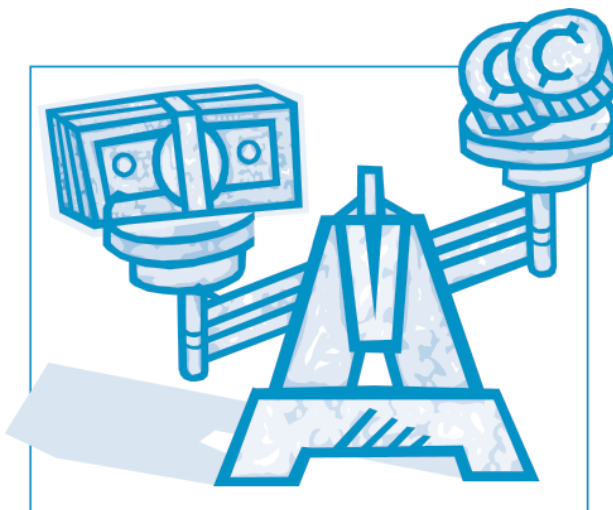
## Corn Belt Contributions to the Crop Insurance Industry

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The crop insurance industry enjoyed another banner year in 2007, collecting \$6.5 billion in premiums yet paying out only \$3.2 billion in losses. I estimate that the industry will collect a record \$2.8 billion from taxpayers. In contrast, the net amount that farmers received from the program in 2007 was only \$750 million. Interestingly, since the beginning of this decade, the \$11.3 billion in net payments to farmers (indemnities received minus farmer-paid premiums) is about equal to the amount that taxpayers have paid the industry (\$11.1 billion). Overall, taxpayers have spent more than \$22 billion since 2000 delivering about \$11 billion in net payments to farmers, making crop insurance one of the least-efficient means by which taxpayers support the farm sector.

The scale of this inefficiency is well known to regular readers of this *Review*. What is difficult to understand is why the program persists in its present form when more efficient risk management programs could be adopted in the farm bill. One explanation is that campaign contributions from crop insurance companies and agents have persuaded key members of Congress to support continuation of the program. An alternative explanation is that farmers in certain regions excessively benefit from the program and that members from these regions are protecting the interests of their farmers. Support for this hypothesis comes from Senator Roberts from Kansas and Senator Conrad from North Dakota



who have argued that reform of the crop insurance program threatens the viability of the program in those regions that depend most heavily on insurance payments. Specifically, they worry that a drop in crop insurance participation by Corn Belt farmers might force farmers in higher risk areas to pay more for insurance.

Implicit in this worry is the assumption that industry profits generated by Corn Belt farmers allow farmers in other regions to pay lower insurance premiums than they would have to pay otherwise. If this is true, then if Corn Belt farmers dropped out of the program, other regions would suffer. An examination of recent crop insurance data offers support for this conjecture.

### Experience with Crop Insurance Since 2000

Participation in the crop insurance program was given a large boost with passage of increased premium subsidies that were included in the 2000 Agricultural Risk Protec-

tion Act. Since that time, farmers have had to pay a bit less than half the amount that USDA's Risk Management Agency (RMA) has determined is needed to cover insured crop losses. This amount is called the actuarially fair premium. The large premium subsidy means that if all farmers pay actuarially fair premiums then the ratio of indemnities received (crop losses covered) to farmer-paid

premium should equal two. While the period since 2000 in looking at crop losses is too short a time to judge actuarial fairness of crop insurance premiums, it is instructive to see if there is a discernible geographic pattern to the ratios since 2000.

As shown in Figure 1 on page 2, Great Plains states all have ratios greater than 2.0 while farmers in the five Corn Belt states all have ratios less than 2.0. This shows that farmers in the Great Plains have benefited far more than have Corn Belt farmers from crop insurance. Note that Indiana, Illinois, and Iowa all have ratios less than 1.0. This means that farmers in these three states have paid more dollars in premiums than have been returned to them in indemnities. That is, far from receiving subsidized premiums, Corn Belt farmers have, in fact, been paying more into the program than they have gotten in return.

Another way of looking at the distribution of crop insurance payments is to simply add up premiums paid and indemni- ➡

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## IN THIS ISSUE

Corn Belt Contributions to the Crop Insurance Industry ..... 1

The Outlook for Corn Prices in the 2008 Marketing Year ..... 4

Options for the Conservation Reserve Program ..... 6

Agricultural Situation Spotlight: Agricultural Trade with a Weak Dollar ..... 8

Boom Times for Crop Insurance ..... 10

Recent CARD Publications ..... 12

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ties received. As shown in Figure 2, Texas, Kansas, North Dakota, and South Dakota have all received more than \$1 billion in net payments since 2000. In contrast, farmers in Indiana, Illinois, and Iowa

together paid \$750 million more in premiums than they have received from the program. Clearly, the recent experience in crop insurance suggests that Corn Belt farmers are paying too much in premiums, and Great Plains

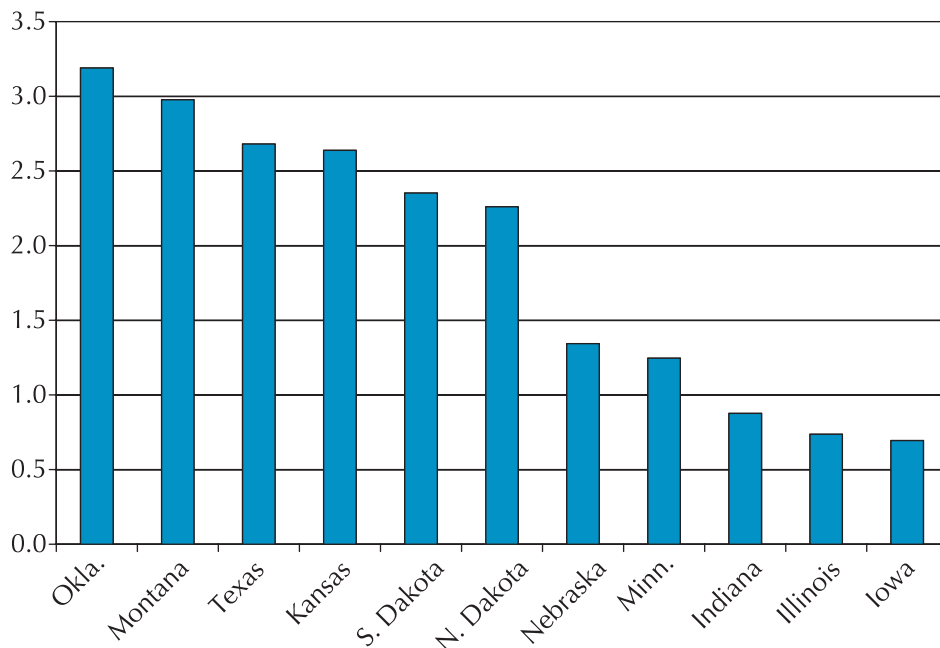


Figure 1. Ratio of total indemnities received to farmer-paid premiums from 2000 to 2007

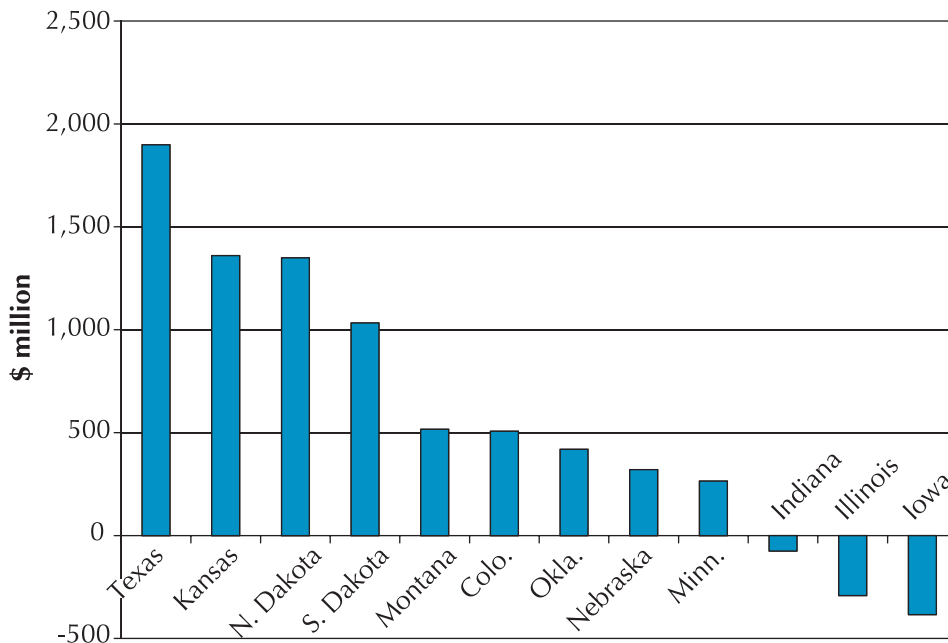


Figure 2. Total indemnities received minus farmer-paid premiums from 2000 to 2007

farmers (among others in the country not shown) are paying too little.

### Corn Belt Contributions to Industry Profits

Each year, the crop insurance program allows companies to keep some of the gains in states where premiums exceed losses in exchange for taking on some of the risk in states where losses exceed premiums. The program also allows companies flexibility in choosing how much of the gain or loss they want to keep in each state. Companies have learned to keep as much of the risk as possible in the Corn Belt states and to give the government as much of the risk as possible in higher-risk states. Thus, it should come as no surprise that much of the net underwriting gains paid to companies are generated in the Corn Belt states.

Total underwriting gains paid to the crop insurance industry range from -\$52 million in 2002 to an estimated \$1.5 billion in 2007. To estimate the contribution to these gains that the Corn Belt made, premiums and losses were calculated each year for the top five corn

and soybean states: Iowa, Illinois, Minnesota, Indiana, and Nebraska. Underwriting gains for each state were then calculated using the rules laid out in the Standard Reinsurance Agreement. The results are shown in Figure 3.

In almost every year, more than 50 percent of the underwriting payments to crop insurance companies were generated by just two crops in five states. Since 2000, 67 percent of total underwriting gains have been generated by corn and soybeans in these five states, even though these state-crop combinations generated only 32 percent of the premiums. Adding underwriting gains to the 32 percent of administrative and operating subsidies that are paid to the companies, it's easy to conclude that corn and soybean insurance in just five states generates 50 percent of the revenue to the crop insurance industry and most of its profits. From this perspective it is clearly true that if Corn Belt farmers left the program, then offering insurance to farmers in the other parts of the country would be much less attractive to the industry.

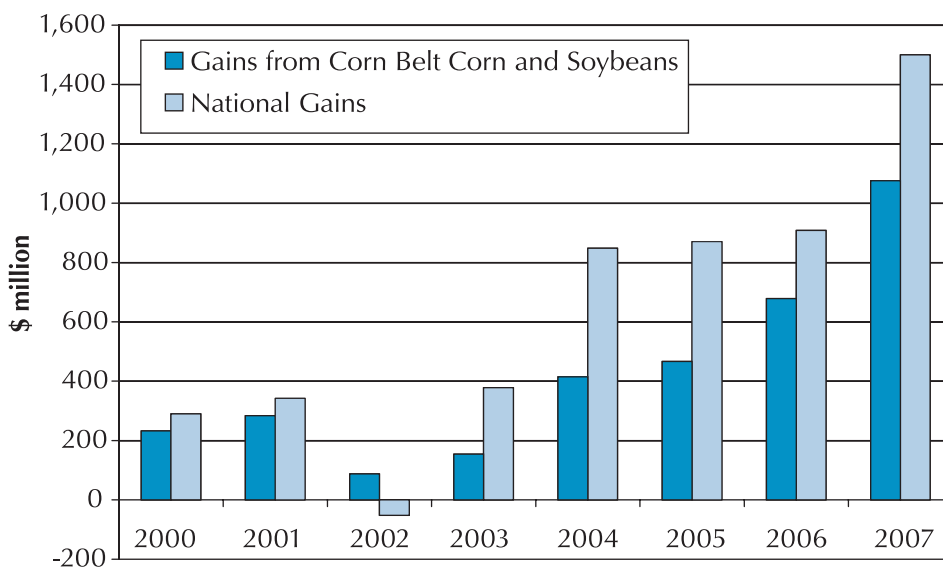


Figure 3. Where are the underwriting gains generated?

### Is Corn Belt Insurance Overrated?

Excessive profits insuring Corn Belt farmers must imply that Corn Belt insurance premiums are too high relative to the risks covered. Before we can conclude that crop insurance premiums on corn and soybeans are too high in the Corn Belt, we must consider the representativeness of growing conditions from 2000 to 2007. Overall, the recent experience in the Corn Belt is likely more favorable than what can be expected over any eight-year period. Although there were regional droughts that affected yields in 2002 and 2005, there has not been a widespread drought in the Corn Belt since 1988. Furthermore, the mechanism by which crop insurance rates are adjusted is based on a rolling 25-year average of losses within each state. The recent good experience in the Corn Belt is slowly making itself felt in lower premium rates for farmers.

However, there is good evidence that production risks are falling much faster than crop insurance rates can adjust because of rapid advances in technology, especially for corn. The recently approved Biotech Yield Endorsement reduces crop insurance rates for Corn Belt farmers who plant certain biotech seeds. This program demonstrates that modern corn hybrids are less risky than assumed by RMA rate-making methods. Today's corn is much better able to withstand insect infestations, late-season wind damage, excess moisture, and extended dry conditions than corn that was planted 20 years ago. Approval of similar endorsements will be needed to bring Corn Belt insurance rates more in line with risks.

### Alternative Means of Insuring Corn Belt Risks

The crop insurance industry argues that it needs to generate large underwriting gains in favorable years

*Continued on page 11*

## The Outlook for Corn Prices in the 2008 Marketing Year

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**M**arket prognosticators and fund managers who invest in corn and soybean futures in the winter and spring would have us believe that they have inside information about where markets are headed. But nobody can know what the price of corn will be for the 2008 crop because so many of the factors that will determine corn prices cannot be known at this time. We know that the 2008 corn yield will have a direct effect on corn prices, but 2008 growing conditions cannot be predicted. Other unpredictable factors that will affect the price of corn include the demand for corn from the ethanol industry, the value of the dollar, the supply of crops in other countries, and the overall level of world economic activity.

Predictors of corn prices and corn price variability can be obtained from futures and option prices on the Chicago Board of Trade. For example, if the December 2008 futures price is \$6.00 per bushel, then we know that traders think there is about a 50 percent chance that prices will be below \$6.00 and a 50 percent chance that price will be above \$6.00. But futures prices give us no information about how far prices could fall or how much they could increase. For that information, we look at options prices. If the price of an “at the money” put or call option is \$0.70 per bushel, then we know from Black’s theory of option prices that the volatility of the futures price is about 30 percent. What this means is that the market suggests there is a 15 percent chance that the December futures

price will fall below \$4.20 and a 15 percent chance that the price will be higher than \$7.80. Thus, we know from observing trades in Chicago that the market suggests there is a 70 percent chance that the future price will be between \$4.20 and \$7.80 per bushel.

But what will happen to corn prices if a major drought hits this year or if Congress decides to relax ethanol mandates? Estimating the impacts of such events requires development of a computer model of the corn market. Such a model needs to include basic supply and demand relationships, such as the demand for feed and the level of planted acreage, but it also needs to account for the unknowable: the national corn yield, the level of export demand, and future gasoline prices.

To answer these types of “what if” questions, we developed a detailed model of the corn market for the 2008 crop. The model reflects the March 31 USDA acreage report that pegged prospective corn acreage at 86 million acres. The model also includes how further increases in ethanol production capacity will affect prices as well as the impact on the percentage of this capacity that will actually be used for production given corn prices, ethanol prices, and the price of distillers grains. Demand equations for corn used as feed, food, and exports are all accounted for also. Details about the model are given in our paper “Ethanol, Mandates, and Drought: Insights from a Stochastic Equilibrium Model of the U.S. Corn Market” (available at <http://www.card.iastate.edu/publications/>). This model is in the process of being expanded to include soybeans and wheat and to include three years of projections. But for now, it only includes corn and price projections for the 2008 crop year.

### Projecting 2008 Corn Prices

The model is a “Groundhog Day” (the movie) model because we repeat the 2008 marketing year many times. One difference with the movie is that we allow the important factors that will affect the price of corn to vary according to what market traders believe will happen in the future or what history suggests will happen. The factors that we treat as being unknowable at this time (early April) are planted acreage, acres not harvested for grain, corn yield, the price of gasoline (which determines the price of ethanol), export demand, and the capacity of the ethanol industry. We treat as known the level of feed demand (given a price of corn), the level of the demand for corn by the food industry, and how stock levels will vary for different corn prices. To the extent possible, we calibrate the model to USDA data put together in the World Agricultural Supply and Demand Estimates (WASDE).

For each repeat of the 2008 crop and marketing year, a random draw (as in a card draw) of each of the unknowable factors is obtained by the computer. For each combination of the random draws, we have the computer solve for the price of corn so that demand equals supply. We simulate the corn market for 1,000 years, recording the market-clearing corn price each time. We take the average of the 1,000 prices as the “expected” corn price and we measure the variability of corn prices by taking the standard deviation of the 1,000 prices. This procedure is aptly named a Monte Carlo simulation model. In technical terms, it is called a partial equilibrium stochastic model of the corn market.

### Model Results

We ran the model under a number of different scenarios, including a “base” scenario in which we as-

sumed that current ethanol mandates, tax credits, and import tariffs are maintained and that we have no information about 2008 growing conditions other than what we have observed in the past. Gasoline price levels and price variability were taken from the New York Mercantile Exchange gasoline futures and options markets. Our baseline corn price distribution has a mean (the expected price) of \$5.60 per bushel. This price represents the average price to be received by corn farmers for their 2008 crop (not the harvest price or any particular month's futures price). Taking into account the variability in the "unknowables," our estimate of the price volatility is 19 percent, which means that we have a 70 percent chance that the actual price will fall between \$4.53 and \$6.66. These results suggest that there is quite a small probability that corn prices will fall to levels that would satisfy the livestock industry. Our baseline results indicate that there is a 20 percent chance that the \$0.51-per-gallon tax credit is insufficient to make ethanol plants willing to produce mandated ethanol levels. This means that there is a reasonably high chance that ethanol prices will have to be bid above levels that would otherwise clear the ethanol market.

High corn prices have increased speculation that scheduled ethanol mandates will be relaxed. A relaxation of mandates would have little impact on the ethanol industry's capacity unless some plants currently under construction are mothballed. The 2008 crop-year impacts of eliminating the mandate are modest. We estimate that such a policy change would decrease the expected corn price by only \$0.26 per bushel to \$5.34 per bushel. The corn price volatility decreases to 17 percent because corn prices are

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*The modeling results suggest that there would be little relief from high corn prices in the short run even if U.S. ethanol mandates and subsidies were relaxed.*

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not bid up as strongly without a mandate in short-crop years.

Removal of both the mandate and the \$0.51 tax credit would be expected to have a much larger impact on corn prices because the ethanol industry's ability to pay for corn would decrease substantially. However, the extent to which ethanol prices would fall depends on gasoline prices and on the willingness of blenders to pay for reduced volumes of ethanol. Under this scenario, we estimate that ethanol production would decrease by about 30 percent from baseline levels, the expected ethanol price would decrease from \$2.39 per gallon to \$1.96 per gallon, and the expected corn price would drop from \$5.60 to \$4.83. The impacts of eliminating the mandate and the tax credit are not as great as one might expect because the ethanol industry would continue to operate until processing margins turn negative. The corn price impacts would be greater if the tariff on imported Brazilian ethanol were also eliminated.

The final situation we examined is what would happen to corn prices if we had a return of a 1988-style drought when corn yields were almost 25 percent below trend levels. Keeping the mandate in place would have a large impact on corn and ethanol prices. The expected price of corn would increase to \$8.62 per

bushel—54 percent above baseline levels—while the expected price of ethanol would have to be bid up to \$3.30 per gallon to induce ethanol producers to meet mandated consumption levels. This price of ethanol means that total ethanol subsidies under these drought conditions would average \$1.50 per gallon, for a one-year total subsidy of \$15 billion. Relaxing the mandate, the expected price of corn in this type of drought condition would still increase to \$7.28 per bushel. The ethanol industry would be working at less than half of its capacity, with a total ethanol supply of about 5.2 billion gallons, which is adequate to meet oxygenate requirements and clean air mandates.

#### Future Modeling Efforts

The scenario results discussed here show the policy value of constructing this type of model. The modeling results suggest that there would be little relief from high corn prices in the short run even if U.S. ethanol mandates and subsidies were relaxed. The existence of ethanol plants should keep corn prices high for the next year or two even under lower ethanol subsidies. As other countries respond to high crop prices with expanded production, we should expect to see a greater decline in corn prices over time with a change in ethanol policy.

Over the next six months to a year, CARD researchers will be developing a more realistic Monte Carlo model of the U.S. crop sector to capture more precisely the impacts on soybeans and wheat as well as corn from a change in U.S. ethanol policy. Expect to see economics lingo such as "dynamic, multi-market, rational expectations equilibrium" in the near future as we develop models to capture the interplay of energy and crop markets and the consequences of biofuels policies on commodity prices. ♦

## Options for the Conservation Reserve Program

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Record crop prices are signaling the world's farmers to produce more. The recent prospective acreage report released by the USDA shows that the ability of U.S. farmers to grow more is limited by a lack of land. The USDA projects that acreage planted to crops in the United States will increase by about 1 percent in 2008 relative to 2007 acreage and about 2.5 percent relative to 2006 acreage. This lack of a supply response by U.S. farmers shows how insensitive aggregate U.S. planted acreage is to price changes, at least in the short run. It explains why introducing a major new demand for agricultural output in the form of biofuels should be expected to have such a large impact on commodity prices.

The only way that crop prices will return to lower levels is through an expansion in aggregate supply. This expansion can come from two sources: expansion in land planted to crops in other countries and conversion of land in the Conservation Reserve Program (CRP) in the United States. Brazil, Argentina, Africa, and Central and Eastern Europe all have land resources that are not currently planted or that could generate substantially more production. We should expect production in these areas over the next two to five years to increase sharply.

At current prices and current CRP rental rates, a large proportion of CRP land will be taken out of the program as contracts expire for the simple reason that

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*... the public interest in seeing lower crop prices needs to be weighed against the public interest in maintaining the substantial environmental benefits of land in CRP.*

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the returns from crop production are now higher than the returns that can be obtained from the program on most CRP land. In one sense, this is how the program is supposed to work. When the CRP began in 1986, crop prices were so low that Congress was desperate for any means to reduce supply. In addition, the farm crisis was in full swing in 1986. CRP rental rates acted as a stabilization program that created a floor on land prices. Today, with record high crop and land prices, there is no reason to use CRP to control supply. Thus, the decision to bring CRP land back into production would seem to serve the public's interest.

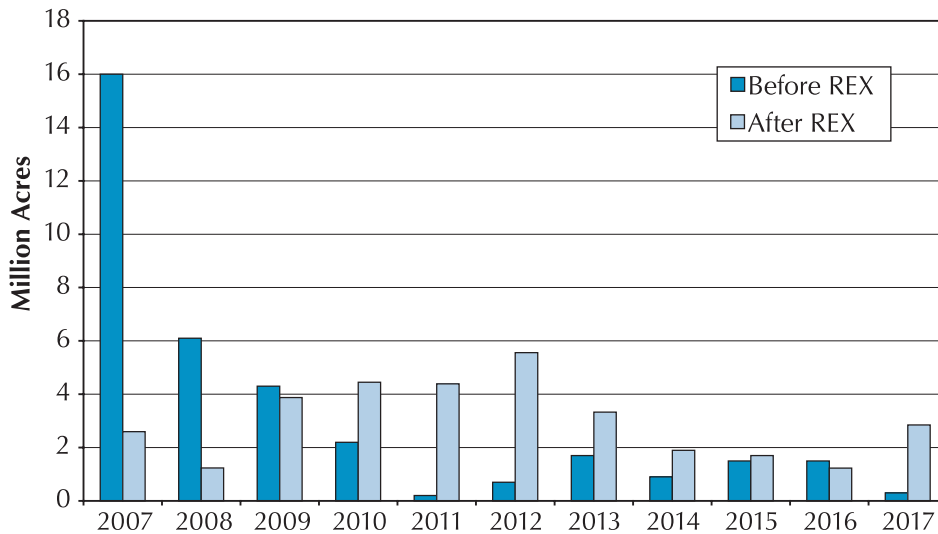
However, most CRP land today provides more than supply control. It also provides a wide array of environmental services, including critical wildlife habitat, reduction in nutrient and sediment loads in rivers and lakes, and carbon sequestration benefits. The transition of CRP from a supply control program to an environmental program began in the early 1990s and continues today. Consequently, the public interest in seeing lower crop prices needs to be weighed against the public interest in maintaining the substantial environmental benefits of land in CRP.

### Current CRP Policy

If CRP policy remains unchanged, perhaps two million acres of CRP land per year will be brought back into crop production over the next 10 years as contracts expire. This would reduce the size of the program from today's 34 million acres to less than 15 million acres. The resulting expansion in planted acreage will have a noticeable impact on aggregate supply because 20 million acres represents an increase of about 6 percent of 2008 total planted acreage.

In addition to this steady increase in acreage as contracts expire, a substantial number of landowners will likely decide to pay the penalty to break their CRP contracts. The current penalty for breaking a CRP contract is to pay back all amounts that have been paid under the contract, including annual rental payments and cost share amounts, as well as a 25 percent penalty on one year's rental payment and interest costs on the monies paid. For most farmers, these stiff penalties mean that it makes no sense to break the contracts. However, for newly signed contracts, the penalties are nonexistent or small because large payments have not yet been made.

In 2006, the USDA moved to re-enroll or extend many of the contracts that would expire between 2007 and 2010. During that period, CRP contracts for nearly 28 million acres were scheduled to expire—over half of them in 2007. The re-enrollment and extension program (known as REX) was successful in re-signing over 23 million acres, in part because crop prices had not yet significantly increased. Figure 1 shows the change in possible CRP expirations from REX. Under REX, acreage was categorized with an environmental benefit index. Owners of the most environmentally sensi-



**Figure 1. Projected Conservation Reserve Program acres, before and after the re-enrollment and extension program**

tive 20 percent of eligible acreage were offered new 10- or 15-year CRP contracts; the next most sensitive 20 percent were offered 5-year extensions of their current contracts, then the next, 4-year extensions, and so on. This structure made sense at the time because it locked up the more environmentally sensitive land under new, longer-term contracts and allowed less environmentally sensitive lands to ease back into production over a five-year period. However, REX sign-up has created an unintended situation: the penalty for breaking CRP contracts is smaller for the more environmentally sensitive land than it is for less environmentally sensitive land because having a new contract greatly reduces the penalty. This suggests that the USDA might want to consider some possible new strategies for the CRP.

### Options for the CRP

USDA has not yet indicated whether a change in CRP rules is being planned for this summer. Livestock groups favor reducing or eliminating early-out penalties for CRP to maximize the amount of land that is cropped. Environmental groups want current rules enforced. If nothing is done then, as Figure 1 shows, signifi-

cant expiration of CRP contracts will not occur until the fall of 2009. This means that much of this land cannot be planted until the 2010 crop year. If crop prices remain high, and the USDA does not significantly increase CRP rental rates, then a significant portion of this land will be brought back into production. But relief from high crop prices will not come until the 2010 crop is harvested. Because a significant portion of this land is likely going to come of CRP anyway, it might make sense for the USDA to eliminate penalties on contracts that expire in the next three years in order to get productive land back into production earlier. Bringing back some land into production would free up funds for the USDA to increase bids on the most environmentally sensitive land that offers the greatest environmental benefits. This proactive policy change could preserve the most environmentally sensitive land in CRP while allowing land that is perhaps needed to grow crops to come back into production.

One drawback of focusing only on contracts that expire in the next few years is that this would do nothing to keep farmers who just signed new contracts under the REX program from bringing their land back

into production. After all, it probably makes financial sense for a significant number of these farmers to pay the relatively small penalty on the new contracts and bring their land into production. One option that the USDA could take would be to rebid their entire portfolio of CRP contracts. This would allow the agency to concentrate its payments on keeping the most vulnerable land out of production—which would require significantly higher per-acre rental payments—while allowing land that is not especially vulnerable to be farmed in the 2009 season. This would meet the objectives of livestock feeders and others who want an expanded supply soon while simultaneously keeping the most vulnerable land out of production. A sensible approach to defining what land should remain in CRP would be for state offices to designate conservation priorities and then to seek land within their boundaries that most effectively meets their objectives. The length of the offered CRP contracts could be staggered so that not all contracts come due in the same year.

Changing CRP contract rules might create its own problems, however. The perception that the USDA “gave in” to political pressure from livestock and other crop user groups might weaken its future credibility when it enters into contracts. But there are sound reasons to believe that changing the rules is, in fact, justified. For the first time, agriculture is being asked to supply both food and fuel. Having to meet both demands with more than 30 million acres of land being held in reserve is difficult to rationalize. Most people recognize that the last two years have led to unprecedented changes in agriculture. Choosing to “re-optimize” CRP through a combination of penalty elimination and aggressive rebidding might be viewed as simply a reflection of this reality, rather than a sign of political weakness. ♦

## Agricultural Situation Spotlight

# Agricultural Trade with a Weak Dollar

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The USDA projects U.S. corn exports to be a record 2.45 billion bushels for the 2007/08 marketing year. Soybean exports are projected to take up nearly 40 percent of the 2007 U.S. soybean crop, up from 35 percent the year before. This export boom has occurred in spite of significantly higher crop prices. Corn prices averaged \$3.04 per bushel for the 2006 crop; they are projected to average about \$4 per bushel for the 2007 crop. The price movements for soybeans have been even more dramatic, with roughly a \$4-per-bushel gain in prices over the past year. One of the major factors behind the strength of these crops is the weakness of the U.S. dollar.

### Exchange Rate Movements

The dollar has been weakening relative to many countries' currencies over the past year and a half. Not coincidentally, this period of dollar weakness overlaps with the period of higher crop prices. The combination has been good news for U.S. crop producers. Normally, higher crop prices lead to lower crop exports, but the weak dollar has offset that impact and made U.S. crops attractive to international buyers. The relative value of one currency versus another is called the exchange rate. U.S. exchange rates with most of the rest of the world have been falling, meaning you can exchange one dollar for fewer units of other world currencies. Figure 1 shows the relative exchange rates (setting the January 2007 value equal to 1) versus the currencies of several of our major trading partners. As you can see from the figure, by

the end of 2007 the U.S. dollar lost ground versus all of these currencies. For Mexico and South Korea, the change was small, less than 1 percent. But for countries such as Canada and Japan, the exchange rate shift was quite large. And this shift made U.S. commodities look relatively more affordable.

Canada is one example of this effect. In January 2007, 1 U.S. dollar was worth 1.176 Canadian dollars. By December, the exchange rate had fallen to near parity. Using these exchange rates, the U.S. corn price of \$3.05 per bushel for January 2007 translated into \$3.59 Canadian. The December 2007 U.S. corn price of \$3.76 per bushel translated into \$3.77 Canadian. Over the course of 2007, U.S. corn prices increased \$0.71 per bushel, but this increase only translated into an 18¢ increase for Canadian customers. This highlights the impact exchange rate changes can have on relative prices between countries. Figure 2 shows the relative price of corn (January 2007 = 1) for the United States and Canada. U.S. corn was actually cheaper in Canada from July to November than it was in January 2007. Overall, since January 2007, the United States has experienced a nearly 60 percent increase in corn prices, while Canada's increase has been roughly 35 percent.

And as the right half of Figure 1 shows, the dollar is expected to remain weak for the rest of 2008. The projections are from the International Monetary Fund and the Federal Reserve Board, through the USDA. The U.S. dollar is projected to continue to decline versus the Japanese yen and the Taiwanese dollar, hold steady against the Canadian dollar and the Mexican peso, and strengthen versus the South Korean won. Overall, the exchange rate projections, when

weighted by total U.S. trade, show the dollar declining roughly 7 percent over 2008. If the weighting is based on only agricultural trade, the decline is 8 percent.

### Weakness Can Be a Strength

But this is only half of the story in how exchange rates are affecting U.S. trade. Our trade competitiveness depends on how the dollar stacks up against our trade competitors' currencies. A weaker dollar means our goods look relatively less expensive than the same goods from our competitors. Figure 3 shows the movement of the U.S. dollar versus the currencies of several of our trade competitors. In 2007, the dollar generally weakened against the currencies of our trade competitors. The biggest drop was versus Brazil, at over 17 percent, but the dollar also declined versus the euro (10 percent) and the Chinese yuan (5 percent). The dollar strengthened relative to the Argentine peso. For 2008, those trends are expected to continue. The dollar is projected to be flat against the Argentine peso but to fall by roughly 12 percent versus the real, the euro, and the yuan. These trends bode well for U.S. agricultural exports. In fact, averaging over all U.S. agricultural trade, the dollar is projected to decline by 9 percent over 2008.

The weak dollar also means that the price signals seen by our farmers are muted to international producers. Using Brazil as an example, Figure 4 shows relative soybean prices (January 2007 = 1) for the United States and Brazil. U.S. producers have seen soybean prices increase by nearly 90 percent since January 2007. Brazilian producers have seen prices increase for their soybeans, but not nearly as strong-



ly, and most of the increase has been in the last two months. So the international production reaction to higher U.S. prices is diminished as the dollar weakens. For both corn and soybeans, the international production response has thus far

been small. For corn, the 2007/08 production response amounted to less than a 1 percent production increase, mostly coming from Brazil and South Africa. For soybeans, production actually fell slightly, with only Brazil showing a slight uptick

in production. In the longer term, we should expect to see a larger international response to the high U.S. crop prices we see today, but the weak dollar is currently mitigating some of that response. ♦

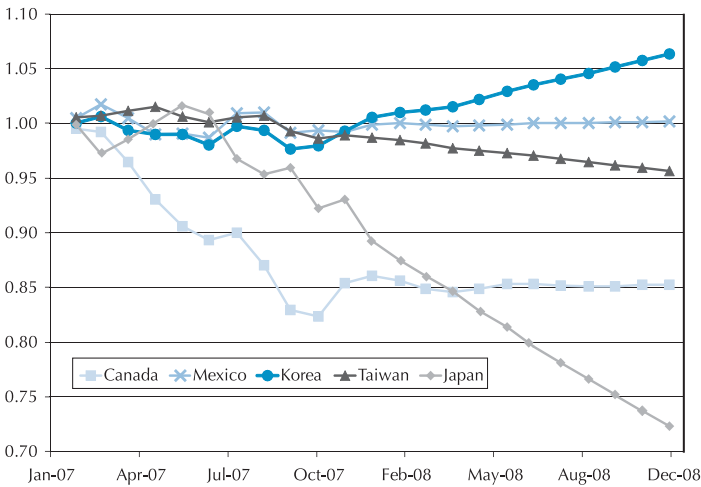


Figure 1. The relative weakness of the U.S. dollar for our trade partners (Jan. 2007 = 1)

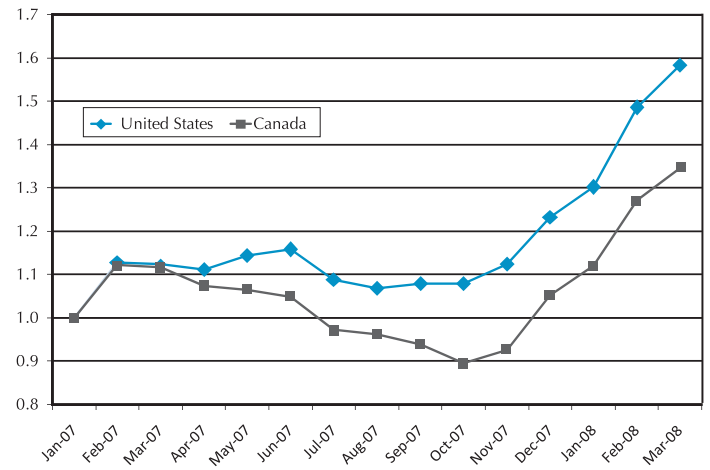


Figure 2. Relative corn prices for the United States and Canada (Jan. 2007 = 1)

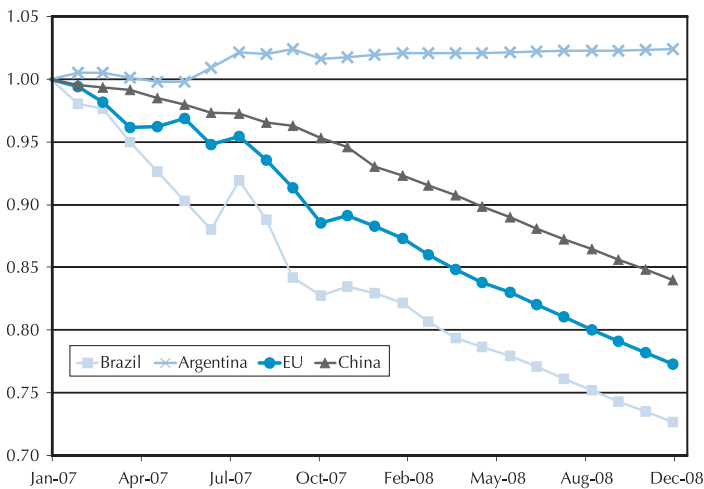


Figure 3. The relative weakness of the U.S. dollar for our trade competitors (Jan. 2007 = 1)

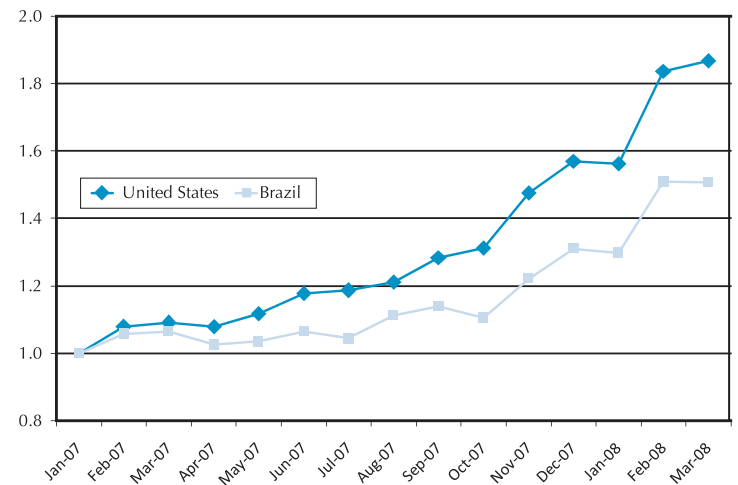


Figure 4. Relative soybean prices for the United States and Brazil (Jan. 2007 = 1)

# Boom Times for Crop Insurance

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Crop farmers are enjoying record high profits because of dramatically higher market prices. Farmers' increased demand for land, seed, fertilizer, and machinery has resulted in higher prices and profits for sellers of these inputs as well. One industry that is also enjoying the higher crop prices is the crop insurance industry. It benefits from higher prices because the formulas used to determine industry revenue automatically generate higher expected subsidies as crop prices rise. Actual subsidies depend in part on crop losses, but administrative and operating subsidies are directly tied to crop prices. Figure 1 shows how total industry revenues from insuring the nation's corn, soybean, wheat, and cotton farmers have risen in recent years. Revenues could rise by another 25 percent in 2008 if crop losses are similar to those in 2007.

You might think that the formulas used to subsidize the industry would be tied to industry workload or effort rather than crop prices. After all, rarely are government-paid salaries tied directly to a commodity price. But as shown in Figure 2, the number of corn, soybean, wheat, and cotton policies written since 2000 has been flat. That is, agent and company workloads since 2000 for these four crops have not increased, yet agent commissions over this time have increased by a factor of four.

The salaries of crop insurance company employees and claims adjusters are largely determined by market forces. After all, why should the salary of a crop insurance company vice president or computer programmer be any higher than needed to keep that employee in the job? A recent report sponsored by National

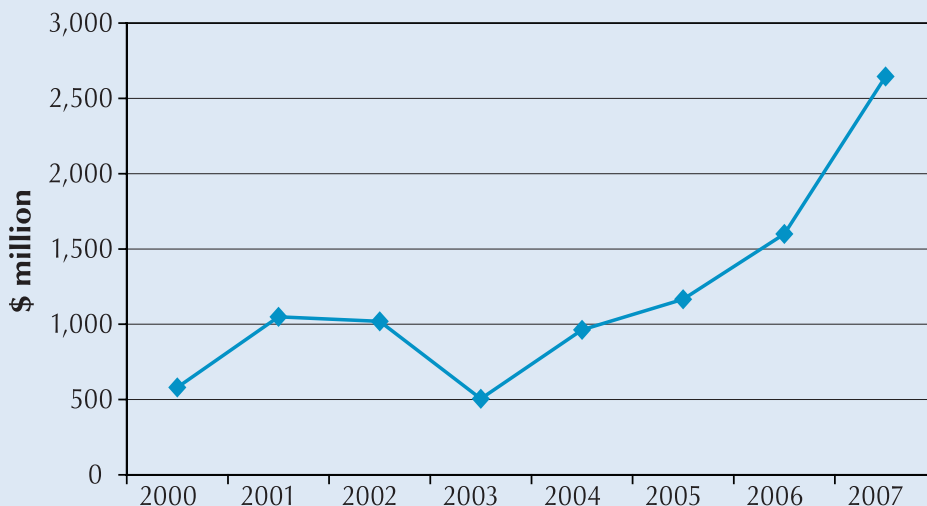


Figure 1. Total crop industry revenue from corn, soybeans, wheat, and cotton since 2000

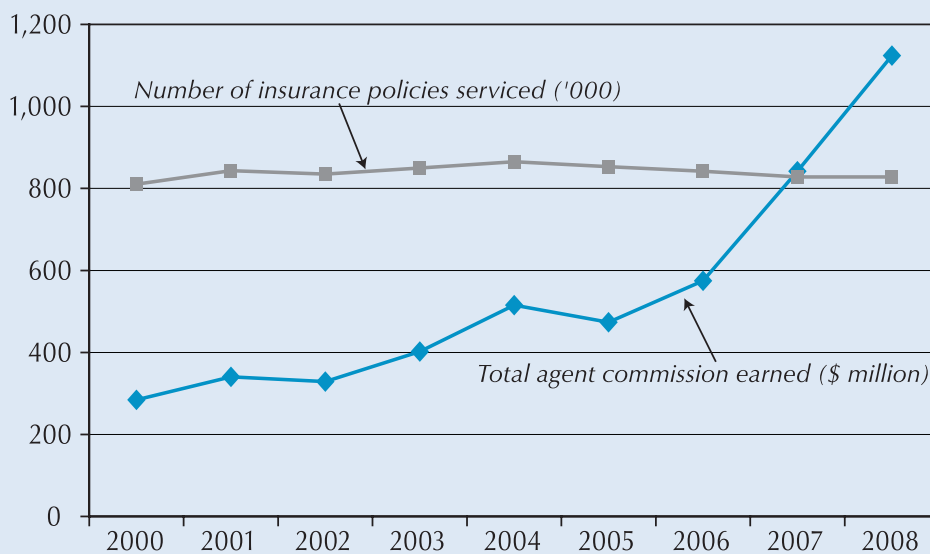
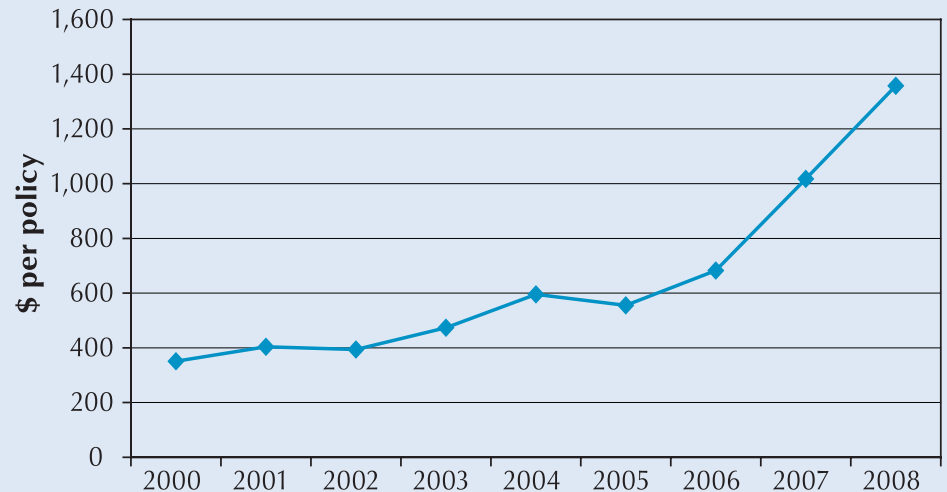


Figure 2. Policies serviced for four crops and associated total agent commissions

Crop Insurance Services shows that all cost categories but one have largely tracked with general labor markets. The one exception is agent commissions, which track directly with crop prices and premiums in the program. As shown in Figure 3, this means that the commission per written policy has increased from \$351 per policy in 2000 to an estimated \$1,357 per policy in 2008. The reason for this rise in agent commissions is that under crop insurance rules, companies cannot compete on the prices of policies because these are set by the government. The only way for companies to compete with each other is to vie for agents' policies. This competition results in changes in taxpayer subsidies being directly reflected in agent commissions. ♦

*Note: Policy numbers are calculated from data obtained from the RMA Summary of Business Reports. Commissions are calculated from "Federal Crop Insur-*



**Figure 3. Agent commission per corn, soybean, wheat, and cotton policy sold**

*ance Program Profitability and Effectiveness Analysis, 2007 Update," prepared on behalf of the National Crop Insurance Services by Grant Thornton LLP.*

#### *Corn Belt Contributions to the Crop Insurance Industry* *Continued from page 3*

to generate reserves to cover years with negative underwriting gains. However, farmers in the Corn Belt are beginning to wonder whether crop insurance is such a good deal for them. Why should they be asked year after year to generate large underwriting gains so that the industry will be willing to offer insurance in other states? Why should they keep generating excessive annual agent commissions when they rarely receive payments that exceed their premiums? Since 2000, agent commissions on policies sold to corn and soybean farmers in Iowa, Illinois, and Indiana have totaled more than \$933 million, whereas corn and soybean farmers in these three states have paid \$768 million

more in premiums than they have collected in indemnities.

The initial push in early 2007 by the National Corn Growers Association to include a county revenue countercyclical program in the new farm bill reflected a belief by corn farmers that a reduction in the role of the crop insurance industry as a risk-management middleman would better serve both farmers and taxpayers. Their county program was immediately opposed by the crop insurance industry because it would have dramatically increased the proportion of taxpayer support for risk management that would have flowed directly to farmers. Given the results of the analysis shared here, it is clear why their proposal was also attacked by politicians and commodity groups from Great Plains states: reducing participation in crop insurance by Corn Belt farmers would dramatically reduce indus-

try profits, which would threaten the willingness of companies to insure farmers in states where premiums have not kept pace with losses.

It's possible that an optional state-level revenue countercyclical program will emerge in the new farm bill. However, it would not be surprising if those farmers who opt for this policy will be required to purchase crop insurance. Such a requirement would reflect the influence of industry interests that are aligned with regional interests in maintaining, for as long as possible, the current structure of the program. ♦

*Note of Disclosure: The author has worked as a consultant for the National Corn Growers Association estimating the cost of various farm bill alternatives.*

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