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Safety Net Design for the New Farm Bill

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Farm bill discussions are beginning in earnest, as groups prepare for congressional hearings and possible legislative action in 2006. A common outcome of organized discussions is an expressed need for a better federal safety net for farmers. This outcome is somewhat surprising in light of the existing safety net for producers of currently supported field crops. As was demonstrated in a previous *Iowa Ag Review* (“Risk Free Farming,” Winter 2004), producers of program crops who farm their own land and successfully get their crop into the ground face almost no risk that their returns over variable costs of production will fall below the average returns without government support, as shown in Figure 1. While the situation depicted in Figure 1 is not directly applicable elsewhere, the majority of land-owning producers of corn, soybeans, and wheat face practically no risk that they will not cover their cash production costs. So what motivates the widely held perception that farmers need an improved safety net?

**Risk-Free for Whom?**
The finding that the current price support and crop insurance programs greatly reduce financial risk only holds for producers who do not have annual cash land expenses. A recent survey by Iowa State University economist Mike Duffy (“Recent Trends in Farmland Ownership”) shows that 74 percent of Iowa farmland in 2002 was held debt free, so cash outlays for debt service do not alone significantly increase risk. However, the same survey also showed that 60 percent of farmland in Iowa is leased. And in 2002, 70 percent of leased land was cash rented. It seems likely that both proportions have increased since then.

A farmer who cash rents land is in a much riskier position than a farmer who farms owned land debt free. For the renter, land rent is a cash-variable expense just as real as cash outlays for fertilizer, seed, and fuel. The land-owning farmer in Figure 1 faces an opportunity cost of land—after all, the landowner could always lease the farm rather than farm it—but no cash costs. This allows the land-owning farmer to more easily survive a revenue shortfall in any given year. Figure 2 depicts the risk situation for the Figure 1 farmer if he cash rented land as opposed to owning the land. The level of cash rent today with government programs is approximately $160/acre for productive Iowa farmland. The expected value of government payments is approximately $90/acre. Thus, if all this value were reflected in land rents, then cash rents would fall to $70/acre with the removal of government support. As shown, the effects of the current safety net are quite limited for the land renter. It is only the land owner who truly faces a “risk-free” condition.

That 60 percent of farmers face the risk shown in Figure 2 and 40 percent face the risk-free situation shown in Figure 1 may explain at least some of the perception that...
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In this Issue

a better farm safety net is needed. After all, if non-farming landowners capture most of the benefit of farm programs, what is left for farm operators?

What About Crop Insurance?
Prevailing farmer dissatisfaction with the current crop insurance program may be another reason why so many people believe we need a better safety net. The program would seem to run in a manner that is highly favorable to farmer interests. Taxpayers pay for the overhead of the program, agent commissions, loss adjustment costs, company profits, and the costs of developing new products. And premium subsidies mean that farmer-paid premiums do not cover even half of the insurance indemnities that are paid out.

But dissatisfaction with the program is widespread. There is a litany of complaints: premiums are too high for the amount of protection provided; yield guarantees lag the amount at risk because they do not reflect current technology; and finally, honest farmers suffer excessive premium rates because program rules are taken advantage of by unscrupulous agents and farmers. Perhaps no program can satisfy all farmers, but the level of dissatisfaction with the current crop insurance program suggests that there may indeed be something fundamentally wrong.

Why the Focus on Price?
The last complaint about the current federal safety net is that because federal farm bill programs focus exclusively on price, payments often arrive when farmers do not need financial help and may not arrive in years when farm income is low. Consider the circumstances of Illinois corn farmers this year. Many of them will not harvest much of a crop because of dry weather. The decline in this year’s crop prospects has driven the price of corn higher, which suggests that farm bill payments for the 2005 crop may be limited to only
direct payments. This is in contrast to the 2004 bin-busting crop, which drove the market price down and farm bill payments up, even though market income for most corn farmers was quite adequate.

In the Spring 2005 issue of *Iowa Ag Review*, we argued that the current farm bill is “mistargeted” because low prices, rather than low revenue, triggers payments. We offered an alternative revenue-targeted program based on the Group Risk Income Protection (GRIP) insurance plan that would hit a revenue target much better than does the current program. This result is no surprise: if Congress wants to make sure that revenue achieves a given level, then payments should be triggered whenever revenue falls below that level. The question is, why does Congress target price in the first place? It seems to make more sense to target revenue rather than price.

One answer to this puzzle could be that it is easier to pass farm legislation that pays out when prices are low because low prices affect all farmers of a crop. If legislation targeted low revenue at the county, crop-reporting district, or state level, then those producers who farm in high-risk areas would receive payments more frequently than would farmers in low-risk areas because low yields would drive down revenue more frequently in the high-risk areas. This explanation would seem to be supported by the frequent complaints from Corn Belt farmers that their low loss experience in the crop insurance program is somehow subsidizing the premiums of farmers who live in states with frequently high loss ratios. If this explanation is correct, then Congress might be unable to move to a program that targets revenue unless the revenue targeted is national revenue, in which case if any farmer of a crop received a payment, then all farmers would receive one. Representative Charles Stenholm’s Supplemental Income Payments for Farmers proposal of 1999 (H.R. 2792) set a precedent for this type of target.

An alternative explanation for why Congress targets price is based on history. Taking a step back and looking at all aspects of the farm safety net, one could surmise that Congress is indeed attempting to hit a revenue target. But instead of using one efficient policy to achieve that targeting, it is using three. Commodity programs support price. Crop insurance supports yields. And when disaster strikes, ad hoc disaster programs provide additional yield support. Because revenue is the product of price and yield, supporting price and yield separately does indeed support revenue.

Throughout the 1980s and 1990s, Congress repeatedly tried to induce farmers to buy more crop insurance. Congress knew that higher participation rates meant that the farm sector would be supported whenever low yields or low prices occurred. But high participation only came about with the dramatically increased premium subsidies. Congress found that it could only achieve its goal of an effective safety net that guards against both low prices and low yields by turning the crop insurance program into an entitlement program that provides benefits with relatively little in co-payments.

**Taking Stock Today**

Has Congress largely achieved effective revenue safety by supporting prices with the farm bill and supporting yields with the crop insurance program? The answer is a qualified yes. One of the qualifications is the long list of farmer complaints about the crop insurance program previously discussed. The other qualification is that the safety net is not cost-effective. Why support price in low-price years without accounting for above-average yields? And why support yields in low-yield years without accounting for the benefits of high prices? Targeting revenue explicitly would be much more cost-effective.

Another redundancy is that most farmers now purchase revenue insurance, not yield insurance. In 2004, Revenue Assurance and Crop Revenue Coverage, the two most popular forms of revenue insurance, covered 126 million acres of cropland, nearly 60 percent of all cropland in the crop insurance program. This implies that farmers can receive both an insurance indemnity and a commodity payment to compensate for a drop in price. For example, many corn farmers received an insurance indemnity for their 2004 crop because of low prices. In addition, they received a loan deficiency payment and a countercyclical payment. Given that taxpayers fund both programs, why should farmers receive double compensation for the same drop in price?

Innovations in farm programs come about slowly and rarely. When the 2002 farm bill was passed, revenue insurance was still relatively new and most farmers still purchased yield insurance. So 2002 farm bill programs to support price could largely still be thought of as a critical part of a total safety net that supported revenue. But with most farmers now insuring revenue directly, perhaps Congress will rethink its overall approach to supporting farm sector income.

We have previously discussed an alternative commodity program that would make payments when county average yield times season average...
still see the potential for profit in the ethanol market. In March of this year, the Chicago Board of Trade began trading ethanol futures contracts, providing a financial tool to mitigate risk in the ethanol industry. While the trading volume has been small, the ethanol futures price movements have paralleled the cash price movements. Over the last month, ethanol futures have gone up by 30¢ per gallon. The nearby contracts are now trading in the $1.60 per gallon range, with the end-of-year contracts priced around $1.50 per gallon.

Given the ethanol futures contracts, we have modified our profitability index for ethanol. Our index compares the costs of the inputs into ethanol, corn and natural gas, to the revenues from ethanol and its co-products, such as dried distillers grains and solubles (DDGS). The index can be thought of as a gross margin for ethanol production, the difference between per unit revenues and costs of ethanol production. The index does not imply that all ethanol plants will make a profit, but it does signal the potential for profits within the industry. With current ethanol, corn, and natural gas futures prices, we can calculate the expected values of the profitability index for ethanol production. Based on a dry-mill production technique for ethanol, one bushel of corn and 165 thousand British thermal units of natural gas are needed to create 2.7 gallons of ethanol and 17 pounds of DDGS. Figure 3 shows the historical and projected levels of the profitability index. Given the futures prices on July 14, 2005, the profitability index for ethanol in August 2005 is at 58¢ per gallon of ethanol, meaning the per gallon expected revenues from ethanol and DDGS exceed the per gallon expected costs of corn and natural gas by 58¢. But the futures prices show a downward trend in ethanol prices and upward trends in corn and natural gas prices. For December 2005, the index is down to 33¢ per gallon. It is still positive, reflecting the possibility of profits in the industry, but highlights the expected tightening in the ethanol market.

Over the last 15 months the ethanol industry has gone through a volatile period. The industry has experienced significant growth and dramatic price swings. Given the planned expansions in ethanol plant capacities and a renewed effort by Congress to pass an energy bill, the ethanol industry is looking to continue its growth, but until the demand and infrastructure for ethanol mature, we can expect to see more dramatic price swings in ethanol’s future that are not necessarily related to events in oil markets.

A New World Market for U.S. Beef
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States will face an uphill battle in recapturing market share in other countries, especially in high-value markets that have been highly resistant to accepting U.S. beef. Once Japan reopens to U.S. beef, that country’s beef safeguard mechanism is likely to hamper these efforts because of lower quarterly trigger levels. And, closing the border to Canadian live cattle has exacerbated these challenges because the United States will face Canada’s increased ability to place high-quality beef into world markets.