



# Ag Decision Maker



## A Business Newsletter for Agriculture

Vol. 8, No. 4

www.extension.iastate.edu/agdm

February 2004



### Risk-free farming?

by Bruce A. Babcock, Center for Agriculture and Rural Development, babcock@iastate.edu, 515-294-6785, Chad Hart chart@iastate.edu, 515-294-9911

The direction of U.S. farm policy changed with the passage of the 2002 farm bill and the 2000 Agricultural Risk Protection Act. Previous farm bills, together with the old crop insurance program, had gradually

moved the crops sector toward greater market orientation, with farmers taking on more market risk in exchange for greater planting flexibility. But the beginning of this decade brought with it increased protection against both adverse price movements and crop losses. These policy changes were brought about largely at the behest of farm commodity organizations, who argued that they needed increased protection against the vagaries of weather and market conditions. As we will demonstrate, the reduction in risk that U.S. crop farmers obtain from crop insurance and commodity programs is now so dramatic that we may have entered a new era of risk-free farming.

farm policy back toward its previous trajectory of greater market orientation. However, the WTO talks have stalled, so it is worthwhile to take a step back and assess where U.S. policy currently stands. We use illustrations of the distribution of returns with and without government programs to show the impacts of these programs on farm financial risk in a single growing season. The assessment begins with a review of the U.S. farm policy legislation process and whom it most benefits.

*continued on page 2*

#### Handbook Updates

For those of you subscribing to the *Ag Decision Maker Handbook*, the following updates are included.

**Historic Cash Corn and Soybean Prices** – A2-11 (2 pages)

**Livestock Enterprise Budget Prices** – B1-20 (1 page)

**Livestock Enterprise Budgets** – B1-21 (23 pages)

Please add these files to your handbook and remove the out-of-date material.

The U.S. proposals for farm policy reform to the World Trade Organization (WTO) would, if adopted, move U.S.

#### Inside . . .

- Lessons from Australian agriculture ..... Page 3
- Hedging or Speculation: Watch Who Does the Hedging ..... Page 5

Risk-free farming?, continued from page 1

### What type of producer benefits from U.S. farm policy?

Evidence would suggest that U.S. farm policy is primarily designed to meet the interests of commodity associations. Early in 2001, Larry Combest, then the chairman of the House agriculture committee, asked the National Corn Growers Association, the National Cotton Council, the American Soybean Association, the Rice Growers Association, the Wheat Growers Association, the National Barley Growers Association, and other associations what farm program provisions they wanted to see in the new farm bill. Chairman Combest, along with the members of the House and Senate agriculture committees, then designed a bill to meet their wishes. The legislation passed through Congress and was signed into law by the president in May 2002.

These commodity associations are national associations of farmers. It seems self-evident that the associations represent the interests of their farmer-members. But typically, the association leaders are chosen from the most successful farmers, who often have large, well-financed operations with lower-than-average costs and higher-than-average volumes.

Profit incentives in a commodity system lead crop producers to focus on low costs and high yields. Thus, commodity organizations, who are led by the most successful commodity producers, will tend to support farm policies that support the kinds of farm operations that are most successful in a commodity system.

### Mechanisms of support and financial impacts

Here, we focus on the subsidies that producers of corn, wheat, oilseeds, rice, cotton, barley, and grain sorghum receive. We examine corn in detail to show how farm programs and crop insurance affect revenue and we include wheat and cotton for comparison. In addition to farm program payments, 75 percent of U.S. corn was insured under the U.S. crop insurance program in 2003. The most popular product was a form of revenue insurance whereby the insurance guarantee increases if the harvest price is greater than the projected harvest price at

Figure 1. Histogram of net revenue for a representative corn farm

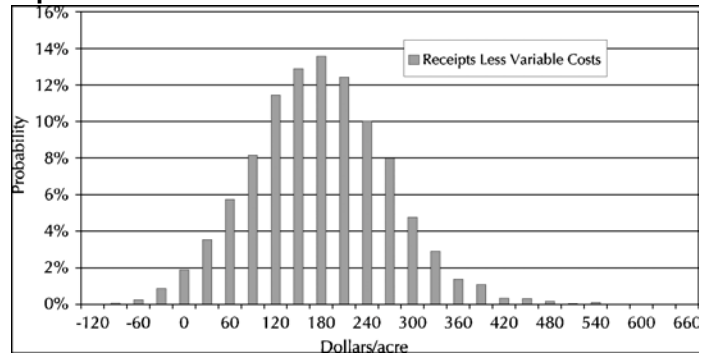
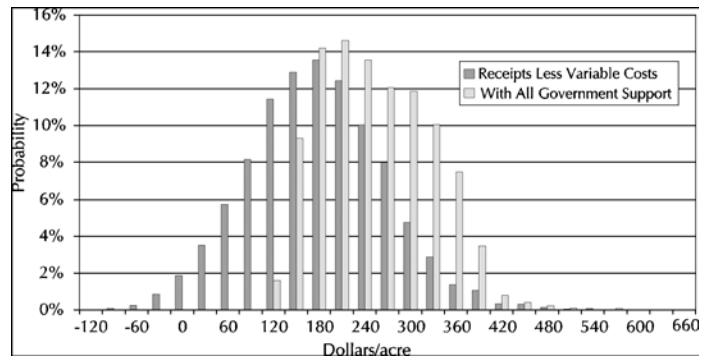


Figure 2. Effect of government programs and crop insurance on risk



planting time. The most popular coverage level is 75 percent coverage (the farmer takes the first 25 percent loss before payments begin). At the 75 percent coverage level, farmers pay only 45 percent of the actuarially fair premium, which is defined as the premium that over time would generate enough total dollars to pay all insurance claims. Thus farmers receive a subsidy equal to 55 percent of the actuarially fair premium.

Before examining the financial effects of the various government programs, let's look at a representative farm's financial picture without farm programs. At planting time, U.S. farmers do not know either the price they will receive for their crops or what their harvested yield will be. To capture this uncertainty, we build a representative farm and repeat a crop year 5,000 times and record the outcome. There are 5,000 different yield and price outcomes. We chose a representative corn farm in Boone County, Iowa, with a local expected farm price set at \$2.15/bushels (bu) and an expected yield of 150 bu per acre (ac). The standard deviation

continued on page 3

*Risk-free farming?, continued from page 2*

of price is set at \$0.45/bu and the standard deviation of yield is 43 bu/ac.

A histogram constructed from the 5,000 revenue draws is shown in Figure 1. The histogram shows the range of possible revenue outcomes as well as the probability of outcomes. Variable costs of \$150 are subtracted so that the distribution shows net revenue. One measure of the amount of risk that a farmer faces is the probability that revenue will not be adequate to cover a certain level of variable production costs. A farmer who covers variable costs has some money left over to pay off fixed expenses. Figure 1 shows that that average net returns for this corn farmer are about \$163/ac. There is a very low probability (4 percent) that net returns are negative. On average, this farmer will have approximately \$163 left over to pay all other expenses, including land, fixed machinery expenses, and management. For a cash renter, land costs would increase variable costs and the entire histogram would shift to the left, which demonstrates the increased risk that cash renters face relative to owner-operators.

Most other U.S. crop farmers face relatively more risk than this corn farmer. Iowa corn farmers have the advantage of highly productive soils and a natural hedge between price and yield. When yield is low, the price is likely to be higher than expected, thus buffering the negative impacts of low yields. And low prices are

likely caused by a bumper crop in Iowa, which helps insulate Iowa corn farmers from financial trouble.

### Impact of government programs and crop insurance

Now let's look at the effects of government programs on the financial risks of this farm. The effects of all the programs are revealed by comparing the distribution of market plus government receipts to the distribution shown in Figure 1.

Figure 2 shows the aggregate effect of these programs on a farmer's risk. As can be readily seen, the amount of risk that this farmer faces is now significantly reduced and the expected returns over variable costs are dramatically increased. Average net returns increase 46 percent to about \$239/ac with the programs in place. Perhaps the best way to characterize the effects of the programs is that with the programs in place there is now less than a one-in-six chance that total revenue will fall below \$163/ac, which is the average revenue without the programs. As shown in Figure 2, there is no chance that farmers in Boone County will not be able to cover their non-land variable costs. It is in this sense that we can speculate that corn farming in Boone County has become "risk free."



## Lessons from Australian agriculture

by Mike Duffy, Associate Director for the Leopold Center for Sustainable Agriculture, mduffy@iastate.edu, 515-294-6161

I recently had the opportunity to spend a month in Victoria, Australia, in the south east part of the country. My visit came at the request of the Australian government to help evaluate its family farms program. The government is concerned about the loss of family farms and began the program to get a better understanding of the subject and to determine what could or should be done about it.

Throughout my career I have had the opportunity to visit farms and meet agriculturalists from many countries. This was my first opportunity to spend an extended time in such an outwardly different agricultural situation. Victoria has a more moderate climate than Iowa, but its soils by comparison are very poor. They face serious problems of water availability and excess salinity. As a result most agriculture involves grass-based animal production,

*continued on page 4*

Lessons from Australian agriculture, continued from page 3

especially beef cattle, dairy and sheep. The northwest section of Victoria has much larger fields for small grain crops, similar to production in the western United States. In spite of the differences in climate and soils, some of the same problems confront family farms in Australia as in Iowa. The problems may rank differently, but the main ones appear on both lists.

Similar issues in agriculture

A major problem is trying to define what is meant by a family farm. The family part is fairly easy, however, it is more difficult to describe a farm.

Like Iowa, Victoria has a number of rural residences that really do not meet the criteria of what is generally thought of as a farm. Such rural residences are critical when considering land use and other social and policy aspects, but they really are not important in the overall consideration of agricultural production. Most people do not realize that based on census data, Iowa has more people living in the countryside but not on a farm than those living on a farm. As in Victoria, this creates very interesting dynamics when considering the type of agricultural production that is practiced and acceptable to the populace.

Victoria and Iowa both face the same concerns with the so-called disappearing middle. In the context of family farms, the disappearing middle simply refers to the loss of the midsize farms. What we see in both locations is an increasing number of small and large farms. The farmers I spoke to commented on other issues and concerns often voiced by Iowa farmers. The cost/price squeeze, how to make a profit in production agriculture, the impact of high land values, the loss of farmers in the neighborhood, the lack of succession or estate planning, concerns over international trade regulations, environmental concerns, and so forth were all the topics of discussion.

My conversations with county, government, and university officials centered on the same issues that Iowans face. During most of the meetings I could have closed my eyes and, except for the

accents, I could have been at a meeting in Iowa. So, what does this tell me? First of all, it says that the core problems we are facing in Iowa are not isolated ones. They are problems associated with all agriculture, at least in developed countries. We need to think in a global context when considering these problems, not just for exports or to see what our competitors are doing, but in search of different solutions to the issues we face.

More than once I heard complaints about direct government support to Iowa (and U.S.) farmers. Similarly, I also heard comments regarding unfair trade positions that the United States is taking. This was interesting to me because I have often heard similar complaints from Iowa farmers; perhaps not directed towards the Australians, but toward other countries. We need to realize that people view any situation from their own perspective. We want to think that our policies do not distort trade, but others do not hold the same point of view.

One significant difference between Victoria and Iowa was the level of direct government support. In Australia, there is no direct commodity support while in Iowa there is. In spite of this type of support in Iowa, our problems are much the same. This suggests that we need to rethink the type of support we give agriculture. If an agriculture that receives large amounts of direct, commodity support experiences the same kind of problems as an agriculture that receives no support at all, we need to reconsider our position. We should be searching for alternatives if we want government commodity support to address these problems.

Lessons we can learn

So, how can Iowa farmers use the knowledge that they are not alone in facing the problems of modern industrialized agriculture? At a base level, I suppose there is some virtue in the saying "misery loves company." But, more to the point, I think Iowa farmers can use this information as they consider their own situations and how they make decisions. They also can use this knowledge as they process information they receive from various sources on agricultural issues.

continued on page 5



Lessons from Australian agriculture, continued from page 4

Iowa farmers and Victoria farmers can evaluate their situations using the same basic principles. They need to have clear goals and objectives, be able to realistically assess available resources, and determine the best way to use these resources to achieve the desired goals.

Several years ago ISU Extension sponsored a conference called "Four Roads to the Future of Agriculture." This conference spelled out different approaches farmers could take in adjusting to the current situation in agriculture. I have slightly modified the roads that were identified at the conference. In a general sense, the four roads are commodity production where you try to make a living using volume to overcome the tight profit margin; specialty production where you try to widen the margins to make a living;

getting off-farm income to supplement farm income; or simply leaving agriculture.

Within each of these categories there are many options, but the general idea is that farmers have a range of alternatives and they need to decide the best course of action based on their own circumstances.

A simple comparison between Victoria and Iowa offers stark contrasts to the role of government in production agriculture. Iowa has substantial government commodity programs while Victoria does not. In spite of these programs, Iowa farmers are facing many of the same problems that Victoria's farmers are facing and the four roads are exactly the same paths. Like us, they have choices. They may not like the choices, but they have choices.



## Hedging or Speculation: Watch Who Does the Hedging

by Neil E. Harl, Charles F. Curtiss Distinguished Professor in Agriculture and Professor of Economics, harl@iastate.edu, 515-294-6354

It's a fundamental principle of tax law that hedging a commodity produces ordinary gains and ordinary losses, with the futures gains or losses treated just like gains and losses from the commodity involved. Likewise, gains from speculative transactions are treated as capital gains; losses are reported as capital losses.

One problem that arises periodically is that, even though the insurance test and the direct relation test are met, the commodity trades may nonetheless be considered speculative because the taxpayer reporting the commodity trades is not the same taxpayer as owns the commodity supposedly hedged. The two cases to date and a private letter ruling are ample evidence that a review of the commodity futures program is in order any time there is a significant change in the business plan for a farming operation.

### Private letter ruling

In a 1997 private letter ruling the taxpayer was a shareholder in a dairy farming business carried on by an S corporation. The taxpayer was responsible for the feeding program in the dairy operation and, in the capacity of shareholder, bought and sold commodity futures contracts to protect against price increases in the feed ingredients.

The ruling notes that a corporate shareholder could not attribute the business of the corporation (in which the shareholder owns stock) to the shareholder as the shareholder's business. The ruling concludes that such a shareholder, to treat the gains and losses from commodity trades as hedges, must establish that the shareholder was engaged in a trade or business separate from that of the corporation and that

\* Reprinted with permission from the November 5, 2003 issue of Agricultural Law Digest, Agricultural Law press publications, Eugene, Oregon. Footnotes not included. continued on page 6

Hedging or Speculation: Watch Who Does the Hedging, continued from page 5

the commodity trades were entered into as hedges in the shareholder's trade or business.

The 2001 tax court case

A Tax Court case decided in 2001, Pine Creek Farms, Ltd. v. Commissioner, involved a corporation, Pine Creek Farms, Ltd., which raised corn, soybeans and cattle. Two other corporations were engaged in hog production. One, Grow Pork, Inc., was engaged in hog farrowing; the other, Reis Ag, Ltd., was engaged in hog finishing. All three corporations had one shareholder in common, John Reis. Reis owned 51 percent of Pine Creek Farms, Ltd. (his wife owned the other 49 percent), 50 percent of Reis Ag (his brother owned the other 50 percent) and 20 percent of Grow Pork, Inc. (there were four other 20 percent shareholders).

Dating back to the period prior to the incorporation of Pine Creek Farms, Ltd., Reis had maintained a commodities account in his own name which was used as a hedge account. That account was transferred to Pine Creek Farms, Ltd. when Pine Creek Farms, Ltd. was formed. That account was used to handle the hedging transactions for all three corporations. IRS argued that because Pine Creek Farms, Ltd. was not engaged in the hog business, it could not have hedging transactions in hogs. Therefore, the losses were considered to be capital losses, not ordinary losses.

The Tax Court, mindful of the well-settled rule that a corporation is an entity separate and distinct from its shareholders, and that a corporation's business is not attributable to its shareholders absent exceptional circumstances, held that the business transactions of Reis Ag and Grow Pork could not be attributed to Reis and from Reis to Pine Creek Farms, Ltd. The court could find no exceptional circumstances which would cause the court to ignore the

corporate entities and attribute the production of hogs to Pine Creek Farms, Ltd.

The 2003 tax court case

The latest case, decided on October 29, 2003, Welter v. Commissioner, involved a taxpayer, Welter, who formed two C corporations after farming in unincorporated form for several years. Welter retained ownership of the land and leased it to the corporations. Each of the C corporations maintained its own records and bank account and filed a federal income tax return.

Before incorporation of the two C corporations, Welter engaged in commodity trading through several brokerage accounts. Welter continued to engage in futures trading through the same accounts after incorporating the new corporations without transferring the accounts to the corporations.

Citing the Pine Creek Farms, Ltd. case with approval, the Tax Court held that the business activities of the corporations could not be attributed to Welter so the gains and losses attributed to the commodity futures transactions were capital gains and capital losses. The deduction for the losses was limited to \$3,000 per year.

In conclusion

The increasing use of futures trading, as a component of a risk-management program, makes it essential that the relationship of the futures trading activity to the production of the commodities in question be reviewed periodically. It is particularly important to examine the futures trading plan whenever a structural change has been made in the production of the commodities or in the ownership of the commodities.

... and justice for all

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Many materials can be made available in alternative formats for ADA clients. To file a complaint of discrimination, write USDA,

Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964. Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Stanley R. Johnson, director, Cooperative Extension Service, Iowa State University of Science and Technology, Ames, Iowa.

Permission to copy

Permission is given to reprint ISU Extension materials contained in this publication via copy machine or other copy technology, so long as the source (Ag Decision Maker Iowa State University Extension) is clearly identifiable and the appropriate author is properly credited.