



## Risk Management

### Executive Summary

#### May 2006

This paper is the first in a series of briefing papers that assess general views advanced during the 2007 Farm Bill Forums convened by Secretary Mike Johanns in 2005 as well as additional policy ideas that have emerged in recent months. This paper describes the risks agricultural producers face; discusses current key risk management programs and tools available to producers through the private sector and government; and concludes with a discussion of program alternatives. These alternatives are generalized approaches for dealing with concerns raised about current programs. They are not meant to be exhaustive or represent specific farm bill proposals. Rather, they are presented as candidates for further public discussion on potentially effective approaches for development of the 2007 Farm Bill.

### Risks Facing Agriculture

Agricultural risks are generally organized into five categories: *price risk*; *production risk*; *income risk*; *financial risk* (related to the cost of and access to debt); and *institutional risk* (related to changes in laws or regulations). Agricultural producers have a variety of options available to help them manage risks. However, not all options are available to all producers, and because agriculture is diverse, producers face different risks and need different risk management tools at their disposal. The Federal government does not try to eliminate risks for most types of businesses, because doing so could encourage risky business choices that would be inconsistent with market incentives. Even so, a government role may be appropriate where risk management tools are inadequately provided by the private sector, where there are special risks such as weather in agriculture, or where there is a policy to offset undesirable or inequitable market outcomes, despite economic inefficiencies that may result.

### Federal Government Approaches to Agricultural Risk Management

Key Federal programs that help reduce farmers' price, production and income risks include payments made under commodity programs. These include direct payments, counter-cyclical payments, and marketing assistance loan benefits, conservation programs, and crop insurance. In addition, ad hoc disaster and market loss assistance has been authorized by Congress regularly.

Many farm programs are administered through the Commodity Credit Corporation (CCC). CCC outlays include commodity program payments, expenses of several USDA trade and conservation programs, and outlays for ad hoc and emergency assistance, but exclude crop insurance. Total CCC outlays peaked in FY 2000 at \$32.6 billion due to declining market prices for major crops and supplementary economic loss assistance payments enacted by Congress. In FY 2004, CCC outlays dropped to only \$10.6 billion as prices for major crops strengthened. But markets for major crops reversed and outlays nearly doubled to over \$20 billion in FY 2005, and are forecast to remain above \$20 billion in FY 2006 and FY 2007. Federal crop insurance costs, because of statutory increases in subsidy levels and increased participation, have risen from about \$1 billion per year in the mid 1990s to an expected average of \$3.1 billion during the 2002-05 crop years.

**Distribution of benefits under current programs.** An examination of data on farm program benefits reveals a number of conclusions:

- **Payments by Crop.** Of total commodity program payments during 2002-05, 93 percent are estimated to go to wheat, rice, corn, soybean, and upland cotton producers. However, these five crops accounted for an estimated 21 percent of total farm cash receipts in 2005.
- **Payments in Relation to Crop Production Value.** In terms of market value for the five major crops that account for most payments, payments ranged from a low of an estimated four percent for soybeans, to 17 percent for wheat, 23 percent for corn, 50 percent for cotton, and a high of 63 percent for rice during the 2002-2005 crop years.
- **Farms Receiving Government Payments.** Farm financial survey data indicate 39 percent of all farms received government payments in 2004. Farms specializing in *rice* received an average of \$53,700 in 2004; *cotton* farms averaged \$49,300; and *cash grain and soybean* farms averaged \$19,000 per farm, but cash grain and soybean farms accounted for 54 percent of payments made.
- **Payments by Farm Typology.** Commercial farms accounted for nearly 17 percent of the

farms receiving government payments in 2004, but received 56 percent of total government payments. Rural residence farms accounted for about half of the farms receiving payments but only 17 percent of total payments. However, rural residence farms accounted for 58 percent of major conservation program payments which are largely associated with the land retirement programs.

- **Payments by Income.** About 9 percent of all farm households receiving payments had incomes of \$200,000 or more and received 23 percent of all government payments in 2004. About 44 percent of farm households receiving payments had incomes of less than \$50,000 and received about 32 percent of all farm payments. About 12 percent of farms had net cash farm incomes over \$100,000 and received 42 percent of payments.

#### **Crop Insurance and Ad Hoc Disaster Assistance.**

Federal Crop Insurance was overhauled in 2000 to increase participation through expanded crop and livestock coverage and increased subsidies. In 2005, acres covered were up 20 percent from 2000, and liability was up 30 percent. Buy-up coverage has increased sharply. Overall, crop insurance policies are purchased on two-thirds of the total U.S. crop value and for 85 percent of the value of program crops. For livestock, new pilot insurance policies are being offered, but participation remains low. The actuarial performance of crop insurance has steadily improved over time, although subsidies have increased, including the costs of delivery. Yet despite the increase in participation and coverage levels, Congress has continued to provide ad hoc disaster assistance to producers, making available \$14 billion to livestock and crop producers since 1998.

**Conservation.** Natural resource conservation will be examined in a subsequent theme paper. The theme is discussed here because there are many conservation activities that farmers, ranchers, and communities may undertake to reduce their risks. Under USDA conservation programs, production and yield risks may be reduced by financial assistance, technical assistance and stewardship programs.

#### **Economic and Policy Issues for Federal Agricultural Risk Management Programs**

Price and income support, crop insurance, disaster, and conservation programs constitute substantial resources directed at farm risk mitigation.

**Risk Mitigation.** While providing substantial income enhancement, government price and income support programs appear to be blunt instruments for reducing income variability or risk. For example, direct payments are fixed and do not take income variability into account.

While counter-cyclical payments are negatively correlated with price, they are based on a fixed production level and do not take the income effect of changing yields into account. Marketing loan benefits, while triggered by low prices, enable the producer to lock in a return at least equivalent to the loan rate on all current production. Thus, the loan program may overcompensate when production is marketed at prices above the level used to lock in the loan benefit. In addition, a producer does not receive the loan benefit on lost production, thus reducing income risk protection. A large national crop loss may greatly reduce production eligible for loan benefits and, if it causes higher prices, may also reduce counter-cyclical payments, again failing to mitigate income risks.

In recent years, crop insurance has had large increases in participation and coverage levels, improved actuarial performance, and higher program costs. Still, ad hoc disaster assistance continues to be made. While 66 percent of U.S. crop value is covered by an insurance policy, insured liability is only 39 percent of U.S. crop value. Trying to increase enrolled crop acres with higher premium subsidies for all producers would result in high costs per added acre enrolled. Availability of crop insurance remains limited for some specialty crops, livestock, livestock forage and whole farm policies.

#### **Level and Comprehensiveness of Support.**

Government payments are not distributed evenly across the country or by farm size or type of farm. This fact raises questions about the equity of program benefits. Payments under the price and income support programs are heavily concentrated in the central and southern parts of the United States, reflecting production of program crops, with a large proportion of the payments going to the largest farms with the highest net farm incomes. Conservation payments are more evenly distributed among farms and ranches.

**Resource and structural effects.** Farm programs have become more market-oriented over time. Yet, today's programs still contain elements that provide incentives for resource use that may be inconsistent with market signals. For example, the marketing assistance loan program assures a per unit return on all current production at least equal to the loan rate, regardless of how low market prices fall. Studies indicate the marketing assistance loan and crop insurance programs have increased planted acreage, although the size of the effects are debatable. In some instances, the land brought into production is economically marginal, environmentally sensitive, or otherwise poorly suited for crop production. Similarly, the sugar and dairy programs provide incentives to produce more than otherwise by maintaining market prices above where they would likely be in the absence of the programs. To the extent that the supported prices for sugar and dairy products exceed the market prices that would prevail in the absence of the programs, consumers of those products pay more.

Commodity programs may also affect farm size and farmland values. While program payments may help some producers remain in business in the short term by augmenting income, program payments may provide a means for other producers to outbid competitors for farmland and expand their operations. While varying by region, studies indicate commodity programs raise U.S. farmland values. Higher farmland values will directly benefit farm operators who own and invest in farmland and may indirectly benefit those farming by improving their access to credit and making additional land purchases easier. However, higher land prices may also deter new entrants into farming and constrain expansion by limited resource farms; increase farmers' costs; increase investment in farmland by nonfarmers; and increase the tax burden of landowners.

**Program cost.** Commodity program costs have increased sharply, about doubling since FY 2004. Costs are expected to remain well above the average of the 1990s. Federal crop insurance costs have steadily increased under statutory increases in subsidy levels and increased participation, rising from about \$1 billion per year in the mid 1990s to an expected average of \$3.1 billion during the 2002-05 crop years. Ad hoc disaster assistance has been consistently provided in recent years with costs of nearly \$3 billion in calendar 2005. In addition, the dairy and sugar price support programs add to consumer costs and can result in stock accumulation by the government which can be difficult to manage. High costs are an issue in the current Federal budget environment where deficits are large and persistent and there is pressure to curb spending.

**WTO implications.** Under the Uruguay Round Agreement on Agriculture of the WTO, the United States is limited in the amount and type of support allowed under domestic farm programs. In addition, under the on-going negotiations under the Doha Development Agenda, the United States has proposed more stringent limitations on domestic farm support in combination with increased market access and elimination of export subsidies. If the U.S. proposals are adopted in the WTO, domestic policy reform is likely to be needed, especially in key amber box programs—the marketing assistance loan program and the dairy and sugar price support programs. In addition, Brazil's successful challenge to U.S. cotton programs has significant direct and indirect implications for farm programs.

### **Alternative Approaches to Agricultural Risk Management**

Three broad approaches for addressing risk management programs are discussed. The options are not meant to be exhaustive or to represent specific farm bill proposals. They are presented as candidates for further public discussion to help inform the 2007 Farm Bill.

**Alternative 1:** *Use the existing structure of farm programs but make them more WTO consistent, reduce their effects on resource use and farm structure, and better target them to producers in greatest need of assistance.* The goals of this option could be met with reduced marketing assistance and price support loan rates, reduced counter-cyclical payment rates, higher direct payment rates, and stricter payment limitations. Programs would be less vulnerable to WTO challenges, resource effects would be lessened, payments could be more targeted toward smaller and mid-size farms, but program benefits would remain concentrated with traditional crops and greater reliance would have to be placed on crop insurance or the private sector to manage income variability.

**Alternative 2:** *Replace marketing assistance loans and counter-cyclical payments with a program that pays producers based on revenue shortfalls.* This option would replace marketing loans and counter-cyclical payment programs with a program designed to stabilize revenue. To fully develop this approach, many questions must be answered on program design (level of guarantee? single commodity revenue or a whole farm revenue? revenue on an individual farm or in a region or nationally?) and program delivery (government or private sector?). This approach would generate cost savings and generally be more effective at stabilizing farm income than our current programs, but could affect supply, demand and prices depending on how the program is constructed and the level of the revenue guarantee. Savings could be used to address other needs or more commodities than under current programs, and WTO concerns may be reduced but not eliminated.

**Alternative 3:** *Phase out marketing assistance loans, direct and counter-cyclical payments and use savings to expand crop insurance coverage, fund farm savings accounts or expand conservation, rural development, or other programs.* Eliminating direct and counter-cyclical payments and marketing assistance loans would reduce Federal spending substantially, lead to a more market-oriented agricultural sector and remove the negative aspects of current programs to expand production and plant certain crops. However, the reduction in payments to traditional program crops and expansion in conservation, rural development, and other programs could result in a significant shift in benefits from producers of traditional program crops to producers of non-program crops and livestock. Implementation would be gradual over several years to limit adverse effects on land and asset values. Greater reliance would have to be placed on the development and use of private sector risk management tools to manage income risk.