

CROP INSURANCE

A Federal Cash Assurance Program

Federal crop insurance is a highly taxpayer subsidized program that allows agricultural producers to shift their business risk onto taxpayers. Primarily benefitting growers of cotton, corn, wheat, and soybeans, crop insurance cost taxpayers more than \$11 billion in 2011 and is now the most expensive taxpayer support for agriculture, outstripping all other agriculture safety net programs. As important as its price tag, crop insurance is a shining example of a government program filled with costly inefficiencies that detract from the program's goals and produce unintended consequences.

Crop insurance is significantly different than the home, car, or health insurance policies that are familiar to most people. Instead of individuals or companies covering the full cost of their insurance protection, the federal taxpayer pays, significantly subsidizing insurance policy holders, agents, and companies. Beneficiaries, on average, pay less than half the costs of their insurance policies. The insurance companies that provide crop insurance carry little actual risk and instead are paid handsomely by Uncle Sam who also bears the burden of losses. Additionally, crop insurance can be used to insure an expected level of revenue, meaning insurance payouts can kick in even after a bountiful harvest.

Privatized Profits, Socialized Risk

From drought, to floods, to pests, and just bad luck, numerous factors can result in a bad harvest. First created in 1938 as a response to the Great Depression, federal crop insurance was designed to help protect agricultural producers. What it does instead is disproportionately shift the costs of managing the risks of agriculture onto the backs of taxpayers.

The Department of Agriculture's Risk Management Agency (RMA) selects private companies, currently 15, to sell and administer crop insurance policies. These companies pay independent insurance agents commissions based on the prices of policies they sell. Taxpayers, in turn, reimburse the administrative and operations costs of these companies. In addition, taxpayers act

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Taxpayers cover the first 60 cents in every \$1 of crop insurance premium, on average.

as reinsurers for the insurance companies. That means the federal treasury is the backstop that covers any catastrophic losses; when insurance claims exceed the company reserves.

Taxpayers also cover a significant portion of the premium costs for the insurance policies purchased by agricultural producers. **Presently 100% of the cost for a basic catastrophic coverage policy (CAT) is covered by taxpayers.** That is, by paying a small administrative fee, a producer obtains a policy that will pay out if he loses half or more of his expected harvest. On top of this basic policy, producers have the option to buy-up more coverage; e.g. have insurance pay out for lower loss amounts, as little as 15% loss in some locations, or have payouts based on a higher percentage of the expected harvest price, up to 100%. The incremental premiums

for this additional coverage are also subsidized by taxpayer dollars at decreasing percentages the higher the coverage. When costs of the fully taxpayer covered catastrophic coverage policy and various level of subsidies for optional coverage are put together, **taxpayers pay roughly 60 cents of every \$1 in crop insurance premiums for agricultural producers.**

Crop Insurance Maze

The federal crop insurance program is complex. While more than 80% of crop insurance covers just four crops (corn, soybeans, wheat, and cotton), some form of federally subsidized crop insurance is available for more than 100 different crops—from almonds to oysters. It can take the form of any of a dozen types of policies, depending on what crop is grown and in which state and county, because some policies are pilot programs and not all crops can receive coverage in every location. A producer may be able to obtain a policy based on a farm's actual production history (APH), a farm's actual revenue history (ARH), Group Risk Plan (GRP)—which is based on county-wide yields—a Rainfall Index (RI), and more. These policies insure against low yield, low price, low quality, or a combination of these three.

The majority of insurance policies are being used not to hedge against a bad harvest (“yield-based” policies), but to protect a certain level of anticipated income (“revenue-based” policies). All crop insurance policies are based on anticipated yield—amount and quality of crop produced—and an expected harvest price, determined through a discovery process conducted by RMA. A yield-based policy insures only a particular yield and is typically based on the actual past performance in growing that crop on the farm. If the amount of crop harvested falls below the amount insured, an indemnity is paid to the producer to make up the difference. Revenue-based policies, however, insure a particular or expected amount of revenue (expected yield x price) for growing a crop.

The distinction between yield insurance and revenue insurance is important because the risks and associated costs vary significantly. Revenue insurance provides coverage from downside and upside risk. This means it ensures a certain level of revenue, whether there is a low yield



caused by drought, flood, or pests, or low prices resulting from high yields and a glut in the market. In addition, most revenue insurance policies automatically increase the revenue guarantee if the crop's harvest price ends up higher than the price projected when the policy was entered.

Revenue insurance is a more dynamic policy covering more risks that would be significantly more expensive in the private market than yield insurance. But because of the unique structure of the federal crop insurance program, most of the increased costs of revenue insurance are not borne by producers, but covered by taxpayers. Again, crop insurance policies are based on an expected price for a harvested crop. As the cost of crops increase, which they have for the most commonly insured crops, the price of insurance policies, and the premiums paid to obtain these policies, increase. Yet taxpayers cover the same percentage of a policy's premiums, whether the policy insures yield or revenue. So as increasingly higher expected revenues are insured, more dollars are paid by taxpayers. In addition, the higher cost insurance policies lead to higher taxpayer-reimbursed administrative and operations costs for the crop insurance companies, even though they are not performing any additional service. And because the U.S. Treasury provides the financial backstop underwriting the majority of these increasingly expensive policies, taxpayer liability for catastrophic losses continues to grow.

While agricultural risks are greater than those faced by many businesses, producers also have unique risk management options beyond insurance. Producers have a robust financial securities market that enables them to tap market forces to reduce risk, such as commodity futures that allow them to lock in a specific price, months ahead of harvest. Producers can also diversify production, grow a number of different crops, adjust the timing of their plantings, and vertically integrate their operations. In addition, producers benefit from permanent federal disaster assistance programs and ad hoc efforts in response to federally declared disasters.

Crop Insurance Needs Reform

Founded on major subsidies to producers and insurance providers, and with its costs tied to near-record high priced commodities, federally subsidized crop insurance is quickly becoming too expensive and unwieldy. In 2011, net farm cash income is projected to be **\$109.8 billion**, an increase of 18.9% from 2010 and **the highest value recorded since 1974**. With federal deficits projected as far as the eye can see, federal crop insurance must be reevaluated to ensure taxpayers are not unnecessarily bearing risk and adding to the nation's \$15 trillion debt.

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The greatest cost in the crop insurance program is guaranteeing income, not insuring crops.



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Costs of Crop Insurance Policies

The following is a comparison of crop insurance payouts under possible yields experienced by an Iowa corn producer cultivating 1,000 acres. This producer, who would pay approximately \$18,000 for a 75% revenue guarantee policy, could expect to receive an indemnity worth more than \$90,000 in a high yield/low price environment, while CAT and yield policy holders would receive \$0. In addition, a revenue policy payout would greatly exceed—nearly 100 times—a yield insurance payout in a low yield/low price scenario.

These examples illustrate why federally subsidized revenue insurance is the most popular type of crop insurance, accounting for nearly 60% of policies and more than 80% of premium costs. Taxpayers need to ensure producers are shouldering their fair share of risks for insuring levels of farm revenue not seen in a generation.

Actual Production History for the farm (APH)	170 bushel/acre
Expected Harvest Price	\$6.01/bushel (2011 avg)
Actual Harvest Price (a)	\$4.00/bushel
Actual Harvest Price (b)	\$7.00/bushel
Yield Insurance Guarantee	75% yield at 100% expected harvest price
Revenue Insurance Guarantee	75% revenue at 100% expected harvest price

CALCULATIONS

Bushel/acre guarantee:

$$170 \text{ bushel/acre} \times 75\% = 127.5 \text{ bu/acre}$$

Free CAT Policy (50% yield; 55% price): **85 bu/acre; \$3.31**

High Yield Harvest: **169 bu/acre**

Low Yield Harvest: **127 bu/acre**

Disasterous Harvest: **80 bu/acre**

Yield Insurance policy (\$20,468 cost)

Federal government subsidy: \$11,257

Producer premium: \$9,211

Revenue Insurance policy (\$40,347 cost)

Federal government subsidy: \$22,191

Producer premium: \$18,156

EXAMPLE 1: DISASTER YEAR

CAT COVERAGE

$$\text{Indemnity} = \text{Yield shortfall} \times \text{Insured price} \times \text{\% yield insured} \times \text{acres}$$

$$\text{Indemnity} = 5 \text{ bu/acre} \times \$3.31 \times .5 \times 1,000$$

$$\text{Indemnity} = \mathbf{\$8,275}$$

YIELD INSURANCE

$$\text{Indemnity} = \text{Yield shortfall} \times \text{Expected Harvest Price} \times \text{\% yield insured} \times \text{acres}$$

$$\text{Indemnity} = 47.5 \text{ bu/acre} \times \$6.01 \times 0.75 \times 1,000$$

$$\text{Indemnity} = \mathbf{\$214,106}$$

REVENUE INSURANCE

$$\text{Indemnity} = ((\text{bu/acre} \times \text{expected price}) - (\text{actual bu/acre} \times \text{actual harvest price})) \times \text{acres}$$

$$\text{Indemnity} = ((127.5 \times 6.01) - (80 \times 4.00)) \times 1,000$$

$$\text{Indemnity} = (\$766.28 - \$560) \times 1,000$$

$$\text{Indemnity } (\$4.00/\text{bu}) = \mathbf{\$446,275}$$

$$\text{Indemnity } (\$7.00/\text{bu}) = \mathbf{\$206,275}$$

EXAMPLE 2: LOW YIELD

CAT COVERAGE

127 bu/acre exceeds the guarantee of 85 bu/acre

$$\text{Indemnity} = \mathbf{\$0}$$

YIELD INSURANCE

$$\text{Indemnity} = 0.5 \text{ bu/acre} \times 6.01 \times 0.75 \times 1,000$$

$$\text{Indemnity} = \mathbf{\$2,254}$$

REVENUE INSURANCE

$$\text{Indemnity} = (\$766.28 - \$508) \times 1,000$$

$$\text{Indemnity } (\$4.00/\text{bu}) = \mathbf{\$258,275}$$

$$\text{Indemnity } (\$7.00/\text{bu}) = \mathbf{\$0}$$

EXAMPLE 3: HIGH YIELD

CAT COVERAGE

169 bu/acre exceeds the guarantee of 85 bu/acre

$$\text{Indemnity} = \mathbf{\$0}$$

YIELD INSURANCE

169 bu/acre exceeds the guarantee of 127.5 bu/acre

$$\text{Indemnity} = \mathbf{\$0}$$

REVENUE INSURANCE

$$\text{Indemnity } (\$4.00/\text{bu}) = \mathbf{\$90,275}$$

$$\text{Indemnity } (\$7.00/\text{bu}) = \mathbf{\$0}$$