GIVING IT AWAY FREE
FREE CROP INSURANCE CAN SAVE MONEY AND STRENGTHEN THE FARM SAFETY NET

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by **Bruce Babcock**
Professor of Economics, Iowa State University
Preface by **Craig Cox**
Senior VP for Agriculture and Natural Resources, EWG

A simple, *free* program to insure farmers against actual crop losses at full market price would be cheaper and fairer than today's hopelessly inefficient and costly system

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Preface

Weaving a safety net that works for famers and taxpayers

by Craig Cox
Senior VP for Agriculture and Natural Resources, EWG

The Environmental Working Group (EWG) commissioned Dr. Bruce Babcock to analyze EWG's proposed safety net for farmers – a free insurance policy that would cover 70 percent of average yield and 100 percent of the market price for the lost crop. EWG's proposal grew out of a previous paper Dr. Babcock prepared that detailed the flaws in the current revenue insurance programs.

Dr. Babcock's new paper arrives at a time when crop and revenue insurance have become the most expensive of all federal farm income support programs. In March, the Congressional Budget Office (CBO) predicted that taxpayers will spend $90 billion over the next 10 years on the highly subsidized insurance program – far more than the $66 billion it projected will be spent on traditional farm subsidies.

Now, some lawmakers are proposing to plow most of the savings from finally ending the discredited direct payments program into a new, unprecedented entitlement to guarantee up to 95 percent of business income for the same farm businesses that have been rewarded with direct payments for years. Sold as reform, this bait and switch will likely add at least $30 billion to the $90 billion taxpayers are already spending to insure farm income. Conservation, food, research and other critical programs will be cut in order to make room for this new mandate.

Dr. Babcock's report should give pause to lawmakers being asked to swallow this "reform." The paper makes a compelling case that:

- The current crop and revenue insurance system is seriously flawed and needs an overhaul, despite the chorus of voices resisting even the minor reforms proposed by the Obama Administration.
- It is very possible to construct a safety net that works for farmers, saves taxpayers billions of dollars and is better for the environment than the current system.

The most stunning evidence of the need to overhaul the current system is Dr. Babcock's estimate that taxpayers send $1 dollar to insurance companies and agents for every $1 dollar that goes to farmers. Taxpayers pay most of the policy premiums and pay insurance companies to sell the policies. Highly profitable insurance companies that harvest generous underwriting gains are the biggest beneficiaries of this heavily subsidized program.

If this is not reason enough to make lawmakers skeptical, a report released by the Government Accountability Office on April 12 should. GAO found that one farm business that had insured its cotton, tomatoes and wheat across two counties received $1.8 million in premium subsidies in 2010, while the average farmer received only $5,339. More stunning, GAO estimated that taxpayers sent $309,000 to insurance companies to administer the policies for this one large farm business alone. In 2011, 3.9 percent of all growers covered by insurance policies harvested 32.6 percent the premium subsidies. A $40,000 limit on premium subsidies – similar to caps in place for direct payments – would have saved taxpayers up to $1 billion. The distribution of insurance subsidies is just as distorted as the distribution of the direct payments that the insurance would replace – and far more expensive to deliver.

At a minimum, Congress should immediately reform the crop and revenue insurance programs by:

- reducing or ending premium subsidies for revenue protection policies, particularly those that insure more than 70 percent of business income;
- capping the amount of premium subsidies an individual or farm business can collect;
- requiring farms to protect soil, wetlands and grasslands in return for premium subsidies; and
- making public the identities of the farm businesses participating in the insurance programs and the amount of premium subsidies and indemnities each farm business receives.

But Dr. Babcock's thorough analysis shows that it would be even better – far better – to replace the current, complicated system of premium subsidies and policies with a single, simple and free yield protection policy covering 70 percent of average crop yield. The policy would compensate producers for a financial loss caused by bad weather – at 100 percent of the crop's market price. Farmers would be asked to pay a small fee to cover the much lower costs of delivering this program. The private sector would be free to develop innovative insurance products that farm operators could buy at their own expense, if they chose, to place atop the core of the safety net provided at taxpayers' expense.

This approach would chart a course toward a fiscally responsible, effective and environmentally sound safety net. As Dr. Babcock points out, getting back to a basic taxpayer-funded safety net would:

- Finally achieve a permanent, farm-level disaster program that eliminates the need for ad hoc disaster relief – better protection than many farmers now enjoy;
- Reduce distortion in planting decisions;
- Eliminate the need for an elaborate premium rating structure; and
- Require growers to buy a single policy that covers all of the insured crop grown in a county, rather than insuring the crop field-by-field, in order to reduce the incentives to farm high-risk, environmentally sensitive terrain.

Providing this financial safety net to farmers for free would actually save taxpayers between $5.7 and $18.5 billion over the next ten years, depending on how many farmers participate. If Congress coupled these savings with $50 billion in savings from ending direct payments and the Average Crop Revenue Election (ACRE) program, it could create a fiscally responsible and effective safety net, fully fund conservation programs, invest in programs that increase access to healthy food and still meet or exceed deficit reduction targets.

The only thing standing between taxpayers and the kind of farm bill they want is the power of the subsidy lobby – now augmented by lobbyists for the crop insurance industry. Now, more than ever, the farm bill is far too important to be left to the agriculture committees.

Giving It Away

Free Crop Insurance Can Save Moneyand Strengthen the Farm Safety Net

by Bruce Babcock

Professor of Economics, Iowa State University

Summary

The record high income earned by growers in recent years has changed the politics of sending taxpayer-supported direct payments to farmers. Agriculture's leaders and their Congressional allies can no longer claim credibly that there is any public purpose to giving farmers $5 billion a year at a time when crop prices and income levels are so high. But instead of simply abolishing the program and either reducing the federal budget deficit or shifting the funds to programs that truly serve public needs, such as agricultural research or reducing farming's environmental damage, Congress seems poised to use a large portion of the money to create a new crop insurance program to support commodity growers. To make it look better to the public, it's being dressed up as a "safety net" that will pay farmers when a "loss" occurs. But as proposed, a farm wouldn't need to suffer any actual financial loss to collect; all that it takes will be the appearance of a loss.

What is surprising is the lack of discussion of why *any* public money should be spent on a new "safety net" when the existing federal crop insurance program already costs so much and provides farmers with such extravagant protection. If the current system of crop insurance isn't working, why not abolish it along with direct payments and redirect the $13 billion in combined annual savings to shrink the deficit and create a truly cost-effective program? Since 2001, the current crop insurance program has cost taxpayers about $50 billion, but only half –$25 billion – has found its way into farmers' pockets. The other $25 billion wound up in the coffers of crop insurance companies and in commissions paid to insurance agents. It strains credibility to claim that a program that costs $2 to deliver $1 of benefits is a wise use of taxpayer funds.

One reason the program costs so much is that it includes premium subsidies that give farmers irresistible incentives to buy more insurance, and more expensive types of insurance, than they would buy if they had to spend their own money. Rather than just seeking protection against unpredictable events that might destroy their crops, farmers are using the subsidies to also buy costly revenue insurance. Such policies protect them

against price fluctuations that can cost farmers money when they have locked in a selling price but don't have enough production to sell. It's no wonder that farmers buy it, because thanks to subsidies, this more expensive protection costs them far less out-of-pocket than what it costs to deliver.

Another reason the program costs so much is that insurance companies have to be paid large subsidies to induce them to take on a small portion of the risk of having to make large payouts. And finally, the agents who sell these policies earn commissions far in excess of what a competitive market would pay.

As a result, crop insurance is so costly that taxpayers would be better off if the insurance were simply given away to farmers. Both farmers and taxpayers would benefit. In fact, giving all corn, soybean, wheat, cotton and rice farmers a 70 percent yield insurance policy on all their planted acreage could save taxpayers almost $6 billion over 10 years. The value to farmers would be about $5.6 billion more than the net benefit that farmers of these five crops get from existing crop insurance today.

Under this free program, crop insurance companies and others would be free to design cost-effective risk management tools to complement the free 70 percent yield insurance. These products would have to be cost-effective, because otherwise farmers paying with their own dollars wouldn't buy them.

Groups as disparate as the National Milk Producers Federation, cotton growers and the American Farm Bureau Federation have embraced the idea that it's sound policy to deliver a more efficient and effective farm safety net directly in the farm bill as a commodity program rather than indirectly through the expensive, subsidized crop insurance program. The milk producers are advocating a milk margin insurance program to be delivered directly by USDA, while cotton growers have proposed a new county-based revenue insurance program also to be delivered directly by USDA. The American Farm Bureau's county revenue insurance program is proposed to be delivered as crop insurance although with much lower delivery costs than current crop insurance products. Clearly, traditional farm groups are beginning to recognize that the current crop insurance program is not an efficient use of tight farm bill funds.

By limiting taxpayers' contributions to a farm safety net to protecting against unavoidable losses in crop yields, Congress would provide a helping hand when farmers are struck by disastrous floods, drought, wind, pests or fire even as it saves farmers and taxpayers money. And it would avoid public backlash against a wasteful system that today makes payments to farmers even when they have no real losses.

Introduction

Leaders of the Agriculture Committees in Congress say they want the 2012 farm bill to strengthen the safety net for farmers. Some commodity groups argue that the way to do this is to set higher target prices for commodity crops to protect farmers against the risk that prices will fall from their current high levels. Others have proposed measures to protect farmers from revenue losses that conventional crop insurance doesn't cover because the losses don't exceed standard deductibles. The revenue loss proposals are called "shallow loss" programs because they would protect farmers against small losses that are not compensated by existing crop insurance, which is designed to cover deeper losses.[1] However, both higher target prices and shallow loss protection would require new funding that is currently unavailable. Even if Congress eliminates direct payments, countercyclical payments and the ACRE (Average Crop Revenue Election) program, it will be difficult to meet budget-cutting targets and still strengthen the safety net, let alone find funds for other farm bill programs, including conservation, research and nutrition.

One source of funds that many seem loath to tap is the crop insurance program. Indeed, many in Congress argue that crop insurance needs to be "strengthened" rather than "raided" to help pay for other programs or meet deficit reduction targets. The appeal of the crop insurance program is easy to understand. After all, who can be against protecting farmers against the vagaries of nature?

Just like homeowners who buy insurance against damage to their homes, farmers buy crop insurance to insure against losses from flood, droughts, hail and pests. But unlike homeowners, who buy insurance from companies that must charge enough in premiums to pay for damage claims plus the cost of running their businesses, farmers pay only small portion of the true cost of their insurance. Their premium dollars pay none of the cost of administering the program and less than half of damage claims. Taxpayers pay the rest.

The cost to taxpayers of the federal crop insurance program has soared in recent years (Figure 1), for two reasons. First, commodity prices have risen sharply. That has driven up premiums along with the cost of subsidizing them and the claim reimbursements that the government pays to insurance companies. Secondly, the premium subsidies have given farmers an incentive to buy the most expensive insurance available with the lowest deductibles. Until the Agricultural Risk Protection Act of 2000, a farmer who wanted to buy more insurance had to pay a dollar for a dollar's worth of additional coverage. Under the terms of the act, however, farmers now only pay 50 cents for that extra dollar's worth of insurance.[2] It is no wonder that farmers have responded by purchasing more insurance.

Figure 1. Taxpayer Cost of the Crop Insurance Program Has Soared
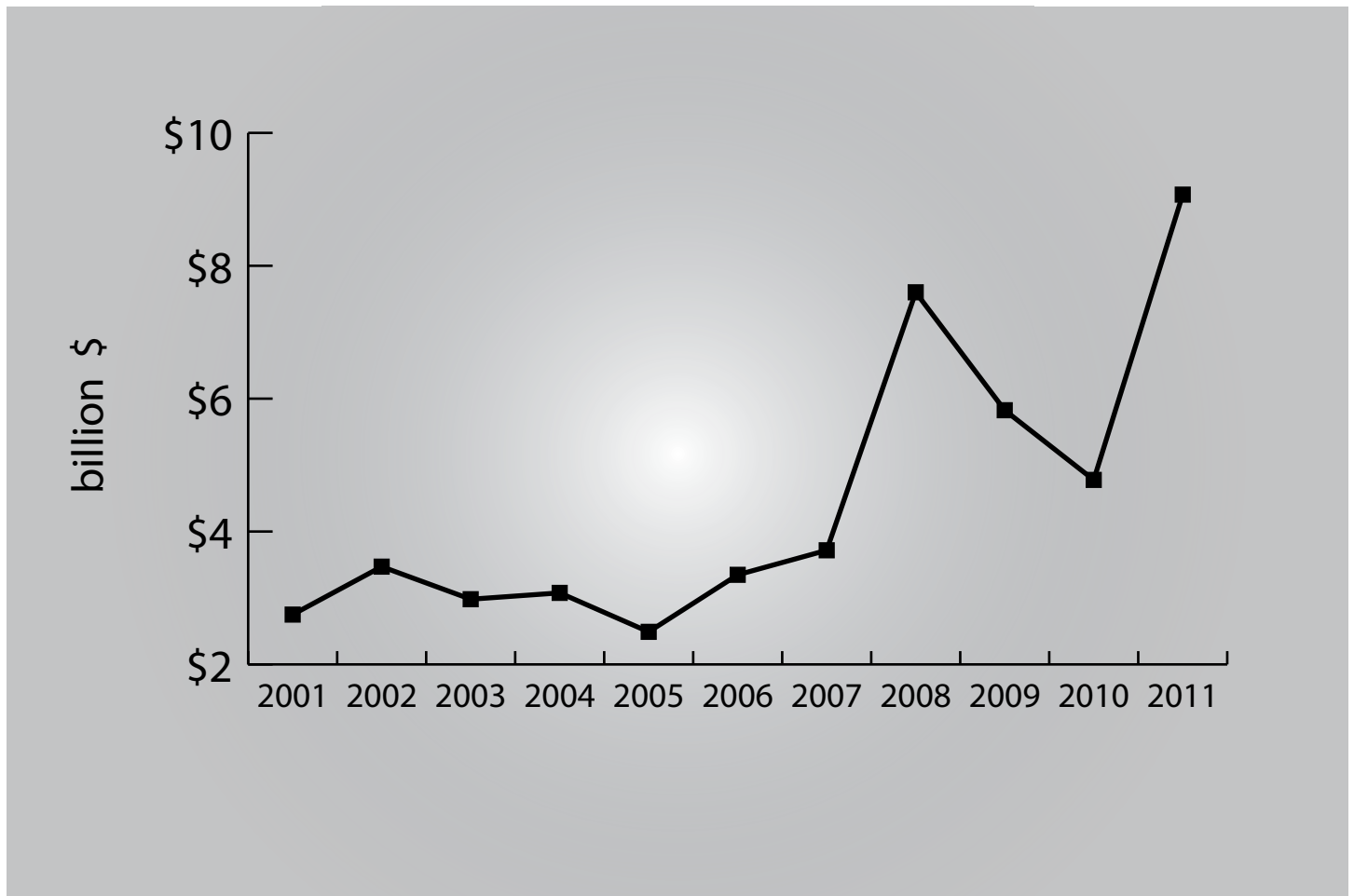
Source: Calculated from USDA Risk Management Agency data

Many farmers responded to increased premium subsidies by choosing lower deductibles and switching from policies that protected against lost yield to policies that protected against lost revenue. Rather than just buying coverage against crop losses, most farmers now buy insurance against both crop losses and movements in market prices. The most popular type is called Revenue Protection (RP), which is available for crops with well-functioning futures markets. The markets are used to set projected prices when a farmer buys a policy and actual harvest prices to determine when a payout is due. With the exception of rice and barley, a large proportion of farmers of eligible crops have chosen RP (Figure 2).

There are obvious reasons why RP is popular. It provides protection against drops in revenue caused by either

Figure 2. Proportion of Insured Acres Covered by RP in 2011
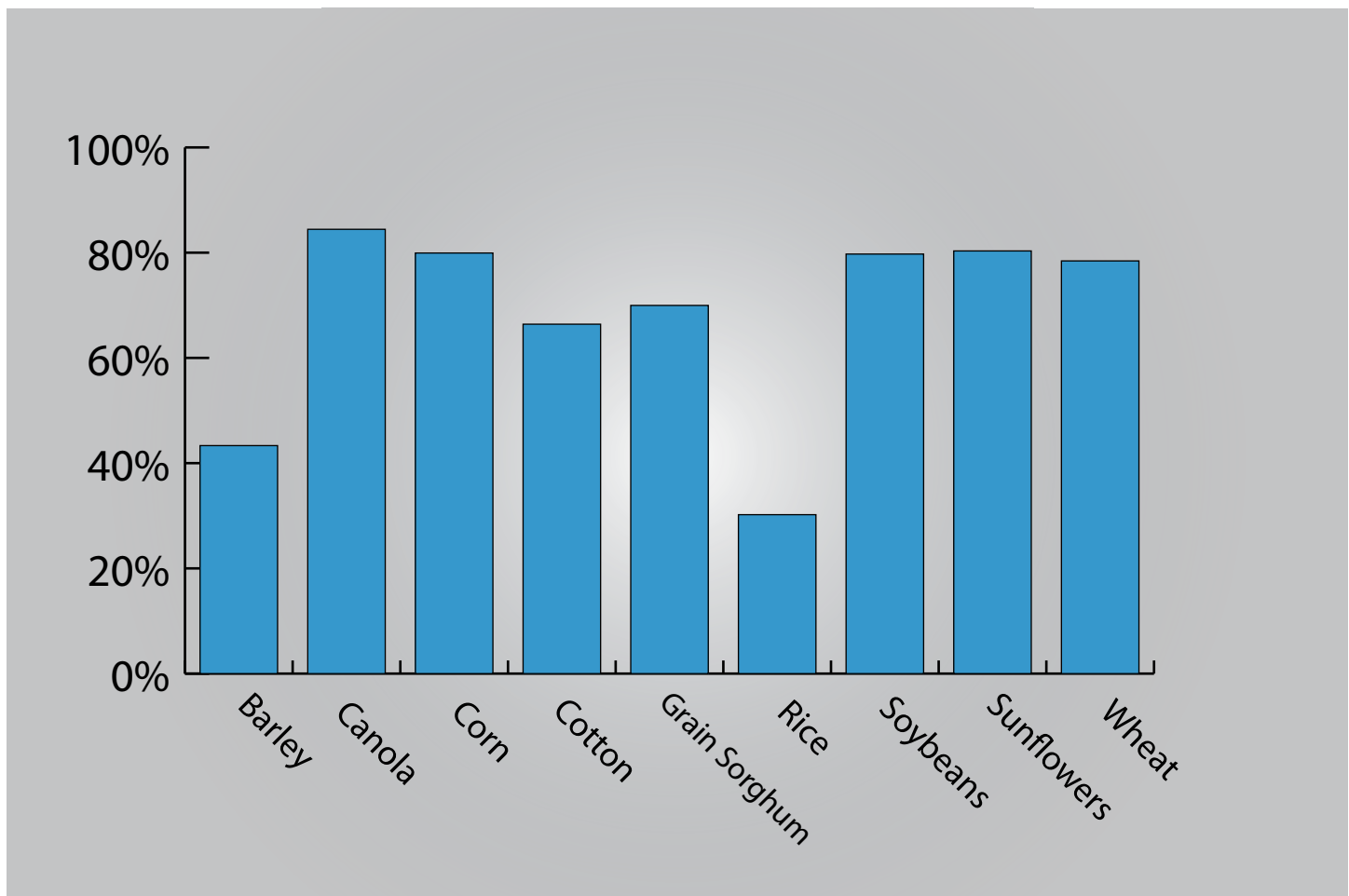
price declines at harvest or by yield losses. In addition, the per-acre revenue guarantee adjusts upward if crop prices rise at harvest. That means that if a farmer with an RP policy does suffer a crop loss, the added revenue from selling the remaining crop at the higher harvest price does not reduce the insurance payout.[3]

But a good deal for farmers is not necessarily the most efficient use of taxpayer money, and it raises important questions:

* How much does the current subsidy structure cost taxpayers?
* Should the government be in the business of subsidizing the cost of managing price risk in addition to providing protection against severe crop losses?
* Could significant savings be obtained by limiting taxpayers' contribution to the cost of crop insurance?
* Would farmers be hurt if subsidies were limited?

Getting answers to these questions is difficult, because the crop insurance program is very complex. This complexity serves the purposes of those who want to protect the existing program's structure. It is easier to defend a program when most critics don't quite understand its nuances.

An Alternative

To provide insight into these questions, this paper analyzes a simple proposal: Instead of the current farm insurance program with its costly and complicated set of regulations and subsidies, why not simply give farmers a free yield protection (YP) insurance policy?

Currently, the federal government gives farmers a free YP policy known as Catastrophic (CAT) coverage. CAT covers crop losses of more than 50 percent and compensates farmers at 55 percent of the market price of the lost crop. The free yield protection policy analyzed here is a more generous CAT policy that would compensate crop losses of more than 30 percent at 100 percent of the market price. This free policy would provide farmers with a solid foundation on which they could add additional risk management tools through the private sector. It would be the taxpayers' contribution to a basic safety net for producers of eligible crops. It would cap the burden on taxpayers and could produce significant budget savings by eliminating both federally paid premium subsidies and underwriting payouts to crop insurance companies. Simplifying administration of the system would produce even more savings.

The "free" insurance comes at a cost, of course, but this analysis shows that, in aggregate, both taxpayers and farmers would be better off than under the current program, which benefits the crop insurance industry as much as farmers.

The reality that giving away free insurance would actually save money underscores how inefficient the current system is. In addition, this alternative system would also reveal which risk management products can actually prosper in an open market, since farmers would have to buy add-on products with their own money.[4]

The Potential Savings

Providing farmers with a free yield protection policy that would pay off on yield losses of 30 percent or more at 100 percent of the expected market price would produce savings in three ways:

Lower Premium Subsidies

This proposal would eliminate premium subsidies for coverage above the basic 70 percent yield protection provided free to growers of so-called program crops – the crops currently benefiting from direct payments. The savings from eliminating these subsidies, which totaled $6.8 billion in 2011, would help pay the cost of the free policies.

Underwriting Gains

Currently, federally subsidized crop insurance is sold through private companies that make large profits, called underwriting gains, for taking on a portion of the risk of large payouts. From 2001 through 2011, crop insurance

Figure 3. Net Underwriting Gains Paid to Crop Insurance Companies
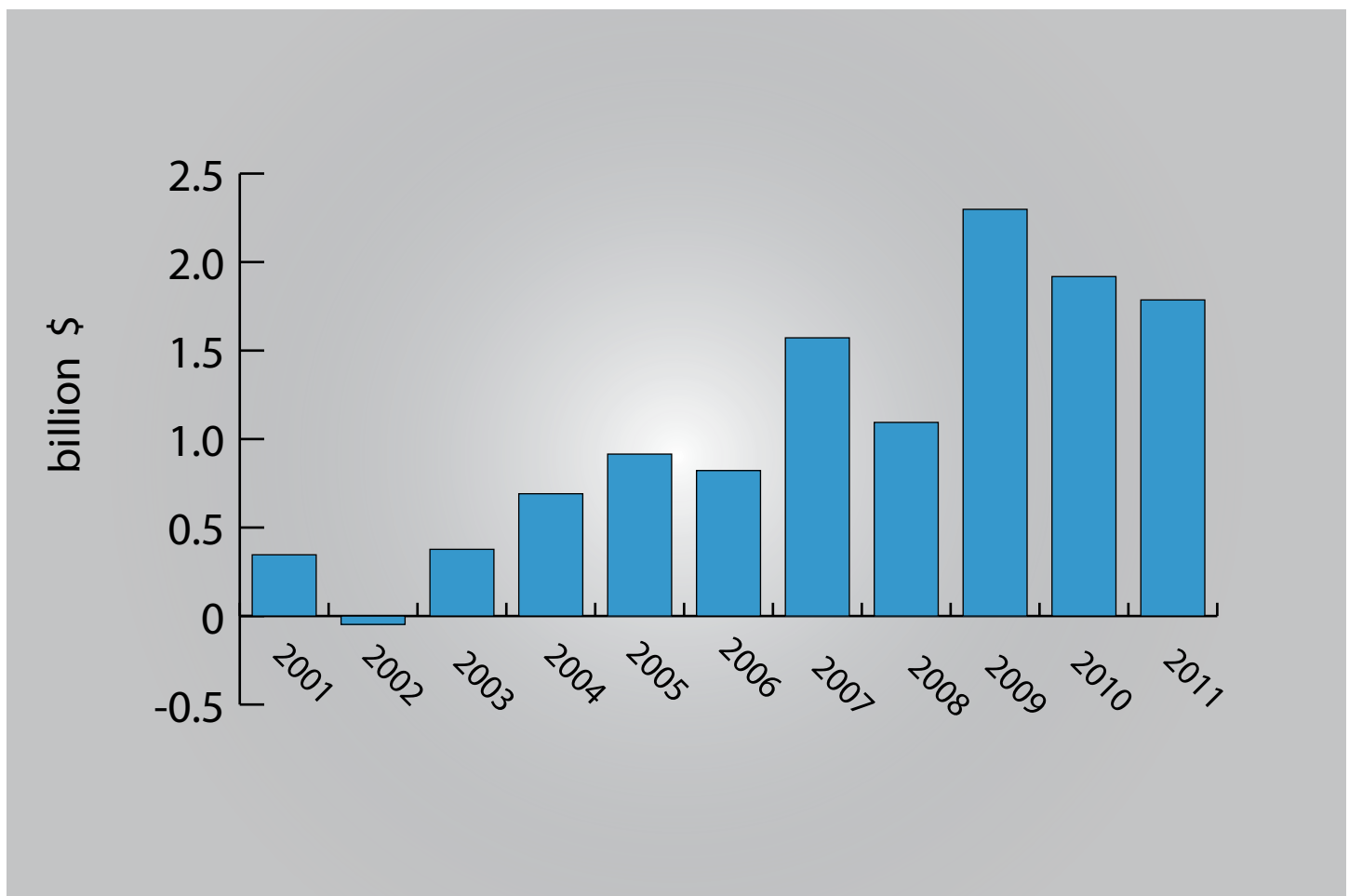
Source: USA Risk Management Agency

companies enjoyed a total of $11.77 billion in net underwriting gains from selling taxpayer-subsidized insurance policies (Figure 3). The rationale for these profits is to allow the companies to make money in years when payouts on claims are lower than premiums collected in exchange for shouldering some of the losses in years when payouts are greater than premiums. In theory, this risk-sharing arrangement reduces the government's exposure in high-loss years in exchange for increasing taxpayer costs in low-loss years. But Figure 3 shows that this is costly to taxpayers. Even in high-loss years such as 2011, companies collected large underwriting gains. Only in one year, 2002, did companies have a net underwriting loss. The proposed free 70 percent yield protection program would eliminate the added cost to taxpayers of underwriting gains by having USDA's Federal Crop Insurance Corporation pay all claims directly.[5]

Reduced Delivery Costs

Crop insurance companies are also generously compensated for the overhead and administrative costs of the policies. Currently, the government makes so-called "Administrative and Overhead" (A&O) payments to crop insurance companies to cover the cost of administering the program and to compensate them for costs that, in a private insurance market, would be built into the premium. These include agent commissions, the cost of adjusting losses and office expenses, including employee salaries and information technology expenses. The A&O payments are set as a percentage of the policy premiums. As Figure 4 shows, when premiums increased due to higher commodity prices and greater use of revenue protection policies, A&O payments also increased dramatically, even though the number of policies administered fell. In 2011, USDA's Risk Management Agency (RMA) capped the resulting windfall profits that companies were enjoying by limiting A&O payments to $1.3 billion a year. Even with this cap in place and adjusting for inflation, however, the industry is still enjoying large windfall profits from A&O reimbursements.

Delivery Costs Loom Large

It is not easy to estimate the actual cost of delivering crop insurance. Industry has every incentive to claim higher costs to justify larger taxpayer reimbursements. Once a farmer signs up for crop insurance, the policy is self-renewing, so current agent commissions are far above what a competitive market would pay.

One estimate of the per-policy cost is the administrative fee of $300 per crop per county that USDA charges

Figure 4. A&O Payments to Crop Insurance Companies
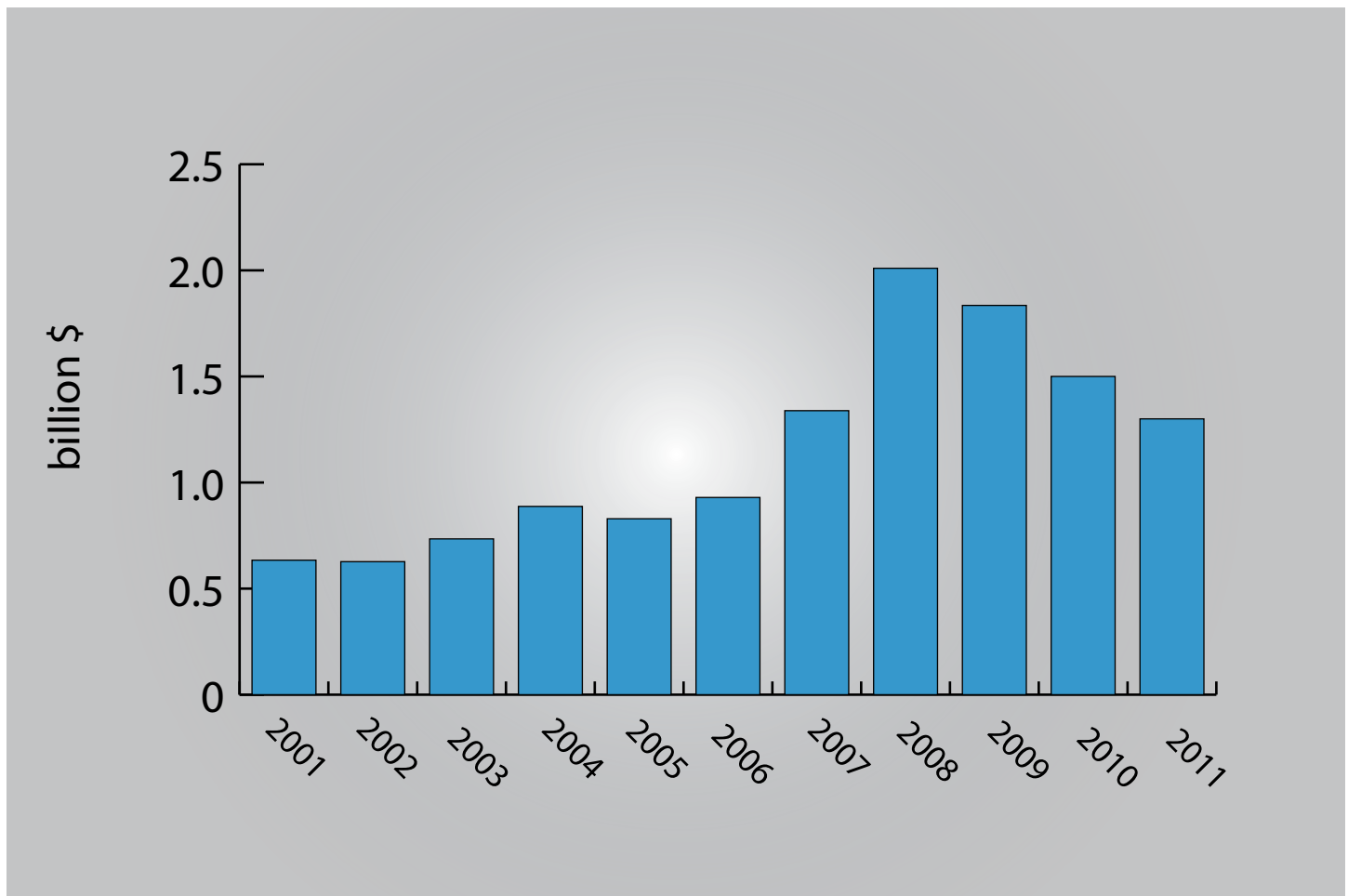
Source: USDA Risk Management Agency

for catastrophic (CAT) policies. RMA estimated that from 2005 to 2008 the non-agent costs averaged $377 per policy.[6]   Informa Economics, in a report for the National Association of FSA County Office Employees, which represents county-level employees of USDA's Farm Service Agency (FSA), estimated that it would cost FSA an additional $467 million a year – about 4 percent of the total premium value in 2011 – to administer the program. This works out to a cost of $406 per policy. What all three estimates make clear is that the cost of delivering the coverage would be lower if USDA implemented the program itself or contracted with insurance companies at a set price per policy, to be determined by competitive bid.

Savings in delivery costs loom large in this analysis of making a free 70 percent yield insurance policy the basic safety net that taxpayers provide to farmers. Over the past 11 years of the current crop insurance program, net

indemnities to farmers (insurance payouts minus premium payments) totaled $24.7 billion – the farmers' cash benefit from the program. The total cost to taxpayers over this period was $49.1 billion (the sum of the $24.7 billion net indemnity paid to farmers and the $24.4 billion in underwriting gains and A&O reimbursements paid to companies).[7] This means that taxpayers paid 99 cents in delivery costs for every dollar of net benefit that farmers received.

Given the importance of increasing the efficiency of all government programs in the face of the large and growing federal debt, it is surprising that this very inefficient means of providing a farm safety net has not caught the attention of avid budget cutters. The crop insurance program is so inefficient that both farmers and taxpayers would be better off if the insurance were given away rather than delivered through the current system.

A look at the costs of crop insurance for corn, soybeans and wheat in Boone County, Iowa and Stutsman County, North Dakota bears out this conclusion.

Impact of Free Yield Insurance

Stutsman County is in West Central North Dakota, where yields are lower and risk is much higher than in Iowa's Boone County. Boone County in rural Central Iowa, with some of the most productive farmland in the country, is one of the least risky places to grow corn and soybeans. Despite the differences in yield levels and risk, almost all acreage in both counties is insured. USDA's Risk Management Agency (RMA) reports that 395,000 acres of soybeans and 155,000 acres of wheat were insured in Stutsman County. Boone County farmers planted 169,500 acres of corn and 101,000 acres of soybeans in 2011 and almost all the acres were insured: 92 percent of corn acres and 95 percent of soybean acres.

Farmers in both counties are big buyers of revenue protection (RP) insurance. It covers more than 90 percent of insured acres in Boone County and 98 percent of soybean and 97 percent of wheat acres in Stutsman County. The most popular coverage level in Boone County is 80 percent for both corn and soybeans, and in Stutsman the most popular level is 75 percent for both soybeans and wheat. Yield insurance (YP) is also available in both counties but covers only 6.7 percent of insured acres in Boone County and 1.7 percent in Stutsman County.

One reason so few farmers in these two counties bought YP was that the per-acre subsidy is so much lower than for RP. Figure 5 shows that the average per-acre subsidy for farmers who bought RP in Boone County in 2011

Figure 5. Average Per-Acre Subsidies for Boone County, 2011
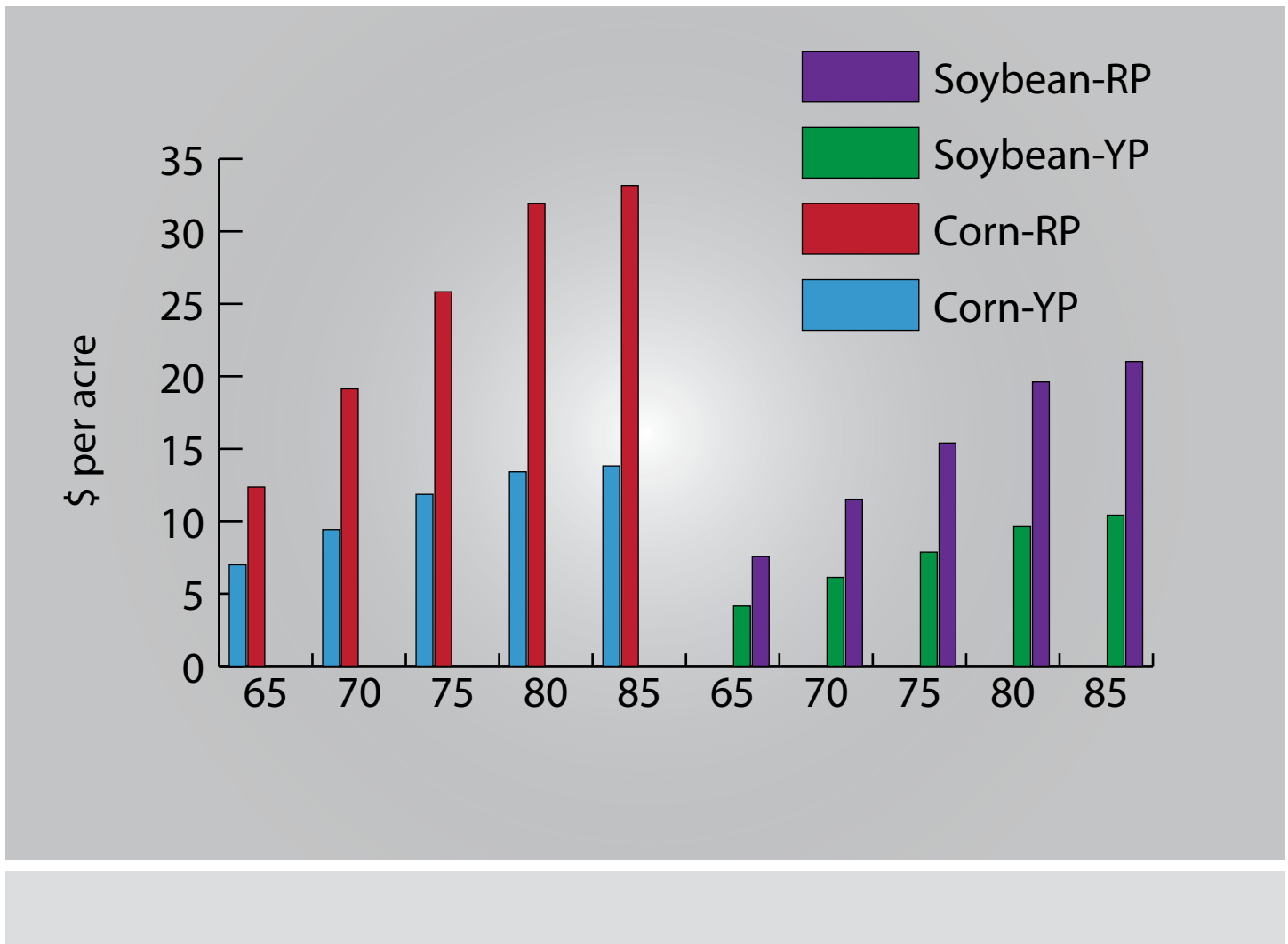
was double that received by farmers who bought YP. Figure 6 shows that RP subsidies for Stutsman County in 2011 were also much larger than YP subsidies. If premiums reflect what crop insurance companies will pay out for these policies over the long run, farmers who select RP will get up to double the net indemnities that farmers who choose YP get. RP provides more coverage and a much greater return on their premium dollars. The more generous net indemnities and the large subsidies the industry gets to administer RP are the reason for the explosive increase in the cost to taxpayers.

Table 1 below shows what the impact would be on farmers, taxpayers and the industry of a program that gave a free 70 percent yield protection policy to all farmers who purchased revenue protection (RP) for corn, soybeans and wheat in Boone and Stutsman Counties. (More will be said later about what options these farmers might

Figure 6. Average Per-Acre Subsidies for Stutsman County, 2011
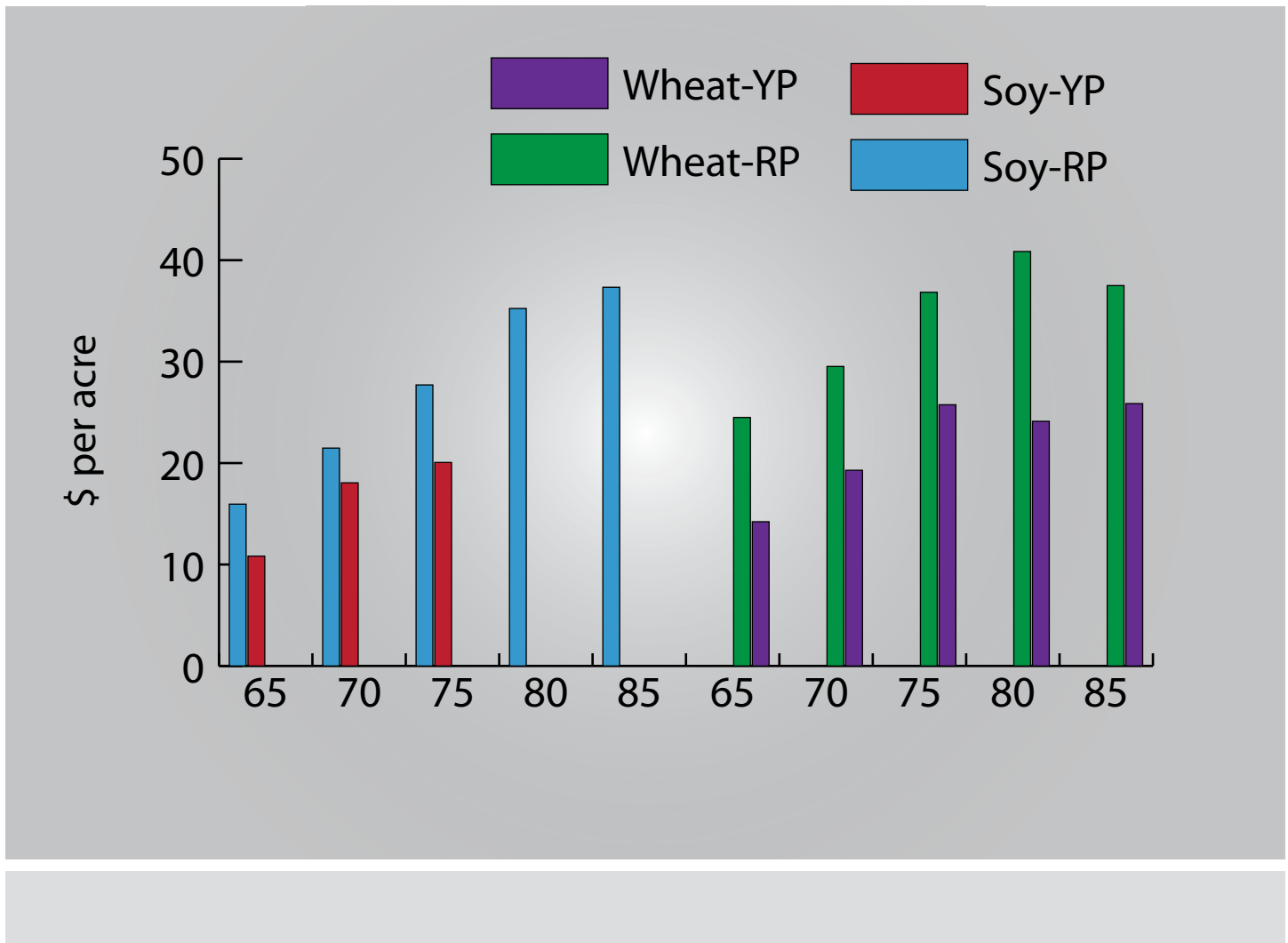
have if they wanted additional risk protection, but for now this analysis assumes no other taxpayer support for the farm safety net.)

As Table 1 illustrates, the impact would vary significantly across crops and regions, but the taxpayer savings would be large. Because yield risk is so much higher in Stutsman than in Boone County, a 70 percent YP policy would be more valuable to farmers in Stutsman than to those in Boone County on a dollar-per-acre basis. The free 70 percent YP policy would also be a better value for farmers than a current RP policy because yield risk in Stutsman County is a greater proportion of total revenue risk than in Boone County. In Boone County, by contrast, RP provides relatively more price protection, so replacing RP with YP represents a drop in value for those farmers.

Table 1. Cost Impacts of Replacing Subsidized RP Policies with a Free YP Policy

	Stutsman County		Boone County	
	Wheat	Soybeans	Corn	Soybeans
Impact on Farmers who Bought RP in 2011	$ million			
Loss of RP Premium Subsidy	5.09	10.14	4.00	2.58
Value of 70% YP Policy[a]	3.61	10.92	2.27	0.89
Net Farmer Impact[b]	(1.48)	0.78	(1.73)	(1.69)
Impact on Administrative Cost				
Reduction in A&O[c]	1.40	2.99	1.26	0.46
Reduction in Underwriting Gains[d]	0.78	1.66	1.40	0.50
Competitive Delivery Costs[e]	0.14	0.44	0.28	0.10
Net Taxpayer Savings No Admin Fee	3.80	4.30	4.67	2.75
Net Taxpayer Savings with Admin Fee	3.94	4.74	4.95	2.85
Current Taxpayer Cost[f]	7.27	14.78	6.66	3.54
Percent Reduction in Program Cost with No Admin Fee	52%	29%	70%	78%
Percent Reduction in Program Cost with Admin Fee	54%	32%	74%	80%

Notes:

[a]Value of 70 percent YP policy equals the average per-acre premium charged in 2011 for each crop and county multiplied by the total number of acres insured under RP for each crop and county.

[b]Net farmer impact equals the value of the 70 percent YP policy minus the loss or RP premium subsidy.

[c]A&O expense is 18 percent multiplied by total RP premium for each crop county combination.

[d]Underwriting gains set to 10 percent of premium in Stutsman County and 20 percent of premium in Boone County.

[e]Competitive delivery cost set to four percent of total value of the 70 percent YP policy.

[f]Current taxpayer cost equals the sum of A&O, premium subsidies and underwriting gains.

The differences are shown in Table 1 in the row titled "Net Farmer Impact." The average value of a 70 percent YP policy is greater than the average value of RP premium subsidies for Stutsman County soybean farmers. By this measure, Stutsman County soybean farmers who currently buy RP policies would come out ahead if given a free YP policy. For Boone County farmers and wheat farmers in Stutsman County, however, the switch from RP to a free 70 percent YP policy would represent a net reduction in support, but it would be a net gain for taxpayers while still providing an effective safety net. In addition, administering this 70 percent YP program directly by USDA or through the private sector with competitive bidding would generate substantial savings. The total taxpayer savings from replacing RP with a free 70 percent YP policy ranges from a low of 29 percent for soybeans in Stutsman County to a high of 78 percent for soybeans in Boone County if underwriting gains and losses are borne directly by taxpayers and if delivery costs are competitively bid. If farmers were charged a fee sufficient to cover delivery costs, the savings would increase to a low of 32 percent and a high of 81 percent, as shown in the last row. [8]

These case studies indicate that limiting the taxpayer-funded safety net to a free 70 percent YP policy could reduce program costs substantially, but examining only three crops in two counties gives little insight into the cost impact on a national level. In addition, Table 1 does not account for the costs of providing a free YP policy to farmers who currently do not buy insurance at all or who buy lower levels of YP, or for the additional savings that could arise from farmers who currently buy other types of crop insurance.

The next section estimates the estimated cost impact of a free 70 percent YP program for all crops for which revenue protection is currently available across all acres insured with all insurance products.

National Impact of Free Insurance

This analysis used RMA's summary of 2011 business data for most crops that are currently eligible for revenue protection coverage to assess the likely impact of providing farmers with a free 70 percent yield protection policy as the core of the taxpayer-funded farm safety net. Only peanuts and oats were excluded. For each crop, the state acreage-weighted average premium for YP at the 70 percent coverage level was calculated for those acres currently insured at that level. In addition, the calculations show the cost of giving this free policy to farmers who bought any form of insurance in 2011 (Column 2 of Table 2) and the cost of providing this policy for all planted acreage of each crop, including for farmers who did not previously buy insurance (Column 3). Giving a free YP policy at the 70 percent coverage level would provide farmers with coverage that would otherwise cost them about $8.6 billion if policies were given only to farmers who bought insurance in 2011, or $9.97 billion in value if the free policies were extended to all farmers who grew these crops.[9]

Subtracting the premium subsidy that insured farmers actually received in 2011 for these crops from the value of the free yield insurance provides a measure of the net benefit that farmers would receive under this proposal. As shown in the totals row of Columns 4 and 5 of Table 2, the net gain to farmers would be either $1.85 billion or $3.2 billion, depending on whether the free insurance was provided only to farmers who bought crop insurance in 2011 or to all farmers who planted these crops. This shows that the free YP insurance would be more valuable to farmers than the $6.76 billion in premium subsidies they received in 2011.

Table 2 shows that a free 70 percent yield insurance policy provides greater net value to farmers than the current system, which requires them to pay for insurance before they can obtain premium subsidies. Obviously, this would be the case for farmers who did not buy insurance in 2011. Remarkably, it is also true for farmers who did

Table 2. Impact on Farmers of a Free Yield Protection Policy

	Farmer Value of Free YP			Net Change in Value to Farmers	
	Only Acres Insured in 2011	All 2011 Planted Acres	Current Value of Premium Subsidy	Only Acres Insured in 2011	All 2011 Planted Acres
	$ million			$ million	
Barley	69	88	40	29	47
Canola	38	37	39	-1	-2
Corn	3,540	4,165	2,911	629	1,254
Cotton	987	1,047	805	182	242
Grain Sorghum	189	241	130	59	111
Rice	74	88	45	29	43
Soybeans	2,169	2,558	1,603	565	955
Sunflowers	74	76	66	8	10
Wheat	1,460	1,670	1,115	345	555
Total	8,601	9,970	6,755	1,846	3,215

Table 3. Net Budget Savings from Free Yield Insurance

	Net Cost of Free Insurance		Reduction in Delivery Cost		Net Budget Savings	
	Only Acres Insured in 2011	All 2011 Planted Acres	A&O	Under-writing Gains	Only Acres Insured in 2011	All 2011 Planted Acres
	$ million					
Barley	29	47	10	12	-7	-25
Canola	-1	-2	10	12	23	24
Corn	629	1,254	951	856	1,178	553
Cotton	182	242	0	216	34	-26
Grain Sorghum	59	111	10	37	-12	-64
Rice	29	43	9	11	-9	-23
Soybeans	565	955	522	469	426	36
Sunflowers	8	10	10	18	21	19
Wheat	345	555	180	323	159	-52
Total	1,846	3,215	1,702	1,100	956	-413
Total with USDA paying 4% admin fee					612	-812
Total with farmer paying 4% admin fee					956	-413

buy insurance. Clearly, a 70 percent yield insurance policy provides valuable risk protection.

But this increase in value to farmers represents a cost to taxpayers. How can taxpayers save money if the cost of the free yield insurance exceeds the cost of existing premium subsidies? Table 3 provides the answer.

The columns showing the net cost of free insurance in Table 3 demonstrate that the farmers' net gain from Table 2 would represent a net cost to the federal budget. There would be offsetting savings, however, from eliminating current A&O expenses, because agents would not get large commissions to sell farmers this base level of protection. Farmers would simply sign up for it. And companies would not need large underwriting gains because this basic yield insurance policy would be backed by the federal treasury, presumably through the Commodity Credit Corporation under the farm bill. The columns showing the reduction in delivery costs give estimates of the savings in average underwriting gains and administrative and operating (A&O) expenses using 2011 data. Total A&O is estimated at $1.1 billion for the crops analyzed here. (A&O expenses are capped by USDA at $1.3 billion for all insured crops.) Underwriting gains are conservatively estimated at 15 percent of premium for barley and canola, 20 percent for corn, soybeans and rice, 0 percent for cotton, 5 percent for grain sorghum, 15 percent for sunflower and 10 percent for wheat.

The total savings on underwriting gains and A&O on 2011 insured acres in Table 2 would be $2.8 billion, which is greater than the additional taxpayer cost (in excess of 2011 premium subsidies) of providing free yield insurance. If the free insurance were provided to all acres planted with these crops, the savings on underwriting gains and A&O would fall short of the cost of free insurance by $400 million a year. If one then adds in a taxpayer-paid 4 percent administrative fee, the final estimate of savings on acres insured in 2011 is $612 million a year. Insuring all planted acres would cost $812 million a year.

Tables 2 and 3 show that both taxpayers and farmers would be better off if the current system of premium subsidies, reinsurance agreements and A&O expense reimbursement were scrapped and replaced with a simple farm safety net program that provided farmers with a free 70 percent yield insurance policy administered directly by USDA. If the free insurance were extended to all farmers and a modest fee were charged, this program could be run at a modest net cost to taxpayers.

That taxpayers could come out ahead or at least break even when crop insurance is given away for free shows how much delivery costs add to the expense of the current crop insurance system. Figure 3 allocates crop

Figure 7. Allocation of Crop Insurance Program Costs
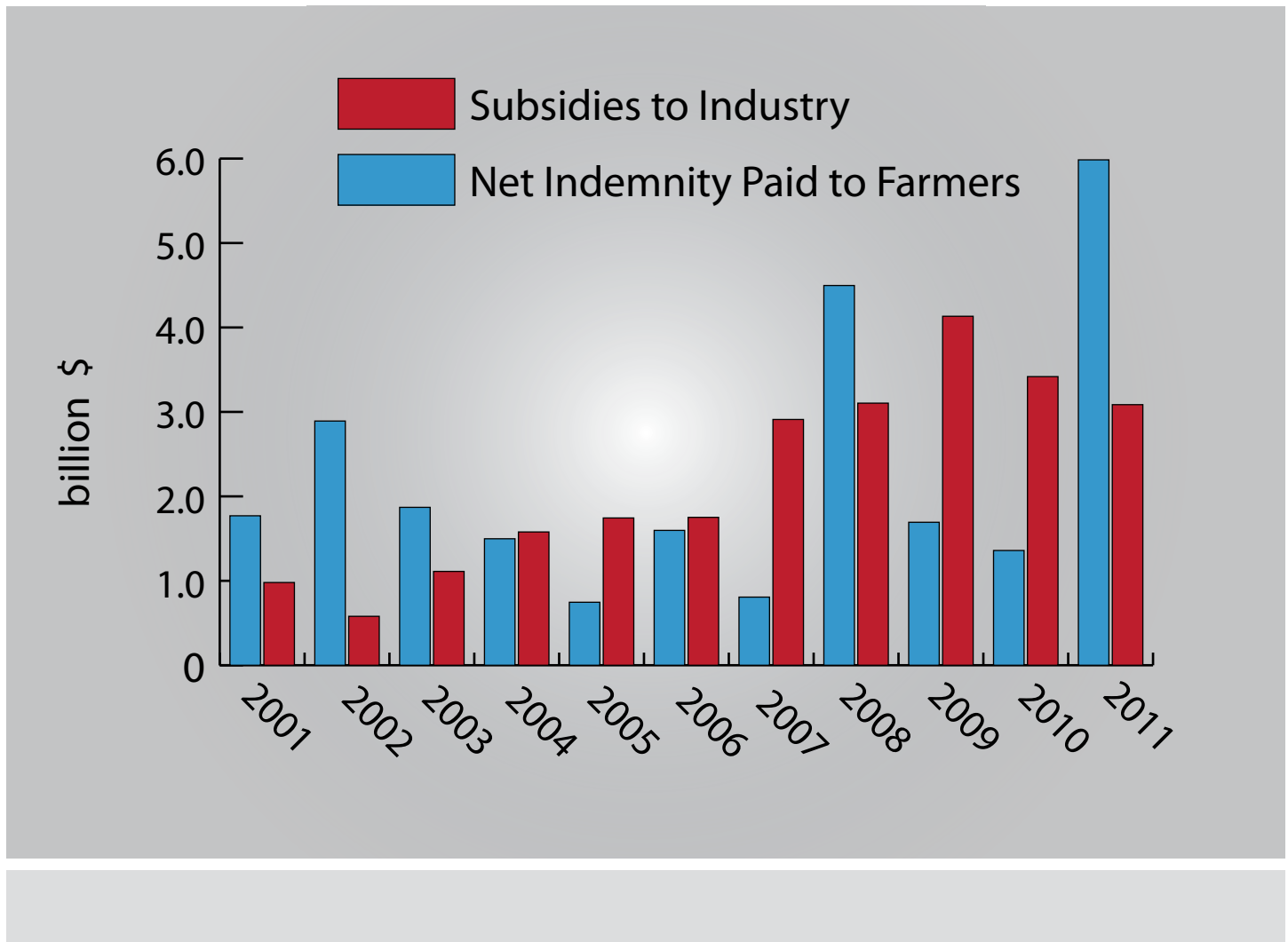
insurance program costs into those that accrue when insurance payouts exceed farmer-paid premiums (net farmer indemnities) and the subsidies paid to the crop insurance industry to deliver the program. In five of the last 11 years, the cost of delivering crop insurance exceeded net farmer indemnities. Over the entire 11 years, net indemnities paid to farmers totaled $24.72 billion. The cost of delivering these indemnities totaled $24.4 billion, meaning that it cost about a dollar to deliver each dollar of net payouts to farmers. Because of these high delivery costs, the proposed alternative system of giving away insurance makes financial sense.

Actual 2011 crop insurance data were used here to estimate the costs of moving to a free yield insurance program as the core of the taxpayer-funded safety net. But since only a small proportion of farmers currently buy yield insurance, large sample selection problems could arise if farmers who bought YP at the 70 percent coverage

level in 2011 have different risk profiles than those who bought RP. Congress calculates the cost of programs using Congressional Budget Office (CBO) baseline budget projections, which are based on 10-year predictions of commodity prices and planted acreage. Calculating the costs of RP using these projections produces very different numbers than the actual costs of RP in 2011 because planted acreage numbers and price levels will be different. The next section uses CBO baseline data to estimate the costs of free crop insurance program in 2013 in order to make those estimates more comparable to competing farm bill proposals.

Costs of Free Crop Insurance Based on CBO Projections

The model used to project costs of free crop insurance is based on current RMA premium rates for yield protection. YP premiums also serve as the foundation for RP premium rates. The model simulates farm yield variability by using the fact that yield can be defined as average yield in that county in a given year, plus a deviation. The National Agricultural Statistics Service (NASS) collects long histories of county yields that provide a measure of county yield variability. The model solves for the extra amount of farm-level variability needed to be consistent with the amount of total yield variability implied by RMA premium rates. This procedure was done for each crop/county combination. The extra amount of variability is calculated for every county that: has adequate amounts of NASS yield history; had reported planted acreage in 2010; and had a crop insurance rate reported by RMA. The amount of planted acreage in 2010 for the counties in the model is greater than 90 percent for included crops – corn, soybeans, cotton, rice and wheat. These crops account for more than 95 percent of planted and insured acreage of the eight crops analyzed in the previous section.

The model simulates price variability using techniques that are similar to those used to calculate premiums for RP. Projected prices for each crop are set equal to CBO's March 2012 baseline projections of average price. Price volatility is set at levels used to set premium rates for RP in 2012. Planted acreage is set using CBO baseline projections (Table 4).

Table 5 shows the model's estimate of what free yield insurance at the 70 percent coverage level would cost if it were provided only to acres that were insured in 2011 (column 2) or provided to every planted acre (column 3). These cost estimates are significantly lower than those shown in Table 2 because the 2013 prices used by CBO are significantly lower than the 2011 prices used to set crop insurance guarantees in 2011. The Table 5 costs are based on the assumption that the free insurance would be given to farmers on an optional unit basis, which means that farmers' fields would be insured field-by-field.[10]

Table 4. Data Used in Model Simulations

	Projected Price	Price Volatility	Millions of Planted Acres
Corn	$4.54/bu	22%	89.09
Cotton	$0.70/lb	19%	11.25
Rice	$0.128/lb	14%	2.97
Soybeans	$10.47/bu	18%	76.42
Wheat	$5.63/bu	19%	54.50

If instead, the free insurance were provided on an enterprise unit basis, in which all of a farmer's fields of the same crop in a given county were pooled together as a single insurance unit, costs would be lower, because a pooled enterprise unit is less costly to insure than individual fields. Calculating the cost reduction for enterprise unit coverage rather than optional unit coverage would require data on the geographical distribution of farms managed by individual operators. Operations that were quite dispersed would be less costly to insure than those that were concentrated in a smaller area. Such data do not likely exist except perhaps in FSA and RMA databases that are not accessible. Instead, RMA's enterprise unit premium discounts are used. Representative discounts are shown in Table 6 for specific locations.[11]

Because large farms are likely to be more dispersed than small farms, and a large proportion of acreage is located on large farms, it is likely that a fairly high percentage of acreage would qualify for an enterprise unit discount. To be conservative, only 50 percent of acreage is assumed to be lower risk than that assumed in the Table 5 cost estimates. The estimated costs of the free YP policy at the enterprise unit are shown in Table 7.

Providing the free YP policy at the enterprise rather than the optional unit level would result in important environmental benefits as well as cost savings. Insuring acreage with optional units allows farmers with environmentally sensitive land that is susceptible to crop losses to transfer yield histories from their more productive land to the higher risk land, thus giving the marginal land a high insurance guarantee that makes the land profitable to cultivate. If farmers were forced to insure this marginal land together with their more productive land, they would base cultivation decisions on the inherent productivity of the land rather than on the ability to collect a crop insurance indemnity.

Table 5. Cost Estimates of Free YP Coverage in 2013 for Optional Units

	Only 2011 Insured Acres	All Planted Acres
	billion $	
Corn	$2,3	$2.7
Cotton	$0.8	$0.8
Rice	$0.06	$0.07
Soybeans	$1.7	$2.0
Wheat	$1.0	$1.2
Total	$5.8	$6.8

Note: Insured acres for each crop/state combination was set equal to the share of 2011 planted acres for each crop that was insured for each state multiplied by 2013 state acres. 2013 state acres for each crop was set equal to 2013 CBO acreage from Table 3 multiplied by the state share of national acreage for each crop in 2011.

CBO projects that the current crop insurance program in its entirety costs about $8.5 billion a year. The cost estimates provided in Tables 5 and 7 are not directly comparable to this $8.5 billion projection, however, because only five crops are accounted for and the costs of administering a free crop insurance program are not included. Table 8 allows a more direct comparison of CBO projections and this study's savings estimates for five major crops. Premium subsidies would be reduced by $4.2 billion, A&O expenses would be reduced by $1.1 billion, and underwriting gains would be reduced by $1.4 billion, for a total savings of $6.685 billion. These results suggest that these five crops account for 79 percent of the CBO projection of the total cost of the crop insurance program. This likely underestimates the savings that would accrue from a free YP program, because these five crops actually accounted for 88 percent ($10.42 billion) of the total premiums collected in 2011. If the cost of USDA implementation is close to the $467 million estimated in the FSA-commissioned study, the total savings

Table 6. Enterprise Premium Discounts for Select Locations

Crop	Location	Premium Discount
Corn	Boone County, Iowa	0.400
Cotton	Lubbock County, Texas	0.194
Rice	Arkansas County, Arkansas	0.154
Soybeans	Champaign County, Illinois	0.371
Wheat	Butler County, Kansas	0.268
Wheat	Cass County, North Dakota	0.207

Source: RMA premium calculator.

Table 7. Cost Estimates of Free Enterprise Unit YP Coverage in 2013

	Only 2011 Insured Acres	All Planted Acres
	billion $	
Corn	$1.8	$2.2
Cotton	$0.7	$0.7
Rice	$0.05	$0.06
Soybeans	$1.4	$1.7
Wheat	$0.9	$1.1
Total	$4.8	$5.6

come to $6.2 billion. If farmers are charged a nominal fee to cover these costs, the total savings come to $6.7 billion a year.

Giving away free insurance and moving program administration to USDA would generate substantial savings unless optional unit coverage was extended to all planted acres. Table 9 summarizes the savings that would be achieved by offering a free, enterprise-unit YP policy to farmers. The 10-year savings would total $5.7 billion if enterprise unit coverage were extended to all planted acres for these crops. The savings would equal $13.8 billion if the free enterprise unit policy only covered acres that were insured in 2011. Charging farmers a nominal fee to cover delivery costs would increase the savings shown in Table 9 to between $10.4 and $18.5 billion, depending on how many acres were covered by the free policy.

Policy Implications

Farmers and Taxpayers are Better Off

The idea that both farmers and taxpayers could be better off under a free crop insurance program rather than providing insurance protection through the current system is not new. Paulson and Babcock (2010) showed that a permanent disaster program based on a county revenue insurance program would cost about the same as was being spent (on a per-insured-acre basis) on Group Risk Income Protection. The idea that commodity programs administered directly by USDA could be based on insurance principles is also not new. The American Farm Bureau Federation proposed a county-based revenue insurance program as a farm bill option in 2011. The Average Crop Revenue Election (ACRE) program established in the 2008 farm bill is a state-level revenue

Table 8. Projected Budget Savings in 2013 from Moving to Free Yield Insurance

	Premium Subsidies	A&O	Underwriting Gains	Total
	billion $			
Corn	$1.8	$0.5	$0.6	$3.0
Cotton	$0.4	$0.09	$0.1	$0.6
Rice	$0.03	$0.006	$0.008	$0.04
Soybeans	$1.2	$0.3	$0.4	$2.0
Wheat	$0.7	$0.2	$0.2	$1.0
Total	$4.2	$1.1	$1.4	$6.7
Total with cap on A&O				$6.7
Total with USDA paying administrative costs				$6.2
Total with farmer paying administrative costs				$6.7

insurance program. Currently, cotton producers are proposing a county-based revenue insurance program called STAX for the 2012 farm bill. The National Milk Producers Federation is proposing a milk margin insurance program that would be administered through FSA. And, finally, the Supplemental Revenue Assistance Payments Program (SURE) was included in the 2008 farm bill as a permanent disaster assistance program based on whole-farm insurance principles.

Table 9. Net Budget Savings from Free Crop Insurance Program

	Farmers Pay No Fee	Farmers Pay a Nominal Fee
	billion $	
Annual Net Savings		
Only Currently Insured Acres	$1.4	$1.8
All Planted Acres	$0.6	$1.0
10 year Savings		
Only Currently Insured Acres	$13.8	$18.5
All Planted Acres	$5.7	$10.4

Note: 10 years savings approximated by multiplying the annual savings for 2013 by 10.

What SURE, ACRE, STAX and the proposals of the American Farm Bureau Federation and the milk producers all have in common is that they leave the current crop insurance program in place. The problem with this approach is that it becomes difficult to find the savings needed to meet deficit reduction targets or to pass any new safety net program. In addition, it would be a mistake to conclude that the lack of proposals to replace the current system with a new approach shows that the industry is efficiently delivering a farm safety net. After all, a system that costs a dollar to deliver a dollar of benefits is hardly efficient. The reality is that it is the lobbying power of the crop insurance industry that stands in the way of reform proposals. If the insurance were simply given away as part of farm bill reform, the crop insurance industry would have to reinvent itself, cutting costs and becoming more creative to survive in an unsubsidized world. No industry that is currently making so much money will willingly accept such change, and it will lobby with all its might to prevent this from happening.

The fact remains that a simple proposal to give farmers a 70 percent YP policy as the taxpayer-funded portion of the safety net would accomplish a number of policy objectives:

- It would provide a permanent farm-level disaster program that would cover 100 percent of planted acreage and 100 percent of yield losses in excess of 30 percent. This is better protection than many farmers now have.
- It would not significantly distort planting decisions because of the 30 percent deductible and the lack of a price trigger.
- It would eliminate the need for an elaborate premium rating structure and short-circuit arguments about whether crop insurance rates are too high or too low, because there would be no premiums to pay.
- Enterprise unit coverage would lower the incentive to farm high-risk, environmentally sensitive land because such land would have to be pooled with more productive farmland.
- It would contribute towards deficit reduction.

Private Sector Options to Enhance Risk Management

Some will undoubtedly argue that 70 percent yield insurance provides an inadequate safety net for farmers. As evidence, they will point to the popularity of RP and higher levels of coverage that many farmers currently purchase. Farm groups have also criticized proposals for reforming crop insurance subsidies by arguing that they

would not be able to afford high levels of coverage without taxpayer help.

However, the current popularity of RP and high coverage levels is not credible evidence that farmers need more risk protection, because farmers are buying much of this additional coverage with taxpayer dollars, not their own. It is fundamental tenet in economics that people have an insatiable appetite for products they can buy with someone else's money. When the subsidies are eliminated, what once was considered a necessity no longer seems so important, and demand shrinks substantially. Many farmers would find that they could get by on much less insurance if they knew that they had to pay the full price themselves. There is no credible evidence in the academic literature that high levels of coverage are necessary for individual farmers and the agricultural sector as a whole to thrive. What the research does show is that the demand for high insurance coverage is more about the pursuit of subsidies than protection against risk.[12]

Why should it be taxpayers' responsibility to subsidize generous insurance coverage? Farmers who truly value more than 70 percent yield coverage should turn to the private sector and pay with their own money. Providing subsidies for high coverage implies that Congress knows better than farmers how much risk protection they really need. Under the proposed free insurance proposal, private companies would be free to offer "add-on" policies that provide higher coverage or effective revenue protection, and growers would be free to decide if they were worth the cost.

Revenue protection policies are especially popular because they increase the amount of guaranteed revenue if the price at harvest is higher than the projected price at the time farmers signed up for the insurance before planting. This increased protection increases farmers' insurance payouts if a farmer has a yield loss. This additional protection is similar to a call option on a futures contract. Call options give a farmer the right to buy a futures contract. If a farmer buys a call option in the springtime and prices later rise, then the holder of the call option has the right to buy futures contract at the lower springtime price. Thus call options protect a farmer who does not have enough crop to meet the obligations of the futures contract. Without the call option, the farmer would have to buy additional bushels at the high harvest price to fulfill the futures contract. Call options seem expensive to many farmers, but it is not a stretch to imagine the development of a private add-on product that pays off on the call option only there is a yield loss. This would lower the cost of the option significantly.

Farmers who buy RP policies also enjoy protection against price drops. But a farmer is already protected against price drops once he or she enters into a forward or futures contract. After all, only farmers who forward-contract

their crop obtain risk management benefits (as opposed to profit increases) from the extra risk protection offered by RP. Farmers who do not forward-contract can protect against price drops by buying put options. A put option gives the holder the right to sell a futures contract. If the harvest price drops and farmer bought a put option in the springtime, he can sell at the higher springtime price, thus protecting against the price drop.

Some of these private-sector alternatives exist now, and many more would presumably be developed if the private sector did not have to compete against heavily subsidized crop insurance products. But as with all private-sector transactions, the buyer would have to pay the full cost of the product. To estimate the likely cost of add-on policies, Table 10 shows what a farmer would pay for 75, 80, and 85 percent coverage of RP and YP on top of the free 70 percent YP coverage, including a 25 percent markup to cover administrative costs and profit. Springtime prices levels are based on the 2013 CBO levels. For comparison, the projected 2013 cost of buying each level of coverage under the current system of premium subsidies is also shown.

The rows labeled "Private Add-on" show the private-sector costs for additional coverage for each crop. This is the incremental cost of providing the indicated type of coverage (RP or YP) at that coverage level. In the Iowa corn example, yield coverage at 10 percentage points above the free 70 percent YP policy (equivalent to about 16 bushels of extra coverage) would cost $20 per acre. RP-type coverage at this 80 percent coverage level would cost $41 per acre after credit for the 70 percent YP coverage. The rows labeled "Current" show the estimated 2013 costs of each coverage option under the current premium subsidy structure. The Iowa corn farmer would pay $26 per acre (at 2013 price levels) for 80 percent RP coverage. This is $15 per acre less than the private sector $41 per acre add-on cost for similar protection.

Table 10 shows that for the lower-risk crops – corn, soybeans and rice – buying RP-type coverage on top of a 70 percent YP policy would be more expensive than what they currently pay. In contrast, the cost of RP-type coverage for wheat and cotton would be much lower. The difference reflects the value of 70 percent yield protection. In low-risk counties, the value of a 70 percent YP policy is much lower than in high-risk counties. This lower value translates into a lower credit that is used to offset the cost of additional protection.

Table 10. Cost of Alternative Amounts of Risk Protection[a]

	Yield Protection			Revenue Protection				
	75%	80%	85%	65	70%	75%	80%	85%
	$ per acre							
Iowa Corn								
Private Add-on	9	20	35	2	12	25	41	62
Current	10	15	24	8	11	17	26	42
Texas Cotton								
Private Add-on	13	28	43	0	15	30	47	65
Current	45	54	69	40	45	55	71	93
Illinois Soybeans								
Private Add-on	6	13	22	1	7	15	26	39
Current	6	9	15	4	6	10	16	26
North Dakota Wheat								
Private Add-on	5	10	16	1	6	12	19	27
Current	8	10	14	6	8	11	16	22
Kansas Wheat								
Private Add-on	14	18	23	11	15	19	24	29
Current	11	13	17	10	11	14	18	24
Arkansas Rice								
Private Add-on	9	20	36	-1	9	21	37	58
Current	9	14	23	6	9	14	23	38

[a]Private add-on costs are calculated by simulating the total cost of the coverage, subtracting the value of the free 70 percent yield insurance and then marking up the result by 25 percent. Current costs equal the simulated total cost of the product minus the current amount of premium subsidy available.

Conclusions

The likelihood of wholesale reform of the crop insurance program during the 2012 farm bill reauthorization along the lines suggested in this study may seem remote. Big changes do not come suddenly to agricultural programs. A significant amount of money has been invested in crop insurance companies in anticipation of continued public subsidies, and crop insurance agents, whose income has risen sharply in the last five years, now have substantially greater political and lobbying power. But eventually the absurdity of the current system, which subsidizes farmers to buy much more insurance than they would if they paid for it with their own money, and which costs a dollar to deliver each dollar of benefits, will eventually result in change, particularly in the face

of mounting demands for deficit reduction.

The need to find funds to pay for new commodity programs and the other farm bill titles is one reason to hope that crop insurance reform may be at hand. Although proposals for new revenue insurance programs in the 2012 farm bill would add to current crop insurance programs, not replace them, they could certainly be revised to provide a direct substitute. For example, the STAX program for cotton could be altered to provide 0 to 90 percent county-level revenue insurance coverage. Eliminating current premium subsidies for cotton insurance policies could cover the cost. Sen. Kent Conrad's new shallow-loss revenue insurance proposal could be altered to provide yield coverage from 0-to-70 percent, rather than revenue coverage from 75-to-88 percent. As demonstrated here, its cost could also covered by eliminating crop insurance premium subsidies.

It makes no fiscal or economic sense for Congress to be considering new insurance-type commodity programs to place on top of the current, extremely costly crop insurance program. If Congress truly wants to put a strong farm safety net in place and make prudent fiscal choices, it should scrap the current system of premium subsidies, deliver a basic level of risk protection directly through USDA and let the private sector do what the private sector does best: deliver products that generate enough value to induce customers to buy them.

REFERENCES

Babcock, B.A. "The Politics and Economics of the U.S. Crop Insurance Program." Pages 83-112 in Zivin, J., and J.M. Perloff, The Intended and Unintended Consequences of U.S. Agricultural and Biotechnology Policy. and Political. National Bureau of Economics Research, University of Chicago Press. 2012.

Goodwin, B.K.. "An Empirical Analysis of the Demand for Multiple Peril Crop Insurance. American Journal of Agricultural Economics 75(1993), 423-434.

Just, R.E., Calvin, L. and Quiggin, J. "Adverse Selection in Crop Insurance: Actuarial and Asymmetric Information Incentives." American Journal of Agricultural Economics 81(1999):834-49.

Paulson, N.D. and Babcock, B.A. 2008. "Get a GRIP: Should Area Revenue Coverage Be Offered Through the Farm Bill or as a Crop Insurance Program?" Journal of Agricultural and Resource Economics, 33(2): 137-153.

FOOTNOTES

1.   A recent proposal by Sen. Kent Conrad (D-N.D.), called Revenue Loss Assistance Program (RLAP), would do both: protecting against a multiple-year decline in prices and covering a portion of the crop insurance deductible.

2. One reason for this change in law was that many farmers only bought a 35 percent deductible policy (which is the same thing as buying 65 percent coverage). Many in Congress and perhaps the crop insurance companies wanted farmers to buy higher coverage levels (lower deductible policies). In their 2006 paper, Babcock, Hayes, and Hart showed that the reason many farmers chose 65 percent coverage is that it maximized their premium subsidies and that USDA charged most farmers much more than a dollar for a dollar's worth of insurance for higher coverage. Babcock (2012) showed that the change in premium subsidy structure helped compensate for this over-charging, leading many more farmers to buy higher coverage. The irony is that Congress has not rescinded the new premium subsidy structure even though USDA changed the way it calculates premium rates in the mid-2000s, so that now premiums at higher coverage levels more accurately reflect the cost of the higher coverage.

3. The reason for this feature of RP is that it protects farmers who forward contract a portion of their crop. The risk of a forward contract is that the farmer does not produce enough to deliver against the contract. If harvest prices are higher than the forward price, the farmer must "buy" more expensive bushels of production to make up the shortfall. There is no requirement that a farmer must enter into a forward contract for farmers to obtain this extra coverage.

4. The free insurance proposal considered here is one form of a fixed voucher program that gives a set amount of funds to each farmer for risk management purposes and allows farmers to spend more to buy additional coverage using their own money. Senator Richard Lugar first proposed such a voucher system for crop insurance more than 10 years ago. Before 1999, premium subsidies were capped by the amount of subsidies that a farmer could receive for a 65 percent yield insurance policy. This policy was effectively a voucher program because higher levels of insurance could be purchased but the incremental costs were paid

for by farmers.

5. Precedent for USDA paying out insurance-like claims directly are the payments that have been made under farm bill programs such as ACRE and SURE, which are paid out under the authority of the Commodity Credit Corporation.

6. See Table 1 in http://www.rma.usda.gov/news/2010/06/610faqs.pdf

7. Not accounted for in this total is the cost of the USDA Risk Management Agency and the Federal Crop Insurance Corp.

8. Because this free yield insurance would be entitlement to all farmers, there would be no need to pay an insurance agent to "sell" the product. Farmers would just sign up for the insurance at their FSA office when they submit their planted acreage report after planting. Thus there would be no need to pay agent commissions on this base policy.

9. The farmer value of the free insurance policy is set equal to the average unsubsidized premium for 70 percent YP for each crop and state. Actual outlays from any crop insurance program can vary dramatically from year to year. Here the premium represents the average outlay across many years is taken as the farmer value. This is consistent with the way that the Congressional Budget Office calculates future program costs.

10. In contrast, the Table 2 data reflect the actual unit structure that farmers selected in 2011.

11.   Ideally, RMA's enterprise unit discounts for each crop/county combination would be used to calculate national costs but these discounts were not readily available.

12. Just, Quiggin and Calvin (1993) and Goodwin (1997) demonstrate that those farmers who bought high coverage levels were likely to be underrated at the higher coverage levels. Babcock (2012) showed that the value of risk protection motivates a relatively low proportion of farmers to buy high levels of insurance.

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