

## Multiple Peril Crop Insurance

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Consider a deal where, for about 200,000 farmers, every dollar they can pay to the government in crop insurance premiums will give them an expected return of \$1.90 as J.W. Glauber reported was the case for 1990 to 2011. Imagine that it costs the taxpayers at least \$1.10 to get farmers paid that expected a 90-cent profit (Glauber, 2013). Imagine that this deal has just been sweetened further with a new set of giveaways in the legislation that is widely called the 2014 Farm Bill, at the end of a half-decade called the “great recession” when farm families’ wealth has soared to over eight times that of the average American family (Bricker et al., 2012; and U.S. Department of Agriculture (USDA), 2014). In an ingenious and successful political marketing campaign, farmers continue to promote public support for this deal as crop “insurance.”

Americans generally seem to follow admirably practical strategies with respect to innovations in goods and services. They believe that the best test of a consumer’s valuation of a product is what the consumer is willing to pay for it. They believe in putting a novel good or service to the market test; if, as is usually the case for an innovation, it does not sell at a price that pays what it costs to produce it, take it off the market and try something else. They favor private sector provision of goods and services where it is more efficient than public provision—as is typically true—but support public provision when it is clearly superior, as in Medicare.

But American politicians behave very differently when considering federal crop insurance programs.

In 2013, a year of fiscal stringency, right after the end of the government shutdown forced by opposition to raising the debt ceiling, federal politicians decided to focus on the

Farm Bill. Focus they did, but not on cutting expenditures on bad programs. They made overall “risk protection” even more attractive to farmers, and much more expensive for taxpayers. Indeed they made it the centerpiece of transfers to farmers, eliminating a program of direct payments more or less “decoupled” from farmers’ production decisions that was vastly more efficient per dollar of transfer.

The government is thus expanding an insurance program that would not be sustainable on a free market owing to its inherently high cost of administration and reinsurance. In 2011, the program cost \$11 billion, compared to less than \$5 billion in direct payment, introduced in 1996 as the main program for transfers to farmers (Glauber, 2013, pp. 482, 486). Not even farm lobbyists try to defend the inefficient wealth transfers to farmers under the crop insurance program, the bulk of which go to unusually wealthy families. Nor do they dwell on the fact that a large portion of the transfers goes to insurers and their agents. As Smith (2011) has noted, between 2005 and 2009, for every dollar transferred to farmers, private insurance companies received \$1.44 in administrative and operating subsidies and underwriting gains.

### The Costs of Federal Crop Insurance Subsidies

An abundance of experience over three quarters of a century make one thing very clear:

Few farmers will buy insurance of their crop yields against multiple perils at the expected full cost to the insurer; in fact no purely private multiple peril insurance program has ever been sustained by the voluntary participation of farmers. A fundamental problem is that the cost of administration,

adjustment and reinsurance is just too high, between thirty and forty percent of indemnities. Costs tend to be at least 25% of expected indemnities even when payouts are tied to a weather index, thereby eliminating costly “adjustment” of claims (Smith and Watts, 2009, pp. 28-29).

In considering development of insurance markets, economists often focus on another problem that they call “adverse selection.” Early adopters tend to be those who have private knowledge that they have unusually large expected losses per dollar of premium. Premiums to cover expected payouts will be too high to attract less risky farmers. A subsidy can solve this problem by attracting a large portion of the population of potential customers, thus reducing the average risk of loss and improving overall performance.

This strategy has been tried in a large number of crop insurance programs worldwide. As many painstaking empirical studies have verified, uptake of crop yield or revenue “insurance” unsurprisingly expands nicely once the cost of an expected dollar of indemnities falls far enough below one dollar. Between 1999 and 2005 the average U.S. subsidy per acre was \$7.76, not including administrative costs. By 2011, over 70% of enrolled acres were ensured for at least 70% of a measure of expected revenue or yield. (In 1988, only 9% had such high coverage.) With this level of participation adverse selection is unlikely to be a major issue. Nevertheless, the federal government is still subsidizing about 60% of the expected indemnities, accounted for as part of total premiums, as well as carrying the large burden of the costs of administration, adjustment and reinsurance.

How have we reached this point, where the United States is expanding a program where a dollar of the farmer’s premium pays out on average around double the investment, and costs taxpayers substantially more?

## The Road to Higher Insurance Subsidies

The history of federal crop insurance is a lesson in the path-dependence of a program that, for the four decades after 1938, was for the most part managed as a fiscally responsible pilot program that demonstrated the need for nothing more. However, beginning in 1980, it began its persistent expansion to what is now a hugely wasteful, inequitable, and environmentally damaging program with no apparent accountability to fulfill its stated goals or to manage taxpayers’ money responsibly.

The adequacy of private crop insurance was discussed in the U.S. Senate as far back as 1923, and the droughts of 1934 and 1936 understandably revived interest in the issue during the Presidential election campaign of 1936. In fulfillment of an election pledge, the Roosevelt administration established multiple peril (“all risk”) crop insurance as part of the Agricultural Adjustment Act of 1938. The Federal Crop Insurance Corporation (FCIC) first offered yield insurance to corn and wheat farmers, marketing the policies using USDA personnel and also making use of independent insurance agents (Chite, 1988). The program was a modest initiative offered in only a limited number of counties.

The premium paid by the farmer was designed to be “actuarially fair,” meaning the premiums covered the expected cost of indemnities. This did not mean that the original program was designed to be self-financing. Multiple peril crop insurance is a very costly means of risk protection. Typically, for each dollar of expected indemnities, around 40 cents extra is needed to cover the substantial cost of reinsurance, marketing, and loss adjustment for this type of insurance. Understandably, there were no prior examples of successful multiple peril private insurance to serve as models for this public program. To encourage

participation, taxpayers financed this administrative cost burden.

In fact, the taxpayers paid a good deal more than was expected when the plan was established. In that era (unlike today), the loss ratio reported by FCIC actually indicated whether farmers were covering the dollar value of the indemnities they received. No crop had a loss ratio of less than unity in any year until 1945; indeed, the program was cancelled for more than a year in 1943. After the number of counties covered was reduced in 1948, loss ratios improved even as farmers received indemnities during the drought years of 1951 and 1952. Expansion in the 1960s increased loss ratios again. The program remained of modest size with low uptake. By 1980, only 9.6 % of eligible acres were insured and the deductible was high. Despite the subsidy covering operating costs, the product was not as interesting to good farmers as it was to many economists involved in evaluating agricultural policy.

Early economic analyses of crop insurance programs often over-estimated the value of multiple peril crop insurance because they focused on annual income from one crop, rather than on farmers’ annual consumption, which is much less variable (Langemeier and Patrick), or on total wealth. They generally used what we now know to be impossibly high estimates of farmers’ risk aversion (Rabin and Thaler, 2001). In their analyses, early economists often neglected to consider the alternate means of risk protection or risk mitigation as well as the true costs of operating an insurance program.

In the late 1970s, a third argument for subsidized crop insurance emerged. Substantial government disaster relief payments, averaging \$436 million per year (Chite, 1988) were seen by farmers as substitutes that reduced their already tepid demand for crop insurance. Allegations that “prevented planting” payments

encouraged expansion into environmentally fragile areas quickly made the disaster programs politically controversial. There was a consensus that something had to be done to contain the cost—both fiscal and environmental—of the disaster payouts.

Disaster payments are much more difficult to budget and less efficiently targeted than insurance indemnities. Congress argued that it could not credibly commit to refuse to make disaster payments to farmers after their production had been affected by adverse weather or other negative, exogenous events. Even though farmers' response to the pilot program since 1938 could not justify crop insurance on its own merits, it could be justified if the only politically feasible alternative were a more costly disaster program. Congress could refuse to make disaster payments, if farmers knew that the crop insurance program would protect them. Accordingly, the 1980 Crop Insurance Act expanded the geographic coverage of crop insurance and increased the number of crops covered. It subsidized premiums at 30% for up to 65% coverage of losses.

Congress also urged that marketing and loss adjustments be handled by private-sector firms, a policy that could seem attractive in a time of renewed appreciation of private initiatives and competition. But there was no auctioning of the award of the contracts for these services, and companies were forbidden from refusing to service some customers or competing on price.

This plan saw acres covered increase to 24.5% by 1988, less than half the goal of the 1980 Act. Bills for disaster aid to farmers passed in 1983, 1986, and 1987, before a major drought hit in 1988. Combined costs of the expanded insurance program and the disaster assistance it was supposed to eliminate averaged \$1.1 billion from 1981-88. The 1980 Act clearly had not met its stated coverage

and cost objectives. The Bush Administration sensibly proposed eliminating crop insurance in favor of a standing disaster assistance program (USDA, 1990).

Despite such clear evidence of the failure of crop insurance to prevent disaster payments, Congress rejected the Administration's proposal. Instead, in the Crop Insurance Reform Act of 1994, it made a minimal level of insurance compulsory for farm program participation in the form of Catastrophic Risk Protection (CAT) which covered half of a producer's approved yield at 60% of the expected market price. The subtle difference from a standing disaster relief program was that producers had the burden of a \$50 sign-up fee per county—the government covered all other costs. A program designed to eliminate costly disaster relief had instead institutionalized such relief.

After the completion of the Uruguay Round of trade negotiations, farm support began to shift to "decoupled" direct payments and to insurance, away from distortionary price supports, which were banned under World Trade Organization (WTO) rules. Insurance coverage more than doubled in 1995, but more than half was CAT coverage. Apparently the \$50 fee for otherwise free coverage was an intolerable burden; the requirement for CAT cover was eliminated in 1996. Subsequently, successive increases in subsidies for higher coverage levels greatly increased uptake.

Even with high insurance participation, disaster payments averaged close to \$1 billion per year between 2001 and 2009; the expansion of crop insurance that began in 1980 totally failed to fulfill its original stated goal of enabling the U.S. Congress to eliminate disaster payments. In the same period, total revenue of primary insurance companies increased 393%, from \$1 billion to nearly \$4 billion (Smith, Glauber,

and Dismukes, 2012, especially p.8), solidifying the establishment of a new rent-seeking lobby supporting crop insurance—the independent insurance agents who gained from insurance companies competing with one another for the above-market rents available from the program.

Furthermore, if the goal of privatization of delivery was truly cost efficiency, then privatization was also a total failure. Mahul and Stutley (2010) rank delivery of U.S. crop insurance as the most expensive per dollar of premium in the world, far less cost-efficient than public Canadian crop insurance delivery. Privatized delivery continues nonetheless, with questionably effective controls on payments to agents.

### **The Current State of the U.S. Federal Crop Insurance Program**

The 2014 Farm Bill eliminates direct payments. These were favored by economists when introduced in the 1996 Farm Bill as less wasteful and more transparent means of transferring income to farmers during a transition to an unsubsidized marketplace. In their place is an expanded crop insurance program, supplemented by "shallow loss" government payments. This major shift to crop insurance as the principal means of agricultural support has nothing to do with efficiency or risk aversion. It exists because it has not been prohibited under WTO rules, and because the expected extent of insurance-mediated transfers to wealthy farmers is much less transparent than are direct payments. Conditionality of insurance on price levels means huge exposure of the insurance budget to reversion of prices even half way back to previous real levels, but such exposure is not evident in initial reports of program costs.

The labels of the parameters of the program are chosen to hide the real costs and the extent of transfers. The loss ratio, the ratio of indemnities

to premiums, is an index of actuarial soundness ordinarily indicating what percentage of payments by the insured is paid back as indemnities. After a redefinition of “premiums” to be the sum of farmer payments and large federal subsidies, the loss ratio for crop insurance is not informative about and, indeed, continually misrepresents, the share of actuarial exposure borne by the insurance program. By excluding administrative costs such as marketing and loss adjustment, it further understates the extent of public expenditure on the program.

For those interested in the sustainability of U.S. agriculture and the environment, the crop insurance and disaster programs are themselves disastrous. The program reduces the incentive for farmers to manage farm risks and environmental problems, and reduces their motivation to adapt to a changing environment. Such adaptation will be all the more crucial for effectively competing on the world market as climate change progresses across the global agricultural sector.

Nevertheless U.S. farmers, and especially farm landowners, support the program because it increases their wealth, which far exceeds the average wealth of nonfarm families and continues to rise. The fact that each dollar they gain costs taxpayers \$1.44 (Smith, 2011; and Babcock and Hart, 2006) is not their problem. Crop insurance may be very inefficient, but it has the advantage of obfuscation; the average citizen has little notion of the wastefulness and inequity of this entitlement program.

Two more decades of well-funded global experimentation using advanced empirical methods have only generalized conclusions that were obvious two decades ago (Wright and Hewitt, 1994; and Just, Calvin, and Quiggin, 1999). Two recent reviews (Miranda and Farrin, 2012; and Smith and Glauber, 2012) make

it clear that farmers globally are not sufficiently interested in purchasing multiple peril crop insurance to support a market when rates are high enough to cover their own expected indemnities plus the cost of administration and reinsurance. And Patrick’s empirical conclusion in 1988 that indemnification using area yield or rainfall indices did not make insurance of very risky Australian wheat crops commercially viable has now been generalized to many other countries and environments.

The economic case against subsidized multiple peril crop insurance, both theoretical and empirical, is stronger than ever. And the record shows consistent failure of successive federal crop insurance programs to fulfill their stated objectives. Yet the latest Farm Bill has not only expanded this wasteful and inequitable program, but also made it the centerpiece of federal support for farmers.

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