

Mutually Insured Destruction

How Unchecked Crop Insurance Subsidies Harm the Environment



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Defenders of Wildlife is a national, nonprofit membership organization dedicated to the protection of all native wild animals and plants in their natural communities.

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COVER: A farmer plows up a Montana prairie. Generous insurance subsidies encourage farmers to destroy grasslands and other important wildlife habitats.
PHOTOS: Grasslands, ©THINAIR28/ISTOCKPHOTO.COM; tractor plowing courtesy of Natural Resources Conservation Service.

INTRODUCTION

Low-risk Farming at the Expense of Taxpayers and the Environment

A large part of managing a farm is about managing risks—the risk that the global free market for farm commodities will prove profitable for your product and the risk that weather and other factors beyond your control could prevent you from having a product in the first place. In bad years, some farmers suffer serious financial setbacks because of these risks. Others survive and actually come out ahead due to price increases. Indeed, despite months-long droughts nearly nationwide in 2013, the U.S. Department of Agriculture (USDA) estimates farm income at its highest level in decades—more than \$130 billion in sales.¹

A long history of government assistance

For almost 80 years, the U.S. government has provided assistance to get farmers through tough times and to help them manage risk. Traditionally, government programs focused on lessening the risk of falling prices. Farmers relied on programs that guaranteed a certain price for crops, purchased surpluses, controlled supply or provided emergency relief for disasters. Some of these programs have run afoul of the World Trade Organization for distorting prices in global markets. Nevertheless, in the last decade, subsidized crop insurance programs have become the tool of choice for the U.S. Congress to assist farmers.

The U.S. Department of Agriculture (USDA) offers dozens of insurance programs covering more than 100 crops and more than 270 million acres of American farmland. Unlike the insurance you purchase to protect your house or car, the insurance offered to farmers through these programs is subsidized by the government. The USDA and the insurance companies it subsidizes support policies that help ensure that a farmer's income at crop harvest will meet or even exceed expectations at the time the crop was planted, reduce the risk of forward-contracting their crops, guarantee revenue from year to year, cover losses when a whole region loses a portion of one or more crops, and provide catastrophic coverage focused on helping farmers deal with the worst kind of weather disasters.

The costs to taxpayers for these programs grew from \$200 million in 1989 to more than \$11 billion in 2011.² In 2012, costs skyrocketed to \$17.3 billion—an amount equivalent to the entire budget for the U.S. Fish and Wildlife Service for the last decade.³

U.S. taxpayers currently pay more than 60 percent of the costs for farmers to buy insurance. Taxpayers also cover part of the costs for insurance companies to market and sell insurance policies, and the government guarantees that the companies themselves will make a profit.⁴

While insurance is necessary for helping to lower risks in ways that ensure farmers can absorb a financial loss and continue to produce food and fiber into the future, risk itself actually has some value for its role in helping farmers make decisions and choose practices that will reduce the likelihood of loss. The need to reduce risk drives smart decisions—and the removal of risk can drive poor ones.

All Americans need the food our farms provide, so it is important for farmers to have an effective safety net. But it is also important to maintain a link between environmental risks and financial ones, because the possibility of losing money motivates farmers to take land-management actions that lower that risk. These actions include leaving farmland fallow for one or more years, switching to crops better suited to local climate and soils, keeping marginal areas out of production, and adopting more sustainable farming techniques. In many cases, actions that reduce producers' exposure to financial risk have attendant environmental benefits such as reduced water use, lower rates of soil erosion and the maintenance of intact wildlife habitat.

Environmental concerns about crop insurance

A major concern about today's federal crop insurance program is that taxpayer subsidies for insurance companies and farmers are so generous they counter many of the negative consequences of high-risk farming. This has a big impact on the environment because many parts of our country are places where a planted crop has a high likelihood of dying before harvest. For whatever reason—soils, water levels, frequency of extreme weather events or susceptibility to climate cycles of drought and flood—these are bad places to try to grow row crops. Yet highly subsidized insurance may actually encourage more farming activity in these areas, in turn causing environmental damage and increasing taxpayer costs. The impacts include increased erosion and the loss of wetlands to new crop plantings.

Prior to 2000, farmers bought and paid for most of their own insurance policies—the federal government only

provided approximately 30 percent of the cost of crop insurance. Today, federal taxpayers pick up more than 60 percent of farmers' insurance costs.⁵

Crop insurance is subsidized by taxpayers at multiple points in its delivery. In addition to paying an average of 62 percent of the cost of policies, the government also pays insurance companies to administer them (see page 3, "How Crop Insurance Works"). These and other insurance subsidies cost taxpayers \$17 billion in 2012.⁶

With less exposure to financial risk, producers have less incentive to avoid risky—and environmentally damaging—actions. Some subsidized insurance policies entitle farmers to an insurance payment even if they themselves have not lost any crops but neighboring farms in their county have.

It is unclear what the "right" level of subsidy is to provide a safety net to farmers, but many experts conclude that the current level encourages many unsustainable farming practices and the destruction of natural habitats and benefits from lands that are poor places to grow crops.⁷

By removing the risk of bad planting decisions leading to financial loss, crop insurance can specifically affect behavior. There is no disincentive for a farmer not to plant a water-intensive crop in a dry area or any crop in a flood-prone area, for example.

Lowering subsidy levels is one way to prevent poor decisions and rampant environmental destruction under crop insurance. Pricing risk more fairly by having farmers pay more of their own insurance bills would discourage high-risk farming. Other options include simply putting limits or prohibitions on the type of farming eligible for subsidized crop insurance or reducing the taxpayer subsidy for farming in environmentally sensitive areas.

In 1985, for example, Congress mandated a restriction on insurance subsidies to limit farming on very fragile, erodible soils and to protect wetlands from being drained. Simultaneously, these kinds of limits became standard practice for all other big farm subsidy programs and are still present in the Farm Bills passed by the Senate and House of Representatives in 2013.

An absence of limits

For more than 30 years, planting limitations aimed at protecting fragile resources have been a condition for producer participation in the major subsidy programs. Since 1985, farmers

have been required to adopt modest environmental safeguards to get direct payments and other traditional subsidy funding. To receive subsidies under these programs, farmers have to take action to protect wetlands. If their land contains highly erosive soils—a criterion more than 140 million acres of croplands meets—farmers have to implement a plan to prevent erosion.

That could mean not farming erodible acres or farming them in different ways. Growing orchard trees on erosive soils and planting a permanent grass or groundcover beneath the trees, for example, might be preferable to row cropping on such soils and, unlike annual plowing for corn or wheat, is likely to protect soil and nearby streams and rivers. The USDA has attributed one-fourth of its success in reducing soil erosion to such limits, saving 295 million tons of soil every year. According to the American Farmland Trust, this is "enough soil to cover the entire area of the National Mall, from the Lincoln Memorial to the Capitol Building, with 1,100 feet of soil every year."⁸

These environmental limits apply to all major farm subsidy programs—except crop insurance. Congress removed the limits from the crop insurance programs in 1996, and only the Senate has proposed putting them back in the 2014 Farm Bill. With crop insurance becoming an increasingly important tool in commodity support, the omission is being felt more keenly.

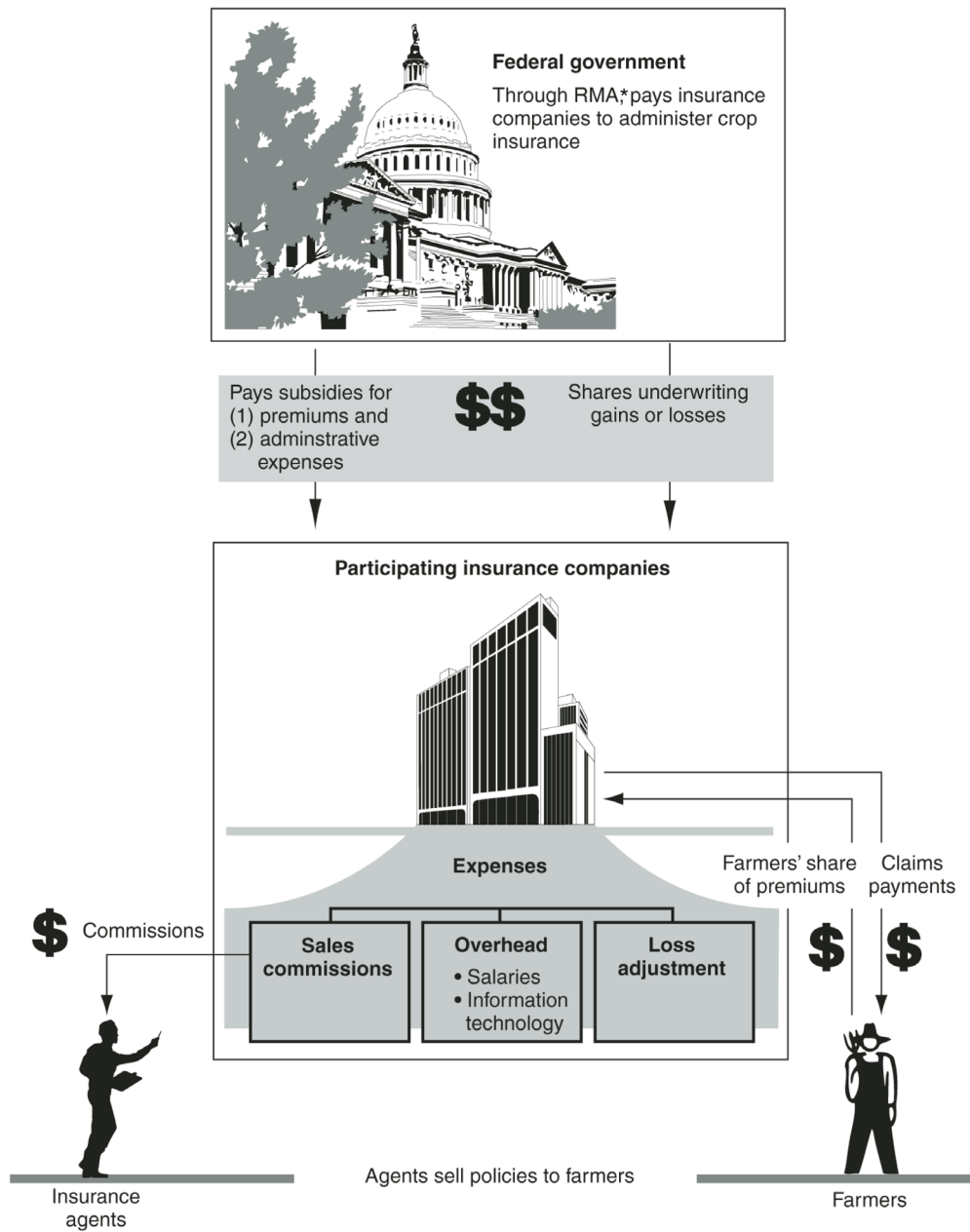
The absence of limits on insurance and the existing level of insurance subsidy are directly affecting the environment. For example, one study found that between 2008 and 2012, almost 2 million acres of wetlands and more than 5 million acres of highly erodible land—an area about the size of Massachusetts—were plowed to grow crops.

Even without the changes proposed by Congress under a new Farm Bill, insurance subsidies encourage behavior that affects the environment:

- With crop insurance already the major source of federal support, even farmers who may still be eligible to receive a direct payment check are opting out so that they can plow marginal soils and wetlands.⁹
- Attracted by high crop prices, farmers are working areas that produce poor crop yields but still produce enough to turn a profit.
- Farmers are planting crops that have the most insurance coverage and taking every possible action to maximize yield, regardless of environmental risks.¹⁰

How Crop Insurance Works

Financial Relationships Among the Federal Government, Private Insurance Companies, Agents and Farmers



*Risk Management Agency, the division of USDA responsible for its insurance program and general risk management

SOURCE: U.S. Government Accountability Office, Savings Would Result from Program Changes and Greater Use of Data Mining, Report to the Ranking Member, Permanent Subcommittee on Investigations, Committee on Homeland Security and Governmental Affairs, U.S. Senate (GAO-12-256), March 2012. Available at <http://www.gao.gov/assets/590/589305.pdf>

New Farm Bill Heightens Environmental Concerns

Beginning in 1985, farmers who wanted to get direct payments or other traditional subsidy funding had to adopt modest environmental safeguards. Now Congress is poised to eliminate the \$5-billion-per-year direct payments program in favor of expanding taxpayer subsidies for crop insurance. Even without that expansion, the Congressional Budget Office estimates the crop insurance system will cost \$8.4 billion per year. If Congress expands insurance subsidies and fails to link all subsidies to the same environmental commitments that have been a precondition for other types of support for the last 30 years, wetlands and grasslands will be destroyed and duck populations will decrease. Increased pesticide use and erosion will contribute to even more damage to our fresh waters, wildlife and ecosystems, and our ability to effectively address climate change will be compromised. Each of these concerns is discussed in more detail below.

Grasslands destruction

Easy to clear and often underlain by rich soils, grasslands east of the Mississippi were some of the first areas to be plowed for farming as settlers spread west. Only 2 percent of America's tall grass prairies were left by 1900. By the 1930s, large areas of the western Great Plains were cleared, including many areas highly prone to drought, creating the conditions that led to the Dust Bowl. However, grasslands persisted in at least two important places: the northern Great Plains, where grasslands grow in very wet conditions, hilly or wetland-dense terrain that has been difficult to farm; and in marginal patches at the edges of and between farm operations. Together, these two types of grasslands support a wealth of grassland plant and wildlife diversity. Current and expanded crop insurance subsidies—without environmental limits—threaten both types.

Economists agree that crop insurance subsidies push farming onto marginal lands. For example, throughout the Midwest farmers are ripping up fence rows, plowing grassland fragments, withdrawing from the Conservation Reserve Program (CRP—a voluntary program that allows farmers to temporarily remove erosion-prone lands from production to establish natural cover) and allegedly even plowing pioneer cemeteries in a quest to plant more areas. Since 2007, more than 10 million acres—the equivalent of Massachusetts and Connecticut combined—have dropped out of CRP. This is one of the more pernicious effects of subsidies because these acres do not exist in million-acre blocks of wilderness, but as

1,000, 100 or even 40 acres scattered across the landscape. These parcels provide homes not only for hundreds of our currently more common species but also for rare prairie flowers like the eastern and western prairie fringed orchids. The small size of these tracts makes it very difficult to detect the loss that is occurring.

In collaboration with Environmental Working Group, Defenders of Wildlife published an analysis of USDA's own data that showed more than 23 million acres of habitat, mostly grasslands planted on highly erodible soils, have been lost across the country between 2008 and 2011. In just six years, North Dakota has lost 1.8 million acres of grassland—more than half of all its acres enrolled in CRP.¹¹

Grassland game birds like lesser prairie-chickens and pheasants are among the wildlife feeling the impact of the combined effects of high crop prices and generous insurance subsidies. Pheasants Forever ranks habitat loss from farming as the number one threat to pheasant populations in the Great Plains. In 2012, the Iowa Department of Natural Resources estimated that the state's pheasant populations dropped 80 percent from past average populations. Lesser prairie-chickens in Oklahoma, Kansas and other southern plains states dropped by 50 percent between 2012 and 2013, as their grassland habitat disappeared into row crops, and they are likely to be listed as a federally threatened species in 2014.

The combined effect of high crop prices and generous insurance subsidies puts America's last remaining grasslands—even if they are on poor soils, steep slopes or in dry climates—at risk of disappearing forever.

Wetlands loss

From the 1600s to present, America lost approximately half of all its wetlands. Our marshes, bogs, swamps and fens provide enormous public benefits—filtering polluted water, slowing and absorbing floodwaters, sheltering thousands of species of native plants and animals, providing breeding habitat for waterfowl and nurseries for important commercial and recreational fish species. More than 40 percent of endangered species depend on wetlands. Recreational fishing contributes more than \$100 billion to the U.S. economy, and up to 90 percent of the fish species sought by anglers depend on wetlands for part of their lifecycle. Wetlands also serve as key locations for groundwater recharge, ensuring that streams and creeks flow throughout the year and making water available

for agriculture and people during dry periods. Since the implementation of intensive conservation efforts and strong protections, wetlands loss has been less dramatic—a net loss of only 60,000 acres of U.S. wetlands from 2004 to 2009.¹²

Wetlands loss is back in the news with announcements of more drainage tile factories opening in North Dakota in 2011 and 2013. Drainage tile is plastic or ceramic tile buried underground in networks that stretch many miles across the landscape and quickly move water away, allowing farmers to grow crops in formerly wet areas. Recent research shows the Dakotas were losing 13,000 acres of prairie wetlands per year until 2001—and more than 15,000 acres per year over the last decade. Another estimate, which includes surrounding habitat, puts wetlands loss in the Dakotas and Minnesota between 2008 and 2012 at more than 700,000 acres.¹³

Crop insurance subsidies contribute to wetlands loss because they reduce the financial risk to farmers of planting on marginal lands. For example, former wetlands might still flood in very wet years but because of crop insurance farmers pay little to insure those crops and get payments from those acres in wet or dry years. As the Department of the Interior concluded about crop insurance subsidies in a 1994 report to Congress, “any reduction in the financial losses from such hazards will make wetland conversion more attractive.” Recent analysis has shown that the 71 U.S. counties with the highest wetlands losses also have the highest average insurance payouts.

The Farm Bill contains an important measure called “swampbuster” that prevents farmers from getting most federal subsidies if they drain a wetland. It does not apply to crop insurance, however. As the new Farm Bill puts more money into insurance subsidies, the absence of a swampbuster provision in the insurance program will be a disaster for prairie pothole wetlands and the grasslands that surround them. Many waterfowl species and threatened or at-risk species, such as grasshopper sparrows, Sprague’s pipits, upland sandpipers and Dakota skipper and Poweshiek skipperling butterflies, depend on the extensive areas of tall and mixed grass prairies interspersed among the prairie pothole wetlands that will be especially vulnerable if the “swampbuster” provision of past Farm Bills is not relinked to crop insurance.

In 2013, the Associated Press reported stories of farmers voluntarily turning down their direct payment subsidies to allow them to drain wetlands and plow grasslands in hopes of being grandfathered in under a new Farm Bill and not having to restore those wetlands and prairies. Even when prices are falling, subsidized insurance still distorts farmers decisions on what, where and how much to plant.¹⁴

Declining duck populations

The Department of the Interior estimates that more than 70 percent of North America’s 10 to 12 million waterfowl nest in the prairie pothole region of the northern Great Plains. The region is named for the tens of thousands of shallow wetlands (potholes) that once dotted the sea of tall grass prairies that used to stretch from horizon to horizon in Iowa, Minnesota, the Dakotas and Montana. South Dakota alone once had more than 2.7 million acres of these wetlands.

Today, most of the grasslands and more than half of all prairie-pothole wetlands have been lost to farming. Many of the wetlands that remain are there only because they were difficult to drain. In 2006, the U.S. Fish and Wildlife Service estimated that 1.37 million wetlands in the Prairie Pothole region were at risk of being drained because of agriculture and other threats. Converting that to ducks, approximately 2.9 million birds would lose their nesting habitat—a 37 percent decline in duck populations.¹⁵

Nevertheless, the region is still important breeding habitat for pintails, mallards, gadwall, blue-winged teal, shovelers, canvasbacks and redheads. It is also a critical migratory stop for waterfowl headed farther north to breed such as lesser scaup, wigeon, green-winged teal and snow geese.

To protect the region’s waterfowl populations, FWS has invested more than \$100 million in federal funding to acquire 2.7 million acres of conservation easements in the region. FWS estimates that another 1.4 million acres of wetland and 10 million acres of grassland easements are needed to secure waterfowl populations.¹⁶

In addition, for most of the last 30 years, farmers who drained wetlands have not been eligible to receive some of the biggest farm subsidies. Getting rid of limits on subsidies also eliminates one of our best tools for protecting wetlands.

Pesticide inputs

The most popular crop insurance programs guarantee a certain level of revenue (crop yield times price at time of planting or harvest). By applying pesticides and fertilizer, farmers may be able to increase yield, which could increase the value of their crop and also its insured value—and taxpayer costs if the crop is lost.

The total amount of pesticides used in agriculture in the United States has been fairly stable over many years: 867 million pounds in 1988; 877 million pounds in 2007.¹⁷ One study found that insurance increases the use of pesticides by wheat farmers.¹⁸

Similar results were found with corn farming. Increased

pesticide (and fertilizer) use may be a particular problem as marginal lands are brought into production. These acres may be closer to rivers, lakes and streams and have lower soil quality and steeper slopes conducive to runoff. Even without an increase in chemical inputs, the use of pesticides in these areas may have more severe effects on sensitive wildlife and plants.

Erosion

Soil erosion chokes vital waterways, increasing water treatment and dredging costs and imperiling wildlife that depends on clean, clear water. Furthermore, the sediments are accompanied by nutrients like nitrogen and phosphorus that cause algal blooms and can lead to dead zones.

Since the Dust Bowl days of the 1930s, federal and state agencies have made a concerted effort to reduce the loss of topsoil and its deposition as pollution in our streams, rivers and other water bodies. Farmers have been paid to take tens of millions of acres of highly erodible soils out of farming and billions have been spent to help farmers adopt soil conservation practices. As crop prices and insurance subsidies grow, farmers have strong incentives to put these lands back into production. These acres may produce lower crop yields than continuously farmed areas, but because they have lower soil quality, farming them may still be profitable.

The USDA found that increased insurance subsidies in the 1990s led to a 2.5-million-acre expansion in areas that are farmed and corresponding increases in soil erosion from wind and water of 1.4 percent and 0.9 percent, respectively.¹⁹

At that time the level of crop insurance subsidy for America's farmers was less than half of today's level. The expanded subsidies proposed under the 2013 Farm Bill will contribute to more intensive farming of existing cropland and increase farming on marginal acres that are currently in grass or other wildlife habitat—both will result in more soil erosion and silting of America's most important freshwater habitats.

Climate-change risks

According to the *2009 Global Change Research Program Report*, by the end of the century temperatures in Illinois will increase by 4 to 10 degrees F, giving the state a climate more like that of Louisiana or Texas. The crop varieties and practices that work there will not work there forever. As climate change continues, the same is true for much of the country.²⁰

In 2012, more than 80 percent of U.S. farmland—including the Midwest, America's Breadbasket—experienced drought conditions. Much of the country is also experiencing, and is projected to continue experiencing, more frequent

floods, extended periods of high temperatures, droughts and change in the timing of rainfall and extreme weather events.

These weather events can wreak havoc on food production. For example, an examination of 40 years of crop insurance pay-outs in Iowa showed more payments related to both drought and flood in the last decade.²¹

More frequent extreme weather events during sensitive periods in crop growth could be as damaging as sustained changes in local and regional climate. Plant diseases and pests that are currently limited by cold are likely to spread to new regions, and additional invasive pathogens are likely to become established as well. All of these forces will increase yield variability within farms, regions and crops making risk-management programs like crop insurance more difficult to manage.

Faced with such threats, it may make sense to convert some farmlands back into grasslands or forests or for farmers to switch to crops that are less sensitive to a climate threat. Recent research showed that yields of crops like barley and rye will increase under some climate change scenarios while cotton and durum wheat yields decrease.²²

However, high crop insurance subsidies may push farmers in the opposite direction. Yield per acre and revenue-based policies provide payments based on how much a farmer grows over a multi-year period or on past regional yield of the same crop. Thus, farmers are rewarded for growing the crops with the greatest level of subsidy and best history of crop production in the region. In an era of climate change, this is a particularly poor way to plan for the future. It encourages farmers to plow as many acres as possible, to increase inputs like irrigation and pesticides to maximize crop yield and to keep planting crops that have a local yield and price history even though climate conditions may put future yields at risk.

As irrigated farming expands in places such as Arizona, eastern Montana and Colorado, surface water and underground aquifers will be further depleted, and water running back off farmland into streams and ponds is likely to be more polluted. Even worse, subsidies make it possible for farmers to keep plowing crops not suited to such climates because low yield and crop losses in bad years are far less likely to result in a loss of profitability. In other words, farmers may plant a crop fully expecting to lose it.²³

If subsidies allow farmers to maintain operations on marginal lands or with poor crops in the face of an altered climate, the environmental costs will be significant. Insurance subsidies may contribute to practices that are maladaptive to climate changes, rather than reducing climate risks.

CONCLUSION AND RECOMMENDATIONS

A Better, Greener Safety Net for Farmers

America's farmers need a federal safety net that helps them responsibly manage environmental and market risks and stay in business. By making the changes recommended below, Congress can provide an effective safety net without simultaneously contributing to widespread damage to our fresh waters, open space and fish and wildlife populations.

1. **Keep conservation compliance in the crop insurance program.**

Although efforts to pass a multi-year, comprehensive Farm Bill have been stalled in Congress for more than a year, it appears that Senate and House negotiators are close to an agreement. It is essential that this agreement relink limits on insurance subsidies to modest environment requirements. This arrangement, termed "conservation compliance," has already passed in the Senate's version of the Farm Bill, has support of more than 100 Democrats and some Republicans in the House of Representatives. It is supported by individual farmers, hundreds of environmental groups and the National Farmers Union.²⁴ These limits currently prevent 295 million tons of topsoil loss every year, but they are linked to a subsidy program that is disappearing in this Farm Bill. Without conservation compliance in the crop insurance program, America will lose millions more acres of wetlands and grasslands and hundreds of millions of tons of topsoil.

2. **Ask farmers to pay a fairer share of their crop insurance premium subsidies.**

Asking farmers to pay a fairer share of their premium subsidies—and having taxpayers provide less—would create a stronger incentive for farmers to not plant crops in wetlands, on fragile soils, steep slopes and other places more likely to trigger an insurance payment than produce food. There are smart ways to structure insurance subsidies so that new

farmers and socially disadvantaged farmers and ranchers receive higher levels of support and taxpayer subsidies for other farmers are less environmentally damaging.

3. **Reward farmers who adopt conservation practices.**

Crop insurance should include a climate-smart provision that rewards farmers who adopt conservation practices on their lands. Farmers who practice no-till farming, plant cover crops and make irrigation more efficient, for example, would receive higher levels of insurance subsidies from USDA. This approach incentivizes more sustainable farming, but should only be offered if it is paid for by lowering the overall average level of subsidies taxpayers provide and not providing compensation for measures already required under conservation compliance.

4. **Lower the profit guarantee for insurance companies.**

Taxpayers not only provide payments to farmers to buy insurance, but also pay for national and international insurance corporations to sell policies to farmers and guarantee a profit rate for those corporations. If the payments that corporations have to make to farmers because of losses lower their profits below 14 percent, U.S. taxpayers pick up the cost of remaining losses.²⁵ By lowering this profit guarantee, Congress would create a stronger incentive for companies to minimize their losses by charging higher premiums on the acres most likely to suffer a crop loss. That sort of change in policy would help protect wildlife that depend on those acres for survival.

Each of these changes would help reduce the damage to the environment caused by high levels of taxpayer support for crop insurance. Adopted together, they will ensure that fish and wildlife, wetlands and clean water are available for the benefit of all Americans now and in the future.

"When you can remove nearly all the risk involved and guarantee yourself a profit, it's not a bad business decision," said Darwyn Bach, a farmer in St. Leo, Minn., who said that he is guaranteed about \$1,000 an acre in revenue before he puts a single seed in the ground because of crop insurance. "I can farm—on low-quality land that I know is not going to produce and still turn a profit."

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