FARM BILL

PROTECTING
CONSERVATION
COMPLIANCE PROGRAMS

A PUBLIC HEALTH
PRIORITY

SUMMER 2013
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Who We Are

Based within the Bloomberg School of Public Health, The Johns Hopkins Center for a Livable Future (CLF) is an academic center that conducts and promotes research and communicates information about the complex interrelationships among food production, diet, environment and human health. The Center investigates these issues, and advocates on behalf of policies to protect the public’s health and the environment, enhance food system sustainability, and increase food security. Improving the “Farm Bill” is a major priority for the CLF.

OUR POSITION:
The Johns Hopkins Center for a Livable Future (CLF) supports the continuation and enforcement of conservation compliance requirements by linking them to all farm support programs, especially crop insurance premium subsidies.

Introduction

The Farm Bill is the primary piece of legislation addressing food and agriculture in the United States. By shaping production and conservation practices on U.S. farms, including the types of crops grown and where they are planted, the Farm Bill exerts a powerful influence on the environment, the composition of the food supply and ultimately, the public’s health.

The Farm Bill contains several conservation programs that incentivize healthier and more sustainable production practices. In many respects, the most far-reaching of these incentives is the attachment of conservation requirements to farm support programs like Direct Payments, often referred to as “farm subsidies.” In order to be eligible for Direct Payments, farmers must comply with certain environmental measures.

Legislators are preparing to phase out Direct Payments in the next Farm Bill, putting conservation compliance measures at risk. Other programs, such as crop insurance subsidies—government payments to cover a percentage of farmers’ crop insurance premiums—are expected to expand, becoming the dominant farm support program. Before 1996, conservation compliance measures were tied to the receipt of crop insurance premium subsidies. Re-linking conservation compliance measures to
crop insurance subsidies and maintaining the requirement across all farm support programs would preserve a major incentive for U.S. farmers to use such measures, and in turn protect the public’s health.

**What Is Conservation Compliance?**

Several United States Department of Agriculture (USDA) programs offer benefits to farmers on the condition that they meet certain standards of environmental protection on highly erodible land and wetlands. Failure to comply with these provisions could mean the loss of benefits. Among the suite of programs tied to conservation compliance, Direct Payments make up nearly half of the funds. USDA estimates that the overall value of Farm Bill benefits subject to conservation compliance between 1997-2007 ranged from $11.7 billion to $27.3 billion.

The conservation compliance requirements were enacted originally as part of the 1985 Farm Bill in an effort to address concerns that commodity programs and conservation programs were working against each other. For example, while conservation programs were designed to encourage farmers to conserve soil and other environmental resources, other programs such as price supports and income payments provided incentives for farmers to expand crop production to highly erodible and environmentally sensitive land. While that contradiction persists, conservation compliance rules help to mitigate the problem.

**What are the components of conservation compliance?**

Conservation compliance measures aim to promote soil quality, reduce soil erosion and conserve wetlands. Farmers who violate the requirements are subject to losing some or all Farm Bill benefits contingent on conservation compliance.

**Sodbuster: Highly erodible land conservation**

Under the “sodbuster” provisions of the Farm Bill, farmers growing on highly erodible land are required to implement approved conservation systems. These systems typically include some combination of conservation cropping, conservation tillage, and seasonal crop residue management. Given the costs of not being in compliance, Sodbuster has both improved agricultural practices on highly erodible land and helped keep such land out of production.

**Swampbuster: Wetland conservation**

Under the “swampbuster” provision, farmers are prohibited from producing on cropland converted for farming after 1985 and from draining wetlands to then produce agricultural commodities on that land.

**How can conservation compliance measures protect public health?**

Soil and wetland ecosystems perform a range of “ecosystem services” such as conserving freshwater, sequestering carbon and filtering contaminants. Many of these services directly or indirectly impact water quality, flood prevention, food security and climate change mitigation—ultimately ben-
Water quality

Measures to protect soil and wetland ecosystems may help to mitigate agricultural impacts on water quality. Practices that promote soil health, meaning there is robust organic matter in the soil, may reduce farmers’ dependence on fertilizer inputs, capture runoff and filter certain contaminants. Certain pesticides, for example, bind to soil organic matter, reducing their toxicity and preventing them from leaching into groundwater. Practices such as cover cropping can reduce runoff by capturing residual nitrogen and building soil organic matter.

When applied in excess of amounts croplands can absorb, fertilizer nutrients can enter nearby waterways or leach into groundwater, contributing to a host of human health and ecological harms. Conservation compliance measures help protect water quality by mitigating erosion and maintaining the ability of soils and wetlands to absorb nutrient-filled water that would otherwise run into waterways.

Wetlands, dubbed “the kidneys of the catchment,” play a key role in filtering nutrients, pesticides and other pollutants from water. In addition, wetlands help to recharge groundwater sources used for drinking water, irrigation and other purposes.

Preventing water contamination is crucial to health. Ingesting nitrate-contaminated drinking water has been associated with various cancers, adverse reproductive outcomes, diabetes, thyroid conditions and “blue baby syndrome” (methemoglobinemia), a potentially fatal condition among infants. Nutrient pollution in waterways drives algal growth and decay, a process that can deplete oxygen from aquatic ecosystems, creating “dead zones” largely devoid of life. Some of these algal blooms produce toxins that have been linked to stomach illness, allergic reactions, liver damage, neurological symptoms and cancer.

Flooding

Wetlands have the potential to abate the destructive potential of floods, reducing the health, social, ecological and economic impacts of these widespread natural disasters. An acre of wetland can store roughly one million gallons of water—an amount equivalent to over two football fields submerged one-foot deep in water. The enormous storage capacity of wetlands can absorb floodwaters that would otherwise flow overland, while trees and other wetland vegetation can help slow the speed of floodwaters.

The destruction and degradation of wetlands as a result of agricultural practices can significantly impair the services they offer. Between 1780 and 1990, twenty-two U.S. states lost at least half of their wetlands. The rate of wetland loss increased by 140 percent between 2004 and 2009. Swampbuster has successfully worked to help prevent farmers from draining wetlands, the USDA estimates between 1.5 million and 3.3 million acres of wetlands have been protected by the provisions.

Food security

Healthy soil is, in many regards, the foundation of the food supply. As soil is depleted, its ability to support food production diminishes. With lowered crop yields come higher food prices and decreased food security.
Conservation compliance measures help protect, and sometimes improve, soil quality. Soil quality, or “health,” refers to soil’s capacity to perform a range of essential functions. The organic matter in healthy soil serves as a sponge-like reservoir of water and nutrients, providing plants with a steady supply of resources for growth. The capacity of healthy soil to retain water is particularly valuable during droughts. Organic matter also improves soil structure, helping to aerate roots, improve drainage and absorb rainfall and irrigation, reducing runoff and erosion.

The prevailing approach to crop production in the U.S. relies heavily on synthetic and mineral fertilizers, often at the expense of a focus on soil health. These inputs dramatically increase short-term crop yields, and can serve as a substitute for, or supplement to, the nutrients cycled through soil organic matter. However, many of these fertilizer inputs are in finite supply; phosphate rock, for example, is a non-renewable resource estimated to be depleted in 50-100 years. As these resources become more costly to extract, the value of soil health to global food production likely will become even greater.

Keeping soil healthy can limit the need for agricultural chemical inputs, which not only may be limited in supply, but also affect soil health. Synthetic nitrogen fertilizers have been shown to deplete soil organic matter and lower crop resistance to certain insect pests, perpetuating farmers’ dependence on agrichemicals and the harms associated with their use.

Because soil health is intimately tied to long-term crop productivity, it is a key component of food security—particularly in light of an expanding global population. Conversely, agricultural practices that degrade soil quality pose a significant threat to global food security. By one estimate, 30 percent of U.S. farmland has been abandoned over the past 200 years due to erosion, salinization and waterlogging. By incentivizing farmers to maintain or improve soil health, conservation compliance measures may help to mitigate this trend.

**Climate change**

Climate change poses serious challenges to food and water security, and contributes both directly and indirectly to infectious disease, heat stress, respiratory conditions and other health problems. The Lancet, a leading medical journal, described climate change as “the biggest global health threat of the 21st century.” Wetland conservation, conservation tillage, cover cropping and other practices incentivized by conservation compliance measures can increase the soil carbon pool, helping to mitigate climate change.

Conservation compliance helps mitigate climate change in two ways. First, it creates a disincentive for converting native sod into cropland. The conversion process from native sod to cropland emits large amounts of greenhouse gases (GHG) that contribute to climate change. Organic matter in healthy soil stores carbon that would otherwise contribute to climate change (and therefore it is important to provide incentives to retain native sod on agricultural land). Second, it incentivizes keeping native wetlands intact. Wetland soils are a particularly important carbon sink; draining these lands is a significant source of carbon dioxide emissions.
Are conservation compliance measures effective?

Tying conservation compliance requirements to farm support programs is a cost-effective conservation measure. The USDA views the Direct Payment program as an effective compliance incentive because the payments are substantial (nearly $5 billion per year), they cover a large share (71 percent) of cropland, and they are paid on an annual basis. This is despite inconsistent enforcement of these provisions. While the number of spot-checks has fallen from 1.2 percent of farms (1993) to 0.6 percent of farms in 2006, and there is also indication that in some cases USDA/NRCS fails to enforce provisions, conservation compliance provisions serve as a relatively affordable way for USDA to protect marginal land, and a deterrent to environmentally damaging actions that ultimately impact the public’s health.

How much land is at stake if Congress eliminates Direct Payments?

Direct Payments may be excluded from the next Farm Bill, effectively ending the conservation requirements linked to the payments. While farmers receiving funds under other conservation programs (See CLF’s report, Working Lands Conservation Funding—A Public Health Priority, for more information) would still be required to use conservation techniques, about 174 million acres of land (44 percent of U.S. cropland) that were covered by Direct Payments but not conservation program payments would no longer be covered. If it is be crucial to link conservation compliance requirements to other farm support programs, such as crop insurance premium subsidies, not only to recapture and protect these lands, but also because it is predicted that crop insurance programs will become the cornerstone of the farm safety net.

For a more detailed visual representation of compliance requirements by acreage see:

http://www.ers.usda.gov/media/361085/eib94_2_.pdf

We need a safety net for the environment

Investment in crop insurance subsidies is often presented as a way to maintain a farm safety net. Crop insurance protects farmers from losses due to extreme weather events, insects, disease, low yields, low prices, low quality, or any combination of these factors. Crop insurance subsidies cover a similar commodity crop acreage to Direct Payments, and they also extend to some ranchlands and land used for producing fruits, vegetables, and other non-commodity crops. In addition to their role in protecting farmers, crop insurance subsidies can also be (as was the case until 1996) a vehicle to encourage conservation compliance.

Crop insurance subsidies are currently the only large Farm Bill program not subject to conservation compliance.

Tying crop insurance premium subsidies to conservation compliance represents a promising means of protecting vulnerable lands. Further, extending subsidies for crop insurance without linking them to conservation compliance presents a concern with regard to risk management. As mentioned, crop insurance seeks to protect farmers from extreme weather events like flooding and drought. These types of weather events are expected to increase in intensity and frequency due to climate change. Drainage wetlands and farming on highly erodible
lakes both increase the vulnerability of cropland to these weather events and decrease carbon sequestration.\textsuperscript{24}

Providing insurance reduces farmers' risks from environmental threats, while removing conservation compliance requirements reduces their incentive to prevent them. Insurance without compliance thus may contribute to real damage to food security, health, and the environment, not to mention higher payouts and increased costs for taxpayers. By allowing farmers to benefit from crop insurance, but letting them off the hook for conservation compliance, the taxpayer makes four payouts—while allowing farmers to contribute to environmental degradation. The first payout is for the crop insurance subsidy itself. The second payout is for the rise in insurance costs as the lack of conservation compliance creates more agricultural loss. The third payout is for the cost of environmental damage resulting from farm practices that have been allowed, such as converting wetlands into cropland. And the fourth payout is for the health costs associated with environmental damage.

\textbf{Conclusion}

As crop insurance becomes the dominant farm safety net, the only responsible action is to tie conservation compliance to all farm support programs. Soil erosion and loss of wetlands contribute to poor water and soil quality, which, in turn, contribute to negative health impacts such as cancer, allergic reactions, and neurological and reproductive health problems. For the next Farm Bill to promote human health, it should link conservation compliance provisions to federal crop insurance subsidy programs and strengthen enforcement of the provisions across all USDA farm support programs. Conservation compliance benefits farmers, too. Conservation helps level the playing field and incentivizes farmers to safeguard their land for the future. The next Farm Bill should seek to extend these provisions to federal crop insurance subsidy programs and strengthen enforcement of the provisions across all USDA farm support programs.

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References