Impact of Safety Net on Water Quality

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Farmers and ranchers in the United States benefit from a variety of taxpayer funded programs aimed to assist producers in managing their risk. In response to the Great Depression and the Dust Bowl in the first half of the 20th Century, Congress passed legislation to provide a safety net for agribusinesses and stem the physical and financial shocks to the agriculture sector. While the multitude of safety net programs for farm businesses were created to decrease the impact of physical and financial shocks, they have contributed to negative impacts on our environment, including our water systems.

Our nation's water systems are negatively impacted through the subsidization of safety net programs that incentivize production over risk management. Increased use of fertilizer to increase yield leads to agricultural runoff. That runoff leads to algae blooms, producing toxins that substantially decrease the health of our important bodies of water, including the Gulf of Mexico and the Great Lakes. Agricultural runoff has gotten so bad in Iowa – the nation's top corn producing state - that the Des Moines Water Works is now considering spending up to $30 million to drill wells in an effort to find water for Des Moines' half million residents that is less contaminated with nitrate pollution from fertilizer runoff.[i] In order to mitigate these unintended consequences, costs, and long-term liabilities, disincentives for better conservation practices should be removed so not only farmers and ranchers, but also the climate and environment, can become more resilient to future financial, economic, and weather challenges.

Disincentives to Farmers and Ranchers Reaching Resilience

Agricultural safety net programs incentivize producers to concentrate on short-term profits at the expense of long-term productivity. This leads agribusinesses to focus on planting crops that have the highest rate of subsidy, while disincentivizing farming practices that benefit the environment, climate, and ultimately long-term productivity of the land and farmer profitability. Historically, taxpayer-subsidized programs have incentivized risky agricultural production practices and the expansion of cropland into carbon-rich wetlands and grasslands while disincentivizing risk-reducing crop diversification and conservation practices such as cover crops, no-till, and grassed buffers.

Federally Subsidized Crop Insurance – Not just crops and not really insurance

One disincentive to resilience is the federal crop insurance program. The highly subsidized program covers both production and revenue losses for over 120 crops. On average, taxpayers subsidize 60 percent of premiums, or sixty cents for every dollar of insurance coverage. Nearly three-fourths of federal crop insurance policies protect farm businesses from dips in anticipated revenue rather than from crop loss due to unexpected weather or disease. Crop revenue policies thus ensure an expected level of income for producers every year, regardless if they experience an actual loss of crops. In certain years, this means producers lock in a profit even before harvest occurs, which is unlike any other business.

Over the last ten years, farm businesses received crop insurance payouts worth $52.5 billion more than the premiums they paid. Some states have even averaged a payout every single year for the past ten years, meaning indemnities exceeded farmer-paid premiums. On average over the past decade, farmers received $2.34 back for every $1 paid in premiums, but in states like Texas and Georgia, the farmer benefit exceeds $3 for every $1 in farmer-paid premiums.

	5-year benefit	10-year benefit
Farmer Premium	$18.3 billion	$39.0 billion
Indemnity	$35.6 billion	$91.5 billion
Rate of Return	**$1.94**	**$2.34**

Because federally subsidized crop insurance is tied to planted acreage, agribusinesses can expand their eligibility for federal payments if they plant more acres to these program-favored crops, leading to incentives for expanded cropland acreage which are typically input-intensive crops such as corn.[ii] According to USDA's Economic Research Service (ERS), "roughly two-thirds of all fertilizer nutrients are spread on corn, cotton, soybeans, and wheat fields," which are the most heavily subsidized crops in crop insurance.[iii] Cropland expansion often occurs at the expense of wetlands, grasslands, tree-lined waterways, and other carbon-rich land that helps filter out agricultural pollutants and protect water quality.[iv] Crop insurance subsidies are thus linked to "increases in overall soil erosion, nitrogen loss to groundwater, and the loss of soil organic carbon."[v]

The Federal Crop Insurance Program does not currently provide any incentives for farmers to reduce their risk of crop loss through the use of conservation practices such as cover crops and no-till even though studies have linked them to lower crop insurance indemnities, less risk of drought- and flood-related crop losses, and better long-term productivity and profitability for farmers. Rather, the program reduces producers' risk – particularly in areas prone to crop losses such as dry areas of western Kansas and South Dakota – with taxpayers footing a disproportionate part of the program's costs.

Shallow Losses Produce a Deep Layer of Subsidies

Federal farm policies with a negative impact on water quality extend beyond subsidized crop insurance. Price supports and shallow loss income programs also promote production over risk management. The Agriculture Risk Coverage (ARC) program provides payments to producers when the revenue of a commodity is less than the five-year Olympic average. The Price Loss Coverage (PLC) program issues payments to producers when the price of a commodity is less than the reference price for that commodity set by the federal government in the farm bill. The majority of the taxpayer costs are for commodities including corn, soybeans, wheat, peanuts, and rice. PLC and ARC were established in the 2014 farm bill (and reauthorized in the 2018 farm bill) to replace the infamous direct payments to farmers and, coupled with crop insurance, to move toward more risk management instead of payments dispensed regardless of crop prices or income. Even though ARC and PLC payments are tied to historic acreage, they have still been historically tied to intensification of farm production, greater nitrogen applications, and crop switching, which leads to negative impacts on water quality and biodiversity.[vi]

Another disincentive to farmers and ranchers utilizing farming practices that benefit the environment are the various ad-hoc disaster programs on top of the farm bill programs mentioned above. In response

to active hurricane seasons and other natural disasters in 2017, 2018, and 2019, Congress appropriated to compensate agribusinesses for economic losses. Implemented by USDA as the Wildfire and Hurricane Indemnity Program (WHIP), WHIP+, the Quality Loss Adjustment Program, The On-Farm Storage Loss Program, and other industry-specific programs – such as the Florida Citrus Recovery Block Grant Program and the Milk Loss Program, the majority of this aid was directed at losses already covered by federally subsidized crop insurance and farm bill disaster programs. Through Omnibus annual appropriations as well as emergency supplementals in 2020 and 2021, Congress directed unspent funds from these programs to producers affected by various natural disasters in 2020 and 2021. The disaster aid effectively created an off-budget disaster spending account that was used to direct income subsidies to Congress' favored agricultural sectors. $5.4 billion to compensate agribusinesses for economic losses. Implemented by USDA as the Wildfire and Hurricane Indemnity Program (WHIP), WHIP+, the Quality Loss Adjustment Program, the On-Farm Storage Loss Program, and other industry-specific programs[vii] – such as the Florida Citrus Recovery Block Grant Program and the Milk Loss Program, the majority of this aid was directed at losses already covered by federally subsidized crop insurance and farm bill disaster programs. Through Omnibus annual appropriations as well as emergency supplementals in 2020 and 2021, Congress directed unspent funds from these programs to producers affected by various natural disasters in 2020 and 2021. The disaster aid effectively created an off-budget disaster spending account that was used to direct income subsidies to Congress' favored agricultural sectors.

Over the course of 2020 and early 2021, Congress and the Department of Agriculture (USDA) directed an additional $50 billion to support farming and ranching operations impacted by COVID-19, this in addition to $28 billion in Trump trade war bailout payments in 2018 and 2019. The Trump trade war payments and some of the COVID-19 income subsidies were dispensed through the Commodity Credit Corporation (CCC), an off-budget account that USDA has recently tapped for tens of billions in subsidies without Congress's approval. Abuses of the use of the CCC undermines bipartisan efforts to create a stable, predictable, and cost-effective farm safety net focused on managing risk instead of maximizing government payments for the politically favored. Because ad-hoc aid is not tied to conservation accountability standards or other strings attached, it incentivizes producers to do what they have always done instead of preparing for the next inevitable disaster or financial downturn.

The combination of ad-hoc payments and farm bill program subsidies led government payments as a percent of net farm income to reach nearly 40 percent in 2020, the highest since 2001. This record high level of subsidization to agriculture businesses – without incentives or strings attached to promote conservation that leads to better resilience and water quality - leads to stagnation of innovation, dependence on government subsidies, and less use of more cost-effective risk management techniques that have climate, environmental, taxpayer, and producer benefits. Worse yet, the Government Accountability Office released a report identifying a lack of compliance regarding wetland conservation provisions which are required in exchange for farm and crop insurance subsidies. Ensuring wetlands, highly erodible land, and grasslands are conserved in exchange for taxpayer subsidies is vitally important for not only water quality – but also taxpayer accountability.

Together, ad hoc aid, farm bill programs, crop insurance, and other subsidies have created a system that is focused on maximizing government payments at the expense of taxpayers, the environment, and water quality in particular. Without incentives to conserve sensitive land, retain or plant grassed buffers along waterways, conserve wetlands and grasslands, etc., the current farm subsidy system will continue

to result in polluted water, higher costs for consumers as water utilities increase costs to treat the polluted water, greater greenhouse gas emissions, depletion of key aquifers, and other environmental and climate costs.

Recommendations

In order for farmers and ranchers to increase environmental resilience, farm income and crop insurance programs that disincentivize agribusinesses from implementing cost-effective conservation practices must first be reformed. Farm bill-authorized conservation programs that benefit farmers, taxpayers, and water quality should also be reformed to prioritize funding toward the most cost-effective practices with the best return on taxpayer investment. Increased data sharing regarding which conservation practices work best would also increase the resilience of agribusinesses, in addition to ensuring the federally subsidized crop insurance program accurately reflects real risks on the ground and the risk-reducing opportunities of conservation practices. Finally, in exchange for any taxpayer subsidies, producers must comply with conservation standards meant to ensure that wetlands, grasslands, and highly erodible land are conserved.

Congress and the Biden Administration can better achieve climate goals by removing obstacles to agricultural climate adaptation. Incorporating conservation into agricultural production practices can help farmers and ranchers increase efficiency, reduce operator costs, increase yields, and ultimately position themselves to be better prepared for the next disaster or financial challenge while decreasing the negative impact of agricultural production on water quality. Reforming risk ratings and risk sharing in crop insurance, including accounting for risk reduction in certain conservation practices, would go a long way in removing disincentives to conservation and decreasing the environmental impact of agriculture.

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[i] https://apnews.com/article/des-moines-business-environment-and-nature-b7f1e431a601dfb6536452d743012948

[ii] https://www.ers.usda.gov/amber-waves/2017/september/study-finds-crop-insurance-has-small-effect-on-environmental-quality/

[iii] https://www.ers.usda.gov/webdocs/publications/44619/eib-88.pdf?v=0

[iv] https://www.ers.usda.gov/webdocs/publications/44876/7477_err120.pdf?v=41056

[v] https://www.ers.usda.gov/amber-waves/2017/september/study-finds-crop-insurance-has-small-effect-on-environmental-quality/

[vi] http://www3.cec.org/islandora/en/item/1909-economic-and-environmental-impacts-agricultural-subsidies-en.pdf, http://ageconsearch.umn.edu/bitstream/7347/2/wp070021.pdf

[vii] https://www.usda.gov/media/press-releases/2019/09/09/usda-resources-available-farmers-hurt-2018-2019-disasters