

Strengthening Crop Insurance through Soil Health



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ABOUT AFT

Founded in 1980, American Farmland Trust (AFT) is the only national organization that takes a holistic approach to agriculture, focusing on the land itself, the agricultural practices used on that land, and the farmers and ranchers who do the work. AFT has extensive experience with Farm Bill advocacy and played a leading role in championing many of today's conservation programs. AFT also works in close partnership with USDA's Natural Resources Conservation Service (NRCS) to help farmers adopt conservation practices across the nation.

ABOUT AFT'S FARM BILL PROCESS

To support the development of AFT's 2023 Farm Bill agenda, AFT held 16 regional workshops across the U.S. to hear from farmers and ranchers, service providers, farm and environmental groups, land trusts, state departments of agriculture, researchers, and more about opportunities for the next Farm Bill. In the 8 conservation and climate-focused workshops, attendees discussed their experiences with extreme weather and their challenges overcoming barriers to conservation practice adoption. These conversations also explored what could be done in the next Farm Bill to increase long-term adoption of the conservation practices that will build resilience to, and address, climate change while also improving soil health, water quality, and profitability. Using these conversations as a foundation, AFT created a series of whitepapers to make recommendations for the next Farm Bill. To see the rest of the whitepapers, and learn more about AFT's Farm Bill platform, please visit us at www.farmland.org/2023-farm-bill.

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Executive Summary

Farming is a risky business - and the most important job in the nation. This is why the federal government offers subsidized crop insurance to financially protect farmers against yield and revenue losses. This popular program covers the vast majority of commodity acres and helps ensure farm viability and a stable food supply even through years of low prices, natural disasters, supply chain disruptions, and more. AFT supports the Federal Crop Insurance Program (FCIP) as a key mechanism for keeping farmers in business.

Climate change is already increasing production risk, and its impacts are expected to worsen with time: NASA predicts corn yields to drop 24% in ten years due to climate change. Yield losses will not only impact farm viability and the nation's food supply, but will also increase FCIP program costs, with expenses expected to rise up to 37% if farmers do not take steps to adapt to a changed climate.

To reduce financial and production risks, AFT recommends that Congress and the Risk Management Agency (RMA) adopt strategies to better integrate and incentivize soil health practice adoption in the FCIP. Improved soil health can stabilize yields, especially through periods of drought, excessive rainfall, and flooding, and can reduce reliance on external inputs. Yet despite recent congressional and administrative changes, particularly around cover crops, farmers can still face barriers and disincentives to adopting these important practices.

To develop its Farm Bill conservation agenda, AFT held eight regional workshops in the winter of 2022 to listen to farmers and ranchers regarding the challenges they had faced from extreme weather, barriers to adopting soil health practices, ways to improve USDA programs, and more. Several themes emerged regarding crop insurance:

- Crop insurance and soil health practices are not always compatible: One farmer lost eligibility for crop insurance due to intercropping, even though the practice was implemented through the Natural Resources Conservation Service (NRCS) Conservation Stewardship Program. More broadly, many farmers expressed anxiety about unintentionally running afoul of FCIP program rules due to soil health practices.
- Crop insurance is not always flexible enough to account for real-world conditions: One farmer lost insurance eligibility for terminating a cover crop several days late.
- Crop insurance is often inaccessible for small and diversified operations: Many farmers attending the workshops felt as though crop insurance had been optimized for large-scale commodity producers.

There are many opportunities to reduce structural barriers and increase incentives for the voluntary adoption of soil health practices, while helping the FCIP program to better account for the risk reduction benefits of improved soil health. AFT recommends that Congress and USDA:

- Include the popular \$5 per acre crop insurance premium rebate for planting cover crops in the next Farm Bill, as laid out in the [COVER Act](#) (S. 1690 / H.R. 3478) introduced by Representatives Casten (D-IL), Bost (R-IL), and Slotkin (D-MI) and Senator Brown (D-OH).

- Advance a research agenda to better understand the risk impacts of soil health practices (e.g., cover crops, conservation tillage, diverse crop rotations) in order to update actuarial tables or develop new programs to incentivize practice adoption.
- Deepen collaboration between RMA and NRCS in order to harmonize FCIP program rules and conservation practice standards, improve producer guidance on conservation practices and FCIP enrollment, and improve conservation support to farmers most in need.
- Offer new crop insurance endorsement options for soil health practices that mitigate risk, such as cover crops.
- Increase access, education, and promotion for the Whole-Farm Revenue Protection program, and increase program training for Approved Insurance Providers (AIPs) and Farm Service Agency (FSA) staff.

Together, these steps will help farmers to reduce production risks, deepen USDA understanding of the risk-reducing benefits of soil health practices, help mitigate FCIP program costs, and protect farm viability and food security.

Introduction

Agriculture is, and always has been, a risky endeavor. Farmers and ranchers are subject to a wide range of factors outside of their control, including drought, flooding, hail, disease, pests, price fluctuations, and much more. Producers also face growing risks related to climate change, as extreme drought, severe wildfires, and “100-year floods” become commonplace.

USDA’s Risk Management Agency (RMA) helps farmers weather the unexpected through the Federal Crop Insurance Program (FCIP), the most widely-used farm safety net program in the U.S. In 2019, the FCIP sold over 2 million policies, protecting more than 85% of planted corn, soy, cotton, and wheat acres.¹ That same year, the program covered 380 million acres of farmland and supported farm incomes by providing \$8 billion to farmers to offset losses.² Studies show that crop insurance is correlated with farm survival. On average, farms that use crop insurance are 70% more likely to stay in business than farms that do not.³

In 2019, FCIP insurance policies protected over 85% of corn, soy, and wheat acres.

The FCIP partially subsidizes insurance premiums, generally paying around 60% of the total cost.⁴ The subsidy makes the program affordable for farmers, helping keep farms viable even in the face of major financial losses. Farmers generally use indemnities (the money collected by the farmer after filing an insurance claim following a loss in yield or drop in price) to pay off operating loans.⁵ These subsidies are a critical component of the FCIP and have a positive impact on program demand.⁶

American Farmland Trust (AFT) is committed to keeping farmers on the land and believes that crop insurance plays an irreplaceable role in ensuring a viable, resilient, and productive agricultural economy. However, the FCIP must be updated and strengthened through congressional and administrative actions to better meet the challenges of the 21st century.

This paper explores how climate change and other factors are increasing agricultural production risk and financial risk, and how soil health practices such as cover crops, conservation tillage, and diverse crop rotations are a critical tool for managing these changes. If enacted, the recommendations put

forth in this paper to better integrate soil health practices into the FCIP would: increase net farmer incomes, decrease insurance premium costs to farmers, reduce the cost of the program to the federal government, improve environmental outcomes, and ensure a more resilient, productive, and stable agricultural system overall.

Production Risk is Growing

Climate change is already impacting the lives of all Americans. According to the National Oceanic and Atmospheric Administration (NOAA), 2022 alone saw 18 separate billion-dollar disaster events, costing the nation a total of \$177.3 billion.⁷

Farmers are feeling these effects more acutely than most, experiencing “alterations in rainfall patterns, more frequent occurrences of climate extremes (including high temperatures or drought), and altered patterns of pest pressure,” as predicted in the U.S. government’s Fourth National Climate Assessment.^a

⁸ According to an American Farm Bureau Federation analysis of RMA data, those 18 separate billion-dollar disasters—the most devastating of which were western droughts and wildfires—also led to \$21.5 billion in total estimated crop losses, and \$11 billion in paid indemnities.⁹ In 2022, the federal government also stepped in to support farmers with about \$10 billion in ad hoc disaster assistance.¹⁰

Research suggests that increasing temperatures due to climate change were responsible for 19% of the crop losses reported to the FCIP from 1991 to 2017.¹¹ In 2012, however, climate-related losses jumped to 47% when massive, extended drought turned over 1,400 U.S. counties into disaster areas.^{12, 13} According to RMA’s AgRisk Viewer, from 2000 to 2020, farmers received an annual average of \$6.4 billion in FCIP indemnities.¹⁴ In 2012, the FCIP paid out over \$17 billion in indemnities, \$13 billion of which was specifically due to drought.¹⁵

In 2012, a year of historic drought, the FCIP paid \$17 billion in indemnities, nearly triple the annual average from 2000–2020. Due to climate change, this could soon become the norm.

NASA predicts that corn yields will drop 24% in the next 10 years due to climate change.

Unfortunately, catastrophic years like 2012 could soon become the rule, rather than the exception. In 2022, the five-year average cost of these billion-dollar disasters alone was \$123.9 billion—a 305% increase in 30 years.¹⁶ The National Climate Assessment, the EPA, and NASA all agree that climate change will reduce commodity yields over time, with NASA predicting that *corn yields will drop 24% just in the next ten years.*^{17, 18, 19}

Because many crop insurance benefits are tied to yield, these expected crop losses due to extreme weather will pose new challenges for administration of the FCIP. Using different emissions scenarios, USDA’s Economic Research Service (ERS) estimated that climate impacts could result in the cost of the FCIP increasing from 10% to 37% if adaptation measures (e.g., soil health practices) are not put in place.²⁰ With such adaptation measures, FCIP costs are only expected to increase 3.5% to 22%.

USDA ERS predicts that climate impacts will increase FCIP costs up to 37% if adaptation measures—such as soil health practices—are not put in place.

a For more information about the impacts of climate change on agriculture, please refer to AFT’s 2023 white paper [Building Climate Resilience with State and Federal Farm Policy](#) and AFT’s new research on farmland loss [Farms Under Threat 2040: Choosing an Abundant Future](#).

In addition to growing climate risks, other factors are also making agricultural production more challenging and uncertain. According to ERS, the nationwide cost of production has increased dramatically in recent years, with the cost of intermediate product expenses excluding operator dwellings (e.g., fertilizer, seeds) increasing 35% from 2019 to 2023.²¹ Fertilizer prices have been particularly volatile, with prices of anhydrous ammonia, urea, and liquid nitrogen (the three primary forms of nitrogen fertilizer) increasing 235%, 149% and 192% respectively—just from December 2020 to December 2021.²² The cost of fuel has also varied dramatically, with diesel prices rising from \$2.98 per gallon in June 2019 to \$5.66 per gallon in June 2022, before reducing to \$3.73 per gallon in June 2023.²³

Paradoxically, increased risk may reduce crop insurance enrollment. New research suggests that demand for crop insurance is price-responsive or elastic, meaning that increased premium costs (e.g., due to climate change increasing production risk) could deter enrollment.²⁴ Reduced enrollment would, in turn, have a negative impact on farm viability, and would contribute to “adverse selection,” where only high-risk farmers would purchase insurance. In addition, by resorting to covering the losses of uninsured farms through ad hoc disaster assistance, the federal government may unintentionally disincentivize participation in insurance programs.²⁵ USDA must take steps to address risk more comprehensively in order to prevent rapid premium increases and keep this essential tool accessible to farmers.

Greater production risks, such as due to climate change, would lead to higher premium costs. This could disincentivize FCIP enrollment, thus further increasing farmer financial risk.

Soil Health Practices Reduce risk

As production risks increase—from climate-fueled extreme weather to rising input prices—farm yields are expected to fall, and indemnities are expected to rise. However, farmers can proactively reduce vulnerability to these risks by adopting soil health practices.

NRCS defines soil health as the “continued capacity of soil to function as a vital living ecosystem that sustains plants, animals, and humans.”²⁶ USDA summarizes the benefits of soil health as allowing producers to “reduce erosion, maximize water infiltration, improve nutrient cycling, save money on inputs, and ultimately improve the resiliency of their working land.”²⁷ Commonly recommended practices for building soil health include conservation tillage (no-till or reduced tillage), cover crops, and conservation crop rotations.

In the Midwest, adoption of just two soil health practices resulted in a 24% reduction in the odds ratio of prevent-plant losses.

Combined, drought, flood, and excessive moisture/precipitation/rain were responsible for 62% of crop insurance indemnities between 2012 and 2021.²⁸ However, improved soil health can increase resilience to both extremes of the water spectrum. According to ERS research, “management practices that increase soil organic matter while reducing soil-moisture loss—such as no-till or reduced tillage, use of cover crops, and conservation crop rotations—may help farms adapt to drought risk.”²⁹ Maintaining higher

levels of organic matter has also been shown to protect corn yields and reduce indemnities, even under severe drought conditions.³⁰ On the other end of the spectrum, recent research using USDA

data found that across 6 Corn Belt states, consistent use of cover crops and no-till resulted in a 24% reduction in the odds ratio of prevent-plant loss in the particularly wet year of 2019.^{b, 31}

In addition to protecting yields, soil health practices can also boost them. A meta-analysis of 106 studies showed that certain cover crop mixes could boost grain crop productivity by an average of 13%.³² Diversifying corn-soybean rotations, adding cover crops, and reducing tillage has increased yields by 7% and 22% for corn and soybeans respectively during hot and dry years.³³ Finally, soil health practices such as cover crops and perennial planting can also help to regulate soil temperatures, enabling crops to better withstand extreme temperatures.³⁴

Certain cover crop mixes can boost grain crop productivity by an average of 13%.

Recognizing the risk-reducing benefits of soil health practices, the federal government has already made program improvements to this end. In the 2018 Farm Bill, Congress clarified rules and added flexibility regarding cover crop termination dates. In 2021, USDA added flexibility regarding haying, grazing, and cutting cover crops on prevent plant acres, saying that given recent “extreme weather patterns and the need to provide producers ample opportunities to protect the nation’s natural resources... [RMA] has re-evaluated the interaction between cover crops and the Federal crop insurance program.”³⁵

Soil health practices can reduce reliance on unpredictable inputs such as fertilizer and herbicide.

Soil health practices also help farmers reduce their reliance on expensive and unpredictable off-farm inputs. According to USDA’s Sustainable Agriculture Research & Education (SARE) program, cover crops can decrease expenses for experienced farmers by \$34 to \$50 per acre due to reduced need for fertilizer, weed control, and erosion repair.³⁶ Reducing tillage also allows farmers to make fewer field passes, thus saving on labor, fuel, and machinery costs. According to NRCS,

continuous conventional tillage requires about six gallons of diesel fuel per acre each year, while continuous no-till requires less than two gallons per acre.³⁷ Assuming \$4 per gallon, a 500-acre farm would save \$8,000 per year by shifting to no-till.

In general, these practices are most effective when combined and integrated into soil health management systems where multiple practices are used in tandem. They also have important co-benefits such as increased biodiversity, improved water quality, flood risk mitigation for surrounding communities, and more.^{38, 39} It is important to note, however, that soil health is not a risk reduction “silver bullet.” Rather, it is an important tool to be used alongside improved seed varieties, precision agriculture, and more.

Economic Benefits of Soil Health Practices

In addition to reducing risk as well as reliance on external inputs, soil health practices also have direct economic benefits to farmers. AFT’s [Soil Health Economic Case Studies](#) used partial budget analysis to estimate the economic benefits that farmers have experienced from investing in soil health. Of the ten row crop farmers profiled in the study, eight attributed a yield increase to their soil health practices (valued from \$14 to \$151 per acre); nine saved on machinery use, fuel, and labor expenses by switching to reduced tillage (valued from \$14 to \$77 per acre); and all ten farmers increased their net income

b A farmer will file a prevented planting claim when they are unable to plant an insured crop, often due to excessively wet weather.

(valued from \$4 to \$59 per acre). The study also included three almond growers who saw net incomes increase from \$99 to \$1,502 per acre.

Below is a brief summary of four of the fourteen case studies:

Farm	Soil Health Practices Adopted	Economic Benefits	Economic Costs	Net Income Increase
Homewood Farms, Ohio (Corn, Soy)	<ul style="list-style-type: none"> Nutrient management Cover crops 	<ul style="list-style-type: none"> Increased corn yield Machinery savings 	<ul style="list-style-type: none"> Cover crop seed, seeding, and termination Soil health learning activities Increased fertilizer use, due to yield increase 	\$56/acre
Ifft Yorkshires, Illinois (Corn, Soy)	<ul style="list-style-type: none"> Strip-till Nutrient management Cover crops 	<ul style="list-style-type: none"> Increased soybean yield Pesticide and herbicide savings 	<ul style="list-style-type: none"> Cover crop seed, seeding, and termination Soil health learning activities Use of variable rate technology 	\$22/acre
HaR-Go Farms, New York (Corn, Soy, Hay, Sorghum)	<ul style="list-style-type: none"> No-till Nutrient management Cover crops 	<ul style="list-style-type: none"> Forage savings, due to use of cover crops as forage Fertilizer savings Machinery savings 	<ul style="list-style-type: none"> Cover crop seed, seeding, termination, and harvest Soil health learning activities Increased machinery costs Nutrient management consultant fees 	\$11/acre
Rogers Farm, California (Almonds)	<ul style="list-style-type: none"> Nutrient management Conservation cover Mulching Compost application 	<ul style="list-style-type: none"> Increased almond yield Fertilizer and pesticide savings Water use savings 	<ul style="list-style-type: none"> Soil health learning activities Leaf sampling Increased mulch and compost application costs 	\$991/acre

While individual results will vary, these case studies show how soil health practices can have real economic benefits for a range of farmers, through increased yields, savings on inputs, and reduced passes with machinery. However, soil health practices can also have even more direct economic benefits for farmers when incentivized by federal, state, or local programs.

One such program was USDA's Pandemic Cover Crop Program (PCCP), which was based on successful programs in Illinois, Indiana, Iowa, and Wisconsin. The PCCP provided a \$5 per acre rebate on crop insurance premium payments for farmers who had planted cover crops, acting much like a "good driver discount" offered by some automobile insurance agencies. Although \$5 per acre did not cover the full cost of the practice (median cost of seed, seeding, and termination is \$37 per acre), the PCCP was still extremely popular.⁴⁰ In the

By offering a crop insurance premium rebate for planting cover crops, the Pandemic Cover Crop Program operated much like a "good driver discount."

two years it ran, the PCCP enrolled 22 million acres, sending over \$100 million to farmers across the lower 48 states.⁴¹ This program showed the appetite that farmers have for soil health—especially when paired with minimal paperwork requirements. The program is no longer in effect since it relied on temporary pandemic relief funding.

Barriers to Soil Health Practice Adoption

Current soil health practice adoption is not sufficient to substantially mitigate risk across the agricultural landscape. Although farmers have adopted conservation tillage on a significant percentage of acres in recent years, nearly one-third are still in intensive tillage, and only 6% of harvested annual cropland acres have cover crops.^{42, 43} Low adoption rates can be attributed to factors such as financial cost, time burden, fear of revenue loss (especially during the first few years), insecure land tenure, lack of access to appropriate equipment, and insufficient knowledge or support to make operational changes.^{44, 45} Many of these barriers could be overcome through additional financial and technical assistance. However, the FCIP itself also poses barriers that can unintentionally limit adoption of soil health practices on insured cropland.

The first barrier is that the FCIP focuses on reducing *financial risk* (the potential for negative farm-level economic impacts, such as lost revenue due to price changes or yield declines) rather than *production risk* (the potential for negative production impacts, such as a failed harvest due to drought). This can be contrasted with automobile insurance, which may offer “good driver” premium discounts for not speeding (and thus reducing the likelihood of an accident).

The FCIP focuses on reducing financial risk rather than production risk.

Insured farmers must “follow all the practices considered prudent and responsible... to produce your crop’s historic yield.”⁴⁶ While the FCIP does recognize that some practices reduce risk—irrigated fields, for example, earn lower premiums—for the most part, the FCIP does not differentiate between the risk profiles of various “prudent and responsible” practices.⁴⁷ For instance, conservation tillage, which limits soil disturbance, is considered to have an equal impact on risk as the use of a moldboard plow, which severely disturbs and exposes the soil. This is despite research showing that conservation tillage increases both soil health and the productive capacity of the land over time.

The FCIP contains structural disincentives to adopting risk-reducing soil health practices.

The second barrier is that many farmers encounter—or perceive—structural disincentives within the FCIP to reducing production risk. Some farmers fear that any major management change, such as adopting soil health practices, could negatively impact their indemnity payment or program eligibility. Many soil health practices also have a “learning curve” which can initially reduce yields, even

though practices like cover crops do generally result in increases in yield and yield consistency over time.⁴⁸ Because the value of the premium—and thus the indemnity—are calculated using up to 10 years of production history, even a short-term yield reduction can result in lower indemnity payments for years into the future.

Additionally, the Good Farming Practice Determination Standards Handbook, which defines the program’s rules for eligibility, requires that a production method allow the crop to “make normal progress toward maturity.”⁴⁹ This vague phrasing can sow doubt as to whether soil health practices are compatible with crop insurance requirements at all. As a result, many producers fear that soil health practices will compromise their program eligibility.

Unfortunately, this concern is not hypothetical—farmers *have* lost insurance eligibility by engaging in soil health practices (including a farmer who participated in an AFT Farm Bill workshop). Despite changes meant to address concerns related to cover crop termination in the 2018 Farm Bill, these fears have lingered. For instance, while NRCS promotes intercropping (growing two or more crops in close proximity to each other) as a way to improve soil health, reduce inputs, and manage pests, the practice makes a cash crop uninsurable.^{50, 51} A farmer can also lose eligibility due to late cover crop termination.

Many farmers worry that adopting soil health practices could put critical indemnity payments into jeopardy.

In short, because many farmers rely on indemnity payments to remain viable, they can feel forced to prioritize protecting eligibility over adopting risk-reducing soil health practices.

The challenges of implementing soil health practices for reducing risk are exacerbated by the fact that crop insurance and conservation programs are managed by different agencies with different mandates. This means farmers must seek out multiple forms of assistance from different agencies (e.g., RMA and NRCS) to get clarification on how conservation and risk management programs can be used compatibly. This requires time that is in short supply for farmers and acts as a meaningful disincentive to soil health practices. This applies to all farmers, even those most dedicated to adopting practices to reduce risk and build resilience.

Recommendations

Climate change is already here, and is predicted to substantially increase production risks and FCIP program costs. While proactive actions will never eliminate all risk, research demonstrates that soil health practices could help boost yields in normal conditions and stabilize yields in particularly wet and dry conditions. Stabilized yields could in turn reduce insurance premium rates, moderate FCIP program costs, support farm revenues and overall viability, contribute to a stable national food supply, and provide broad environmental benefits.

AFT proposes that the following recommendations be considered by Congress for inclusion in the next Farm Bill and by USDA for implementation in order to enhance the FCIP's ability to reduce risk through soil health practices. These recommendations recognize that crop insurance is a critical part of the farm safety net. First and foremost, the FCIP must continue to provide accessible financial assurance to farmers.

Farm Bill Recommendations

The next Farm Bill must ensure even greater compatibility between crop insurance and the soil health practices that advance the goals of the FCIP. This includes passing legislation that will support the adoption of cover crops while simultaneously signaling to producers that soil health practices are compatible with the FCIP. It also includes pursuing a research agenda that will either allow RMA to update actuarial tables to reflect the risk-reducing benefits of soil health practices or will give Congress a solid rationale for creating additional incentives for adopting soil health practices.

1. Include the COVER Act in the Next Farm Bill to Continue FCIP Support for Cover Crop Adoption

The FCIP is authorized to offer additional subsidy assistance to farmers who meet certain criteria. For instance, beginning and veteran farmers receive a 10% reduction on their premium costs, independent of additional premium cost calculations.⁵²

Illinois, Iowa, Indiana, and Wisconsin currently offer programs that provide a \$5 per acre crop insurance premium rebate for planting cover crops. Because these programs reward farmers for engaging in best practices, they operate much like a “good driver discount.” These simple and accessible programs with low paperwork requirements have been highly popular: In 2021, Illinois’ Fall Covers for Spring Savings program was in such high demand that the first-come first-serve funding was exhausted within hours, leaving 20,000 acres of applications unfulfilled.⁵³

Due to this demonstrated success, the premium rebate idea was brought to the federal level as the Pandemic Cover Crop Program (PCCP) in 2021 and 2022, which also offered a \$5 per acre insurance rebate for cover crops. In year one of the PCCP, farmers received \$60 million to support planting cover crops on 12 million acres. In year two, farmers received over \$50 million, with nearly a quarter of a million dollars going to farmers enrolled in the Whole Farm Revenue Protection Program. Both years, the program benefitted farmers across the lower 48 states, with the greatest number of farmers coming from Texas, Iowa, Indiana, Georgia, Kansas, Missouri, Nebraska, Minnesota, North Dakota, and Illinois. The top commodities this supported cover crops on were corn, soy, cotton, sugar beets, peanuts, dry beans, sorghum, and wheat.⁵⁴ The program concluded with the 2022 crop year since it was reliant on temporary funding from Congress. Expanding on the PCCP was included as a recommended action within RMA’s Climate Adaptation Plan, and was proposed in the President’s FY24 budget.^{55, 56}

Congress should codify this program in the FCIP by including the COVER Act in the next Farm Bill. In 2023, Representatives Casten (D-IL), Bost (R-IL), and Slotkin (D-MI) and Senator Brown (D-OH) introduced the [Conservation Opportunity and Voluntary Environment Resilience Program \(COVER\) Act](#) (H.R. 3478), to codify the program.⁵⁷ The bill also includes a pilot to evaluate the risk mitigating potential of other soil health practices.

In addition to incentivizing a risk-reducing practice and putting money back in farmers’ pockets, the COVER Act would help to dispel concerns that soil health practices are incompatible with crop insurance. The program would also be a valuable tool for encouraging farmers to report cover crop acreage which would help to inform research as well as the development of future policies and programs. In addition, the COVER Act would assist USDA in meeting its [soil health goal](#) of expanding cover crop adoption to 30 million acres by 2030.

2. Advance Research to Determine the Impact of Soil Health Practices on Production Risk

This paper has laid out many arguments for how soil health practices can reduce on-farm financial and production risk, but many questions remain to be answered: Which soil health practices most effectively reduce various aspects of production risk? In which climate and weather scenarios are they most effective? In which regions do they work best? On which production systems? What is the time horizon for realizing risk-reduction benefits? How would broader adoption of soil health practices impact FCIP costs, administration, and enrollment?

Congress should direct RMA, in partnership with other relevant agencies, to develop and pursue a research agenda to answer these and related questions in order to better understand the

relationship between soil health practices and production risk. By answering more of these types of questions, the FCIP would be able to more accurately predict risk by taking factors such as soil health practices into account in actuarial tables. If RMA concluded that soil health practices did reduce risk, these actuarial updates would lower premiums for farmers who implemented such practices.

In the event that RMA's findings were not sufficient for updating actuarial tables (e.g., if the geographical distribution was not wide enough), **Congress should use these research results to inform incentives for adopting soil health practices, similar to a “good driver discount.”** The creation of an incentive program would also, in turn, help to generate the data necessary to inform future actuarial tables. Such results could also be used to inform farmer decision making around soil health practice adoption.

For additional details related to USDA's role in carrying out this recommendation, see Recommendation #1 in the Administrative Recommendations section below.

3. Ensure that Farmers Adopting Diverse Crop Rotations are Not Disadvantaged by Actual Production History in Calculating Premium Costs

The value of a farmer's liability, and thus the cost of their premium, is determined in part by their expected yield. This expected yield—called actual production history, or APH—is created by averaging the previous 10 years of yield data. In cases where a farmer has fewer than four years of data (e.g., they're a beginning farmer), their APH is instead set as a percentage of the county-wide 10-year average for a crop, called the transition yield or “T-yield,” which can be as low as 65% of the county average.⁵⁸ This low T-yield reduces the value at which their crop can be insured, which in turn reduces the value of a potential indemnity—as well as the level of credit they can access.

Unfortunately, this calculation may unintentionally discourage diverse crop rotations, another risk-reducing soil health practice. While it takes four years to build an APH for a given crop on a given tract of land, a farmer who practices a diverse crop rotation would have that timeline extended—a three-crop rotation, for instance, would require a total of 12 years of yield history before they “graduate” from the T-yield. This provides a strong incentive for farmers to grow the same crop for consecutive years rather than adopt a diverse rotation when they rely on crop insurance.

In order to ensure that farmers who wish to implement a diverse rotation are not unduly penalized by the T-yield, **Congress should direct RMA to research the risk impacts of diverse rotations.** As with other soil health practices, such research could translate into the risk-reducing benefits of crop rotations being better factored into RMA actuarial tables and/or inform the consideration of incentives by Congress.

Administrative Recommendations

1. Pursue Research Agendas on the Risk Reduction Benefits of Soil Health Practices

As described in detail in Farm Bill Recommendations #2 and #3 above, **RMA should pursue research agendas related to determining the risk impacts of soil health practice adoption—particularly cover crops and diverse crop rotations—with the goal of using this research to update actuarial tables in order to better predict farmer risk factors.**

RMA—in collaboration with FSA, NRCS, and other relevant agencies—is uniquely positioned to advance these research agendas due to the information that it already collects on acreage, production, cause of loss, and more. For research related to cover crops specifically, RMA could utilize information collected by the PCCP and state-level crop insurance rebate programs on cover crop acres. An additional data source could include FSA’s 578 form, which is already part of regular reporting requirements for farmers. This form was used to determine PCCP eligibility, and would allow RMA to collect additional data without adding any administrative burden to farmers. Additionally, RMA already collects data on two production practices when determining premium costs—irrigation and organic status. This list of practices could be expanded to include common soil health practices such as conservation tillage and cover crops. Sharing this information and use of these practices, however, should not be used as a condition of eligibility for crop insurance programs.

It should be noted that research into the risk-reduction benefits of conservation practices could also be done through cooperative partnerships with non-profits and/or universities. In doing so, protecting producer privacy must be paramount. One model to follow could be the research conducted jointly by USDA, the University of Illinois, and the Meridian Institute to develop AGrEE’s 2019 Conservation and Crop Insurance Research Pilot report. This project combined data from RMA, FSA, NRCS, and private sources, and met the highest level of data privacy standards—only the University of Illinois research team had access to the raw data, all individual identifiers were stripped from the data early in the process, and summary results were only provided in aggregate.⁵⁹

2. Improve Collaboration between RMA and NRCS to Harmonize Program Rules and Improve Conservation Support

Despite RMA’s recent updates to cover crop termination guidelines and rules around cover crops on prevent plant acres, conflicts remain between RMA’s Good Farming Practices and NRCS conservation practice standards. One example is “planting green” (planting a cash crop directly into a cover crop), or planting cover crops after a summer-harvested crop like wheat. A farmer who attended one of AFT’s Farm Bill workshops experimented with intercropping through a NRCS Conservation Stewardship Program (CSP) contract, which involved growing two or more crops in close proximity. In spite of her NRCS contract, she lost insurance coverage due to the practice not being permitted by the Good Farming Practice standards.

RMA and NRCS should continue their work to harmonize the Good Farming Practices with NRCS conservation practice standards to ensure that, at the least, no other farmer loses insurance coverage due to adopting an NRCS-approved soil health practice.

Additionally, RMA and NRCS should collaboratively develop producer guidance on how to adopt soil health practices without running afoul of Good Farming Practices rules. This could include creating county-specific guidance on what practices are compatible under current rules as well as developing resources to direct farmers to local agricultural experts who can be consulted to determine the effectiveness of a practice or who can provide a Good Farming Practices decision.

Finally, **RMA and NRCS should collaborate to ensure that producers utilizing the FCIP also receive voluntary conservation support.** For example, this could include RMA automatically providing anonymized county-level cause of loss data to NRCS and/or state soil health programs. This would enable NRCS and states to increase outreach and education for voluntary conservation programs in these acres to mitigate such losses in the future. It would be critical to ensure that this information not be used for regulatory purposes, or violate personal privacy.

3. Treat Cover Crops Like Any Other Input and Offer New Endorsement Options for Soil Health Practices that Mitigate Risk

In crop year 2022, farmers in select regions of the Corn Belt were able to access the Post Application Coverage Endorsement (PACE) through the FCIP. PACE allows farmers who split-apply nitrogen to corn (applying in multiple applications, rather than just once) to retain eligibility for crop insurance even if they cannot do a second application due to weather conditions.⁶⁰ The goal of the program is to encourage corn growers to apply more fertilizer post-planting in order to reduce nutrient losses and water quality concerns. In a sense, PACE acts as a “seal of approval,” allowing farmers to adopt an environmentally beneficial practice that could potentially reduce yield.

The PACE pilot, developed through the 508(h) process for Private Sector Developed Plans of Insurance, demonstrates a way to develop crop insurance products that promote compatibility between soil health practices and crop insurance.⁶¹ This is an important pathway because, despite recent updates to the Good Farming Practices and other new guidance, many farmers still worry that cover crops may complicate or affect eligibility for crop insurance. This is, in part, the result of cover crops being considered differently than other inputs that a farmer might utilize, such as fertilizer.

Similar to PACE, USDA should develop endorsement options allowing farmers to utilize these and other soil health practices that may be at odds with existing crop insurance eligibility. These options should be piloted and suggested through 508(h) or a similar process. This would allow for testing and evaluating the ability of a diverse range of soil health practices to protect yields and improve soil health.

4. Improve Access, Education, and Promotion for the Whole-Farm Revenue Protection Program

Rather than insuring individual crops, the Whole-Farm Revenue Protection program (WFRP) allows diversified producers to insure the operation’s total revenue under a single plan. As such, WFRP is an important safety net for diversified operations, and provides an opportunity for other farms to promote diversification. The way the program is currently set up, it even *rewards* greater levels of diversification. However, the program is currently difficult to access and use, due in part to challenges with data gathering and the small number of approved insurance providers (AIPs) that offer the product.

RMA should address these challenges by providing enhanced templates and guidance for data collection; training FSA staff and AIP agents on how the program works; and providing additional program outreach, education, and technical assistance to producers. RMA has already developed a partnership with the University of Arkansas to increase farmer outreach, education, and technical assistance related to WFRPP. This partnership with a trusted institution could serve as a model for future outreach to farmers, as well as AIP training efforts to ensure that agents understand the product and have an avenue for continued learning. In particular, farmer education should include support for development and maintenance of the record keeping systems necessary for WFRP enrollment.

Conclusion

The Federal Crop Insurance Program is an important tool for ensuring the long-term productivity and viability of the nation’s food system. As such, the program must be protected and updated to contend with all of the challenges the 21st century has in store. As the impacts of climate change continue to grow, and our farmers feel the strain, USDA’s Risk Management Agency will need to expand its scope to include reducing production risks through the use of soil health practices. In so doing, the program will moderate its own costs while keeping farmers in business and food on our plates.

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