



June 19, 2020

The Honorable Brian Schatz
U.S. Senate
Washington, DC 20510

The Honorable Tammy Baldwin
U.S. Senate
Washington, DC 20510

RE: U.S. Senate Democrats Special Committee on the Climate Crisis rural and agricultural stakeholders request for comment

Dear Chairman Schatz, Sen. Baldwin, and members of the Special Committee:

Thank you for your efforts to review and mobilize action to address climate change. National Farmers Union (NFU) represents about 200,000 family farmers, ranchers and rural residents across the country and works to protect and enhance the economic well-being and quality of life for all family farmers and ranchers and rural communities.

Climate change is having a significant impact on family farmers and ranchers. Changing growing seasons, precipitation patterns, pest pressures, and increasingly frequent and severe extreme weather events are making what is already a tough and risky business even more difficult. These challenges vary significantly from region to region and among the various types of farmers and ranchers. Thus, government programs for agriculture that look to address climate change must be flexible to assist all production types, farm sizes, regions, and commodities.

Climate change also presents opportunities for farmers and ranchers. Agriculture is in a unique position to provide the easiest, most cost effective, and most readily available means to reduce greenhouse gas (GHG) emissions on a meaningful scale through soil and biomass sequestration. Practices that sequester carbon also promote healthy soils that hold water in times of excessive moisture and make it available in time of drought, mitigating some of the effects of climate change and making the land and nearby communities more resilient to changing weather patterns and extreme storms. Farms and ranches are also well positioned to contribute to a clean energy future through the production of renewable energy, which will be key in ensuring the United States' long-term energy security.

In short, agriculture must be a key component of an economy-wide solution to reduce U.S. GHG emissions and to mitigate and adapt to climate change. We are encouraged by the work of this committee to develop potential policy solutions for climate change.

NFU Policy on Climate Change

NFU has long been concerned with the ongoing and future impacts of climate change on agriculture and food security. Our members have found that “climate change jeopardizes the livelihoods of U.S. family farmers, ranchers, and rural residents, as well as our nation’s food, fuel, and fiber supply.”¹ NFU supports a comprehensive federal approach that encourages and assists farmers and ranchers to implement climate friendly practices on their operations and recognizes the carbon sink potential and public good of well-managed agricultural and forested lands. At the crux of this policy should be a carbon credit trading or similar system that appropriately compensates farmers for sequestration activities. Family farmers are deeply committed to improving the sustainability of their operations. Carbon credits and other incentives can help them overcome financial barriers and ensure they are rewarded for the public good they provide.

The following comments are based on [NFU’s 2020 Policy Book](#).

Response to the special committee’s questions

- 1. What challenges do you face from weather extremes? What would it take for your community to be prepared for more severe storms, droughts, wildfires and flooding? What additional tools would be valuable as you work to plan for future weather extremes and to ensure your community is prepared to make it through disaster events?*

The effects of climate change take different forms in different regions of the country. In the San Luis Valley in south-central Colorado, water shortages stemming from years of lower than average snow melt and warmer temperatures are making it harder to produce the potatoes, alfalfa, and cattle that are mainstays of farms and ranches in the region. In northwestern Missouri, which experienced severe flooding when the Missouri River breached its banks last spring, locals know firsthand that too much water can destroy homesteads that were in their families for generations. In the Sonoma Valley in California, more wildfires are destroying or threatening high-value vineyards and are crippling local agritourism.

While the challenges vary greatly between regions and rural communities, there are actions and tools that would be effective for farmers and ranchers across the country.

Invest in soil health: Soil health is critical to farmers’ and ranchers’ productivity and is at the core of the climate services agriculture provides. Healthy soils hold on to water and nutrients, reduce pest pressures, and sequester carbon. Soil health practices should be supported across America’s agricultural lands through financial incentives and technical assistance, and farmers must have flexibility to employ science-based practices and activities that best fit their operation’s unique needs. The primary barriers farmers face when making any adaptation to

¹ 2020 Special Order of Business

their operation are the cost of new machinery, tools and inputs. Farmers also incur short-term risks when making even minor adjustments to their production system. Increased financial and technical support through USDA Natural Resource Conservation Service (NRCS) programs including the Environmental Quality Incentives Program and the Conservation Stewardship Program will help farmers adapt to the effects of climate change and protect rural communities from extreme weather.

Construct and maintain climate resilient infrastructure: Family farmers and ranchers are reliant on the nation's infrastructure to protect their land, move their products to market, and ensure that they have access to the latest technologies. However, America's public works are often unable to deal with the pressures of climate change. Dam collapses across the Midwest in the spring of 2019 and again earlier this year have flooded farmland, killed livestock, destroyed farm buildings, and crippled supply chains.² Meanwhile, the lack of broadband in rural areas limits some farmers and ranchers from using precision technologies that could help to curb their emissions and access information on best practices and new markets. A significant and long-term investment is needed in infrastructure to protect farms and ranches from the effects of extreme weather and provide them the tools to respond to climate change.

Research long-term soil health and terrestrial carbon sequestration: Public agricultural research in the United States is falling behind the rest of the world, and the ramifications could be severe.³ Limited public dollars for agriculture research has caused many land-grant universities to look to private sources and the creation of marketable products to fund their work. Public research into soil health and terrestrial carbon sequestration can be slow and often yields advances in best practices rather than marketable products. However, soil health research will be vital to the longevity and prosperity of America's farms and ranches, thus Congress should make the necessary investments in USDA research programs and its Climate Hubs, which provide regionally specific information and tools to farmers. Currently the Climate Hubs do not have their own appropriations and rely on funding from other USDA agencies.

Strengthen the farm safety net: As farmers face new challenges from climate change, the farm safety net has been slow to adapt. In some cases, farmers and ranchers have had to wait months for Congress to approve disaster payments following extreme weather events. Meanwhile, crop insurance has been pushed to the brink in the aftermath of storms that it was not designed to account for. The deep financial impact of extreme weather has limited farmers' ability to adopt better soil management practices. USDA estimates that the price tag for the crop insurance program will increase by an average 22 percent by 2080 if emissions trends

² Link to Jeanne's blog

³ <https://www.feedstuffs.com/news/report-shows-how-ag-research-funding-can-supercharge-us-industry>

continue.⁴ Congress and USDA should create a climate resilient safety net that recognizes and protects farmers from the growing risks from climate change.

- 2. What are the most important reasons for acting to improve resiliency and slow the impacts of changes to climate? How would you describe the risks and local impacts of inaction?*

Extreme weather, consolidation, trade wars, and now the COVID-19 pandemic have caused volatility in agricultural markets and sent commodity prices in some cases below the cost of production. As the farm economy remains in a slump, farm bankruptcies are on the rise and farmers and ranchers—and the communities where they live—are struggling to get by.⁵ The potential issues caused by climate change—extreme weather, changing growing seasons, and new pest pressures—threaten to make an already bad situation worse.

At a time when farmers and ranchers are perhaps most in need of investing in their land to ensure the climate resiliency of their operations, they do not often have the resources to do so. Losing a family farm not only ends what could have been a generations-long way of life but also puts strain on the food supply and rural communities. Climate policy should compensate farmers and ranchers for the public good that they provide through land management and encourage markets and other opportunities that pay farmers to sequester carbon and mitigate the effects of climate change. If done right, climate policy can sustainably bolster a strong agricultural economy for farmers and ranchers and ensure the longevity of rural communities.

- 3. Are there existing tools for farmers, ranchers and communities such as those at the U.S. Department of Agriculture in their Natural Resources Conservation Service or Farm Service Agency that would help your area be more resilient? Are there ways those tools could be expanded or changed to address the challenges land managers face in keeping our working lands and agricultural operations productive and profitable in the face of changes in local and large-scale weather patterns and growing conditions?*

Climate change must be among the primary considerations of USDA and its programs. NRCS is at the fore of agencies that can help farmers adapt to and mitigate the effects of climate change, yet this issue is not among its resource concerns. NRCS is understaffed and its programs are oversubscribed. Similarly, USDA risk management tools could be expanded or adapted to reflect the reduced risk for farms and ranches that have invested in their soil health and implemented other climate friendly practices and help farmers through implementation periods that often come with a short-term reduction in yields. Likewise, credit and loan programs could look at the reduced risk to a farming operation caused by the implementation

⁴ <https://www.ers.usda.gov/amber-waves/2019/november/climate-change-projected-to-increase-cost-of-the-federal-crop-insurance-program-due-to-greater-insured-value-and-yield-variability/>

⁵ <https://www.reuters.com/article/us-usa-farms-bankruptcy/us-farm-bankruptcies-hit-an-eight-year-high-court-data-idUSKBN1ZT2YE>

of climate friendly practices as they consider applications. Prioritization of climate change would aid the Forest Service as it works to prepare for and mitigate forest fires on what is already an inadequate budget. And rural development, energy, and broadband programs could benefit from a focus on promoting a clean energy and high-tech future for rural America built around responding to and mitigating climate needs. While there are specific changes and funding increases to programs that could remove barriers and better support farmers and ranchers as they look to adapt to climate change, they should be led by a department-wide recognition of the threats it poses to family farmers and ranchers.

However, changes to USDA programs should not penalize farmers who have yet to act but rather build a system that considers these long-term risks and needs. Farmers and ranchers ought to be incentivized to innovate lead the country to a sustainable future.

4. *a. What are the most promising opportunities for land managers to benefit from climate action that are based on tools, such as conservation practices, that are currently in use?*

Improvements to soil health can promote climate resilience and have financial benefits for farms. In a series of case studies, American Farmland Trust (AFT) found that yields increased between 2 percent and 22 percent after farmers adopted soil health practices and saw an increase in net income of an average of \$41 per acre.⁶ Farmers enjoyed savings from reduced fertilizer, chemical, and fuel use, though they often faced steep upfront costs in altering their land management practices, according to AFT. These costs and benefits can vary widely based on environmental factors, soil quality, and production systems. While USDA NRCS programs can help to defray upfront costs, those programs are often beyond capacity, underfunded and, as discussed above, lack a clear focus on climate. All told, implementing good soil health practices can help to improve the environmental and financial sustainability of family farms and ranches.

4. *b. What new tools and strategies have the most potential for improving resiliency and sequestering carbon?*

Improving the resiliency of America's private lands and realizing the broad potential for terrestrial sequestration of carbon in agricultural soils will require work and attention from both the public and private sectors. USDA programs and government funding cannot fix the climate crisis alone—the private sector has an important role to play. These private sector efforts should be twofold. First, as food and other agricultural supply chain companies look to reduce their environmental footprint, they must not pass down unfunded sustainability-focused mandates to farmers and ranchers. Rather, companies should appropriately compensate agricultural producers for the extra work and costs that may occur. Secondly, carbon markets with strong private sector participation would create a revenue stream that

⁶ <https://farmland.org/soil-health-case-studies-findings/>

compensates farmers for sequestering carbon. Through these systems, companies can pay to offset some of their emissions through the purchase of sequestration credits. Carbon markets would put a value on the public good provided by agricultural carbon sequestration and take pressure off the government to fund all the necessary broad-scale changes to land management.

To be sure, carbon markets do work. North Dakota Farmers Union (NDFU) and NFU created the National Farmers Union Carbon Credit Program in 2006, which served as an aggregator of carbon credits that were traded on the Chicago Climate Exchange (CCX)—a voluntary cap-and-trade system. NDFU sold carbon credits that were earned on a per-acre basis with land management practices such as no-till and reduced-till cropping, long-term grass seeding, intensive rangeland management, and afforestation. At the program's conclusion in 2010, NDFU was the largest aggregator of agricultural soil credits in the United States and had distributed more than \$7.4 million to 3,900 farmers across five million acres. The market folded in 2010 after the Waxman-Markey climate bill failed in the Senate.

4. c. What are the key barriers to adoption of these practices? Are there solutions you would recommend prioritizing?

There are several barriers to implementing a system that appropriately compensates farmers for the environmental and climate services they provide. Years of consolidation in food companies and agricultural processors has limited the markets farmers and ranchers can sell into and reduced competition, thereby suppressing commodity prices. This highly consolidated industry has allowed for companies to pass mandates onto farmers on a range of issues, often without providing compensation for that work. Appropriately rewarding farmers for their climate and environmental services will require that the food and agricultural processing industries change how they look at their supply chain. Some companies are farther ahead on this than others, thus there may be a need to take action to prevent bad actors.

Private sector carbon markets are making huge investments into research and development to fill gaps left by a lack of public research into specific climate-related issues within agriculture, potentially delaying when they can fully launch. Carbon markets will also need broad buy-in from private companies, organizations, and citizens to purchase the credits to be effective. Without government support for reducing carbon emissions, companies that choose to buy carbon credits may be at a competitive disadvantage to those who do not and markets could be unstable. The government should work to ensure fair treatment of farmers and ranchers by the industries they sell to and a level playing field for companies as they seek to reduce their carbon emissions.

The federal government also has a key role to play in ensuring that carbon credit systems are delivered in a consistent and fair manner—an issue which the Growing Climate Solutions Act from Sens. Braun and Stabenow would start to address. USDA should have a system for

certifying carbon markets to ensure unbiased, science-based protocols. More uniform protocols will reduce confusion and skepticism among agricultural producers and purchasers of carbon credits.

4. *d. What challenges do you see in the balance of food and fiber production with the incorporation of additional resiliency and carbon sequestration activities? Are there tools or strategies that could help reduce the difficulty of these challenges?*

The widespread adoption of soil health improvements, carbon markets, and other climate-focused strategies will help farmers and ranchers make changes to their land and production systems. Working land can sequester carbon, thus land should be kept in production. Adding carbon sequestration to a farm's revenue stream will allow farmers and ranchers to diversify and explore new crops with potentially higher values, reducing the focus on commodities that have lost value due to over production. Congress should combat consolidation in agricultural processing supply chains—and ensure that carbon markets themselves are spared from efforts to consolidate—and consider tax incentives and other tools to encourage the development of new markets for commodities and livestock.

4. *e. What types of recognition, certification, compensation, or other acknowledgement would be most useful to promote the use of conservation practices that are particularly effective at reducing climate change?*

Certifications and other labels can be helpful tools for family farmers and ranchers looking to differentiate their products. However, experiences with these tools shows that they are not a silver bullet. Such systems can come with costs to certification that outweigh some of the premium, be undermined by cheap imports, and potentially face issues with fraud that drive down prices. Further, certain certifications may be required by a retailer or processor, though no premium or additional is provided to the farmers for meeting that standard. In looking to create a climate friendly food and agriculture industry, Congress, the private sector, and farmers should work to ensure that prices honestly reflect the environmental and ecosystems management services provided in addition to the cost of production. Certainly, a certification or label can be part of this effort, but it should not be the only piece.

5. *What technical assistance is most important for agricultural producers in your region? Who is best suited to deliver technical assistance? What additional tools or resources would make it possible to best tailor and deploy these strategies in your area?*

Family farmers and ranchers get information on conservation from a number of sources, though NRCS play a key role. Local NRCS staff is often known and trusted in a community and considered an important and neutral resource. NRCS technical assistance should remain cost effective for farmers and ranchers and avoid being privatized. While NRCS is best positioned to

give technical assistance, many offices are under-staffed as more than 1,000 positions are currently vacant, employees may lack needed training on soil health and other climate focused practices, and the agency is often underfunded in the appropriations process.⁷ USDA should fully staff NRCS and assess the likely increased staffing needs in light of climate change and Congress should be ready to fund those needs. Further, NRCS staff must be trained on best practices for application of appropriate land management tools to ensure needed outcomes in the field. NRCS technical assistance should also be able to provide regional and commodity appropriate advice, recognizing that there is no one-size-fits-all solution.

6. What technical assistance is most important for rural communities in your region?

Rural communities are also at risk from climate change and have a role to play in mitigation, adaptation and other efforts. USDA rural development grant and loan programs should consider climate resiliency needs, including new infrastructure, green energy development, rural broadband connectivity, protections for downstream and underserved communities, training for rural health officials to recognize heat stress and other climate related issues, and resilient housing and business needs. Ensuring all rural communities have the tools and infrastructure needed will help to support farmers and ranchers and protect the rural way of life.

7. A wide range of solutions have been proposed to slow climate change, and there are additional strategies that could be developed. What approaches to policy and action to reduce the severity of climate change and the impacts of severe weather would you be most interested in seeing put in place? What do you see as the best way to accomplish action as quickly as possible?

Congress should work to promote the use of biofuels and implement a cap and trade or other emissions reduction trading system as it looks to implement strategies to slow climate change.

Renewable fuels: NFU supports growth in the use of renewable fuels, including ethanol, and any climate programs should work with the Renewable Fuels Standard (RFS) program. Ethanol, a renewable fuel produced largely from corn, has broad benefits for the environment. As a renewable, domestically produced resource, it reduces U.S. dependence on fossil fuels, and creates a cleaner burning fuel when mixed with gasoline. Real-world evidence shows use of ethanol blends reduces emissions of carbon monoxide, particulate matter, air toxic chemicals, and GHG compared to burning petroleum gasoline. As we move to even higher-level blends of ethanol, such as E20, there can be even more benefit to motorists and the environment as higher-octane fuel burns more efficiently. This results in better overall air quality than when vehicles burn conventional gasoline, significantly improving public health. The Energy Independence and Security Act of 2007 required EPA to conduct lifecycle GHG emissions

⁷ <https://www.agri-pulse.com/articles/13569-nrcs-hiring-1000-plus-employees-to-bolster-field-offices>

analysis to identify the renewable fuels eligible to meet the various categories under the RFS program. EPA conducted this analysis for corn-based ethanol as part of the 2010 RFS rulemaking. Since that time, published studies and more recent data have improved the understanding of corn ethanol's lifecycle GHG impacts. U.S. farmers have responded to demand and concerns by moving toward sustainable practices and intensification, not land expansion.

Emissions reduction system: NFU supports a national cap or tax on GHG emissions that would encourage the private sector to develop its own plan and methods for emissions reductions through efficiencies, carbon capture technology, and the trading of offsets. This economy-wide approach would set the United States on a path to a more sustainable future that allows flexibility for individual industries and businesses to act and adapt and would compensate farmers and ranchers for their climate services and fund much-needed research. Agriculture should have special exemptions under the tax or cap due to the carbon sequestration and other benefits the sector provides.

An economy-wide emissions reduction and offset trading system would not need to be built from scratch. There is already growing corporate interest in carbon emissions reductions, and many sectors are looking at their carbon capture potential. Meanwhile, several companies and organizations are building carbon markets to trade offsets provided by agriculture, forestry and other sequestering sectors. NFU is participating in one such carbon market effort. The Ecosystems Services Market Consortium (ESMC) works with farmers, food companies, and other actors in the supply chain to create voluntary, market-based approach to incentivize farmers and ranchers to implement conservation practices that provide quantified ecosystem benefits.⁸ Once the market is fully operational, farmers and ranchers will be able to sell credits based on environmental improvements and carbon sequestration on their land to companies and others who are looking to reduce their environmental footprint. The group is testing its protocols in pilot projects and plans to launch the market in 2022.

Congress should put a cap on carbon emissions and take action to encourage the private sector to innovate while ensuring a fair price for sequestered carbon. This approach allows for the flexibility necessary for economy-wide long-term changes.

Conclusion

Government efforts to address climate change must acknowledge the important role of agriculture in climate resiliency and GHG emissions reduction efforts. While climate change poses specific challenges to family farmers and ranchers and rural communities, it also presents opportunities that, if appropriately addressed, could result in environmental and economic resilience and prosperity. Programs and initiatives that promote on-farm conservation, expand on-farm energy production and biofuels, assist farmers in diversifying their operations, and

⁸ <https://ecosystemservicesmarket.org/about-us-2/>

increase agricultural research would be a boon to producers who are currently struggling in a depressed farm economy. All those efforts should rest on an appropriate economy-wide funding mechanism such as a cap-and-trade system.

Thank you for the opportunity to provide information on the policies, programs, and other activities Congress should consider as it reviews climate policy for agriculture. We look forward to working with you to identify solutions to this pressing issue in ways that strengthen our family farms and rural communities.

Sincerely,

A handwritten signature in black ink, appearing to read "Rob Larew". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Rob Larew
President, National Farmers Union