



November 22, 2019

The Honorable Kathy Castor
United States House of Representatives
2052 Rayburn House Office Building
Washington, D.C. 20515

Re: Select Committee on the Climate Crisis request for stakeholder information

Dear Chairman Castor, Ranking Member Graves, and members of the committee:

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

Climate change is having a significant impact on family farmers and ranchers of all crop and production types. Changing growing seasons, precipitation patterns, and increasingly frequent and severe extreme weather events have all taken their toll. NFU has long been concerned with the ongoing and future impacts of climate change on agriculture and food security.¹ However, climate change also presents opportunities for farmers. Agriculture is in a unique position to provide the easiest, the least costly, and the most readily available means to reduce greenhouse gas emissions on a meaningful scale through soil and biomass sequestration. Practices that promote healthy soils also help land hold water in times of excessive moisture and make water available in time of drought, mitigating some of the effects of climate change. Farms and ranches can also contribute to a cleaner energy future through the production of wind and solar energy, and the source materials for biofuels.

Agriculture must be a component of an economy-wide solution to reduce total emissions and mitigate and adapt to climate change. 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 must be something like a carbon credit trading system to serve as a funding mechanism to ensure that farmers are appropriately compensated for sequestration activities. True sustainability means leaving both the land and the farming operation better than it was.

We are encouraged by the work of this committee to develop potential policy solutions for climate change. The comments below detail NFU's policy related to climate change, experience

¹ NFU 2019 Special Order of Business on Family Farming and Climate Change: <https://1yd7z7koz052nb8r33cfxyw5-wpengine.netdna-ssl.com/wp-content/uploads/2019/03/Climate-SOB-030519.pdf>

with carbon markets and their potential for the sector, and policies that could help U.S. farmers and ranchers adapt to and mitigate the effects of changing weather patterns.

Overview of the current state of agriculture, risks and opportunities

U.S. family farmers and ranchers face an uncertain future. Commodity prices have fallen in many cases below the cost of production, while farm debt is on the rise and bankruptcies are at the highest rate since 1981.² Meanwhile, ongoing trade conflicts and recent moves by EPA to limit ethanol production under the Renewable Fuels Standard (RFS) have harmed key agricultural markets. While climate change poses an undeniable risk to family farmers and ranchers, in these difficult financial times many lack the resources to make changes to their land and operation to adapt to and mitigate the effects of changing weather patterns. Congress needs to work with farmers and the agriculture supply chain to change the economics around responsible practices.

U.S. family farmers and ranchers care deeply about their land and have for decades implemented conservation practices and adopted technologies to increase productivity while decreasing inputs. However, recent scientific developments are showing that there is more that could be done. We are quickly learning that to enhance resiliency, U.S. agricultural systems need a diversity of crops, reduced inputs, and protections for soil, water, and other limited natural resources.³ Healthier soils better absorb water, mitigating the risks from flooding and drought, while land management practices can substantially reduce risks from wildfires—benefits that are felt in communities far from the farm.

Creating a more resilient U.S. agricultural system will come at a cost. Natural resource conservation efforts on private lands are accomplished through voluntary USDA programs that offer cost share, technical assistance, and other incentives and aid for farmers, ranchers, and foresters to implement environmentally friendly practices. These programs, which cost about \$6 billion a year and cover a range of resource needs, are popular with farmers, ranchers and forest owners. However, USDA is limited by financial resources and staff, and is only able to fund about half of all requests from farmers for certain large programs and apply practices to only a small percentage of the roughly 1.3 billion acres of U.S. farm and private forest land.⁴ The government must enhance its efforts to encourage the move toward agricultural resiliency, recognizing the public good that terrestrial sequestration of carbon provides and the climate change mitigation potential of agricultural lands.

Unlike many sectors, U.S. agriculture has the potential to both reduce its own emissions and sequester additional atmospheric CO₂. U.S. agriculture accounts for about 9 percent of the 6.5 billion tons of greenhouse gasses emitted in the United States in 2017.⁵ Livestock emissions,

² USDA Economic Research Service: <https://www.ers.usda.gov/topics/farm-economy/farm-sector-income-finances/assets-debt-and-wealth/>

³ National Sustainable Agriculture Coalition: https://sustainableagriculture.net/wp-content/uploads/2019/11/NSAC-Climate-Change-Policy-Position_paper-112019_WEB.pdf

⁴ USDA ERS: <https://www.ers.usda.gov/topics/farm-economy/land-use-land-value-tenure/major-land-uses/>

⁵ US EPA: <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>

fertilizer use and soil disruptions, manure management and burning crop residues account for most of these emissions. These emissions have seen incredible reductions over the past several decades due to farmers' adoption of efficient technologies and sustainable practices that reduce inputs and improve soil health. These sustainability gains have been huge, and now farmers will need significant levels of technical and financial assistance to make the further improvements necessary in response to the changing climate.

NFU Policy on Climate Change and support for cap-and-trade systems

NFU policy is set through a democratic, grassroots, member-led process, and is reviewed each year. NFU's 2019 National Policy Book⁶ raises concerns about the effects of climate change and calls for farmers and ranchers to have a role in the conversation as the United States moves forward in greenhouse gas emissions reductions. NFU's climate policy calls for expanding the use of and research into innovative practices and tools to enhance soil health, emissions reductions, and terrestrial carbon sequestration with funding generated by the economy-wide trading of carbon credits or a national carbon emissions fee and dividend system. A cap-and-trade system applied to agriculture should allow farmers to use the full range of conservation tools to meet sequestration goals; be administered by USDA; prohibit a cap on agricultural emissions; and minimize the potential negative costs on farmers, ranchers, and rural communities.

In addition to calling for specific action on climate change, NFU's policy also supports the development of on-farm renewable energy and renewable fuels—including biofuels, wind, and solar—to ensure domestic energy security and reduce emissions from fossil fuels; USDA voluntary, incentive-based conservation programs; efforts to combat consolidation in agricultural markets and supply chains; and incentives and development of markets that encourage sustainable and regenerative farming practices.

NFU Carbon Credit Program and other market efforts

It's clear that a funding mechanism is needed to finance further improvements in agricultural lands, emissions reductions, and research. Cap and trade is a model that works for agriculture. In 2006, North Dakota Farmers Union and NFU launched the NFU Carbon Credit Program, which traded as part of the Chicago Climate Exchange's Soils Offsets Program. The program paid farmers for no-till and strip-till farming, long-term grass seeding, prescribed grazing, and reforestation. Most of the contracts were a five-year commitment, while the forestation contracts were a minimum 15-year commitment. By the time the exchange folded in 2010—after it was clear that the cap-and-trade program under consideration by Congress would not be implemented—more than \$7.4 million had been paid to more than 3,900 farmers across North Dakota and other parts of the county. This experience shows the power of a secure funding mechanism and that interest from growers exists.

NFU has continued to support private sector efforts on cap and trade and similar programs. Most recently, NFU has participated in the development of a private-sector funding mechanism

⁶ The 2019 National Policy Book is available here: <https://nfu.org/policy/>

for ecosystems services as part of the Ecosystems Services Market Consortium (ESMC).⁷ ESMC is working 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. The group is testing its protocols in pilot projects and plans to launch the market in 2022.

Response to Select Committee questions

The following policy suggestions and recommendations reflect NFU's 2019 National Policy Book.⁸

Carbon Pricing

NFU supports a national carbon cap-and-trade system that would include payments to family farmers and ranchers for on-farm conservation and soil and biomass sequestration efforts. Among the many benefits of this type of system is that upstream users are responsible for compensating farmers for the environmental services they provide. Any cap-and-trade effort in the United States should be aimed at meeting the Paris Agreement goal of limiting global warming to below 2 degrees Celsius.⁹ Cap-and-trade systems provide certainty that emissions reductions will be met while allowing the private sector and the market to deliver solutions. At its core, a carbon credit payment program for farmers and ranchers is a long-term commitment to in depth conservation-based land management.

The success of the NFU Carbon Credit Program shows how a cap-and-trade system can work for and be embraced by U.S. farmers and ranchers. Any cap-and-trade system considered by Congress should allow farmers to use the full range of conservation tools to meet sequestration goals; be administered by USDA; prohibit a cap on agricultural emissions; and minimize the potential negative costs on farmers, ranchers, and rural communities.

Innovation

A strong investment in agricultural research must underlie all climate efforts aimed at farmers and ranchers. NFU has been concerned by recent USDA actions to suppress climate related research findings from the department and underfund climate research infrastructure. Reductions in state and federal funds for crop and livestock research, especially amid the growing pressures on the sector from climate change, are also cause for alarm. These actions must be rectified.

USDA, and public and private research institutions must be tasked with assessing potential mitigation and adaptation practices for agricultural lands, with a focus on soil health, and work to determine their economic viability and carbon sequestration potential. Resources must be

⁷ More information on ESMC is available here: <https://ecosystems-services-market.org/>

⁸ NFU has also detailed its climate policy priorities in a May 21, 2019 statement to the Senate Agriculture Committee: https://1yd7z7koz052nb8r33cfxyw5-wpengine.netdna-ssl.com/wp-content/uploads/2019/05/NFU-Climate-Hearing-Statement_05212019-2.pdf

⁹ NFU supports the findings and goals of the Paris Climate Agreement: <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>

targeted toward public breeding programs in order to better provide farmers with regionally adapted seeds and practices, and toward energy and emissions reduction practices and technologies. Additional funding is also needed to develop new opportunities in renewable energy and biofuels. Research is needed to develop regionally appropriate renewable energy sources and technologies; feed stocks for biofuels and other biomass energy sources; engines that run solely on ethanol; uses for distillers' grain; and production of fuels and fertilizers from renewable energy sources.

Agricultural policies

NFU supports a comprehensive federal approach that would encourage and assist farmers in implementing climate friendly practices on their operations. Core elements of this approach include funding and promotion of USDA's existing voluntary incentive-based conservation programs; initiatives to expand on-farm energy production and biofuels; and measures to incentivize new markets and supply chains to help farmers diversify their operations.

Voluntary, incentive-based conservation: Increased funding and staff for USDA conservation programs will be key in any effort that aims to address and mitigate climate change. The Environmental Quality Incentives Program (EQIP) and Conservation Stewardship Program (CSP) are USDA's main tools for providing funding and assistance to farmers to implement conservation practices on agricultural lands. A host of changes to the program included in the 2018 farm bill were aimed at helping farmers and ranchers adapt to and mitigate weather volatility, a key product of climate change, including the establishment of Conservation Incentive Contracts within EQIP to target the program for longer-term, management-focused conservation and allow for higher reimbursement rates for state-designated high-priority practices.

We encourage Congress to examine ways to specifically prioritize EQIP for conservation practices that are most effective at sequestering carbon and continue to build upon the 2018 farm bill's push for better coordination between EQIP and CSP. This change allows farmers to seamlessly take advantage of both programs' benefits. It is critical that we encourage farmers to install and maintain comprehensive conservation systems. Further, Congress must continue to fund the Conservation Reserve Program acreage and funding for the Agricultural Conservation Easement Program. Farm bill programs such as these protect land from development and take highly erodible land out of production. Together, they play an important role in climate change adaptation and mitigation.

On-farm energy production: On-farm renewable energy generation and energy-efficient systems can help farmers access new revenue streams and reduce their carbon footprint and input costs. USDA's Rural Energy for America Program (REAP) has supported more than 15,000 renewable energy system installations and energy efficiency improvements nationwide. However, the program remains heavily oversubscribed. NFU supports increasing REAP funding to meet demand and to target the program to projects with the largest climate benefits.

NFU supports “expanding the utilization of anaerobic digesters.”¹⁰ However, in most cases, our members lack the quantity of waste necessary to serve as adequate feedstock for large-scale digesters. Thus, federal policy needs to encourage the proliferation of small-scale digester systems. NFU supports the Biorefinery, Renewable Chemical, and Biobased Product Manufacturing Assistance Program; and the Biomass Crop Assistance Program. Each of these programs can play critical roles in promoting the development of the bioeconomy, providing farmers with additional marketing opportunities.

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 greenhouse gases compared to burning petroleum gasoline. As we move to even higher-level blends of ethanol such as E20 + we see even more benefit as a higher-octane fuel, and the motor fuel can burn even 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 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.¹¹ U.S. farmers have responded to demand and concerns by moving toward sustainable practices and intensification, not land expansion.¹² In addition, federal policy needs to be strengthened to better support development and markets for advanced biofuels, biodiesel, and cellulosic ethanol.

Market-based incentives: Congress and the administration should take steps to incentivize and ease the way for new domestic markets and supply chains so that farmers can have more

¹⁰ NFU 2019 National Policy Book

¹¹ See, e.g., ICF, A Life-Cycle Analysis of the Greenhouse Gas Emissions of Corn-Based Ethanol, Report prepared for USDA (Jan. 2017), available at

https://www.usda.gov/oce/climate_change/mitigation_technologies/USDAEthanolReport_20170107.pdf

¹² See, e.g., Bruce A. Babcock and Zabid Iqbal, Using Recent Land Use Changes to Validate Land Use Change Models, Iowa State University Center for Agricultural and Rural Development, Executive Summary (2014), available at <http://www.card.iastate.edu/products/publications/pdf/14sr109.pdf> (“The contribution of this study is to confirm that the primary land use change response of the world’s farmers from 2004 to 2012 has been to use available land resources more efficiently rather than to expand the amount of land brought into production. ... Our conclusion that intensification of agricultural production has dominated supply response in most of the world does not rely on higher yields in terms of production per hectare harvested. Any increase in yields in response to higher prices would be an additional intensive response.”); see also Renewable Fuels Association, USDA Data Show Cropland Reductions in Counties with Ethanol Plants from 1997-2012, April 3, 2017, available at <http://www.ethanolrfa.org/wpcontent/uploads/2017/04/USDA-Data-Show-Cropland-Reductions-in-Counties-with-Ethanol-Plants-from1997-2012-1.pdf>.

control over what they produce and have the freedom to make climate friendly choices on their land. More diversified crop rotations have soil health and environmental benefits that in the long run can make land more resilient to extreme weather and help soil capture carbon. To see lasting, market-based climate benefits from agriculture, the government needs to examine ways to encourage markets that help farmers and ranchers improve their environmental stewardship. Such approaches could include tax incentives and marketplace incentives to encourage production and supply chains, and other market-based incentives for climate friendly production.

Non-CO2 Greenhouse gases

NFU supports the creation of voluntary, incentive-based programs to assist in cost share on practices that help U.S. farmers and ranchers reduce or capture greenhouse gases from their operations. Congress should also consider providing financial assistance to dairy farmers seeking to install digestors to capture methane and other gases. NFU also supports investments in research and precision agriculture tools aimed at more efficient application of fertilizers and other chemical inputs, and research in animal feed that is aimed at reducing livestock emissions.

Conclusion

Government efforts to promote on-farm conservation, expand on-farm energy production and biofuels, assist farmers in diversifying their operations, and increase agricultural research would be a boon to producers who are currently struggling in a depressed farm economy. Certainly, all those efforts must rest on an appropriate funding mechanism such as a cap-and-trade system. Climate change mitigation and resilience could help to rebuild rural areas and ensure the longevity of America's family farms and ranches.

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 policies and 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 "Roger Johnson". The signature is fluid and cursive, with the first name "Roger" being more prominent than the last name "Johnson".

Roger Johnson
President, National Farmers Union