



April 29, 2021

Secretary Tom Vilsack
Seth Meyer, Chief Economist
William Hohenstein, Director, Office of Energy and Environmental Policy
U.S. Department of Agriculture
1400 Independence Ave., S.W.
Washington, DC 20250

Via regulations.gov

Re: [Docket Number: USDA-2021-0003](#) – NRDC’s Comments on the Executive Order on Tackling the Climate Crisis at Home and Abroad

Secretary Vilsack:

The Natural Resources Defense Council (NRDC) appreciates the opportunity to comment on President Biden’s groundbreaking Executive Order on Tackling the Climate Crisis at Home and Abroad (Climate EO), 86 Fed. Reg. 14403 (Mar. 16, 2021), Docket No. USDA-2021-0003.

On behalf of our three million members, NRDC works to safeguard the Earth – its people, its plants, and its animals, and the natural systems on which life depends. Our current agricultural system threatens our environment and health, but agriculture also has great potential to protect our climate, enhance biodiversity, and build healthier communities.

We strongly support the Biden-Harris Administration’s commitment to transitioning our food system from climate problem to climate solution, while also prioritizing health and equity.¹ The Climate EO directs federal agencies to: end to fossil fuel subsidies; adopt policies to address disproportionate health, environmental, economic, and climate impacts on disadvantaged communities; and invest in climate-friendly infrastructure and jobs. Our comments highlight specific, near-term opportunities for USDA to act on these directives by supporting climate-smart agriculture.

At a macro level, USDA must recognize that a meaningful transition to climate-smart agriculture will require significant changes in our food and farming practices, including:

¹ See Allison Johnson & Andrea Spacht Collins, NRDC, Biden Sets Stage for Climate Resilient Food & Agriculture (Jan. 29, 2021), <https://www.nrdc.org/experts/andrea-spacht-collins/biden-sets-stage-climate-resistant-food-agriculture>.

- **Restoring soiling health through regenerative agriculture.** Soil building practices, including cover cropping, crop rotation, and application of compost, can pull carbon out of the atmosphere and trap it safely underground.²
- **Ending reliance on fossil-fuel based fertilizers and pesticides.** Use of synthetic fertilizers and pesticides can interfere with long-term soil health and carbon sequestration,³ in addition to threatening human and ecosystem health.⁴
- **Ensuring worker safety.** Increased exposure to extreme heat, wildfire smoke, and other health threats in a changing climate will make farming and food system work even more dangerous.⁵
- **Protecting communities from bearing the externalized costs of industrial food animal production.** Industrial food animal production can contaminate water, air, and soil and contribute to antibiotic resistance.⁶ It remains a serious health threat to surrounding communities, in addition to accounting for nearly two-thirds of greenhouse gas emissions in the U.S. diet.⁷
- **Building resilient regional food systems.** As extreme weather and public health crises become more common, regional supply chains that are short, flexible, and climate-friendly will be even more key to ensuring food security while also supporting local economies.⁸

² See, e.g., Ben Chou, Claire O'Connor, and Lara Bryant, NRDC, Climate Ready Soil: How Cover Crops Can Make Farms More Resilient to Extreme Weather Risks (November 19, 2015), <https://www.nrdc.org/resources/climate-ready-soil-how-cover-crops-can-make-farms-more-resilient-extreme-weather-risks>.

³ See, e.g., Nicole E. Tautgas et al., Deep soil inventories reveal that impacts of cover crops and compost on soil carbon sequestration differ in surface and subsurface soils, *Global Change Biology* (July 2019), <https://onlinelibrary.wiley.com/doi/abs/10.1111/gcb.14762>; UC Davis, Agricultural Sustainability Institute, Farm management effects on soil carbon stocks, <https://asi.ucdavis.edu/programs/rr/century-experiment/carbon>.

⁴ See, e.g., Allison Johnson, NRDC, Organic Farming Protects Communities from Toxic Chemicals (Aug. 14, 2020), <https://www.nrdc.org/experts/allison-johnson/organic-farming-protects-communities-toxic-chemicals>.

⁵ See, e.g., Lena Brook & Juanita Constible, NRDC, Treat Farmworkers as Essential, not Sacrificial (Sept. 14, 2020), <https://www.nrdc.org/experts/lena-brook/treat-farmworkers-essential-not-sacrificial>.

⁶ See, e.g., Paloma Sisneros-Lobato, NRDC, Industrial Farming Is Not as You've Pictured (Aug. 24, 2020), <https://www.nrdc.org/experts/paloma-sisneros-lobato/industrial-farming-not-youve-pictured>.

⁷ See, e.g., EPA, *Literature Review of Contaminants in Livestock and Poultry Waste* (2013), <https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockkey=P100H2NI.TXT>; Sujatha Bergen, NRDC, *Less Beef, Less Carbon* (Mar. 2017), <https://www.nrdc.org/sites/default/files/less-beef-less-carbon-ip.pdf>.

⁸ See, e.g., Andrea Spacht Collins, NRDC, We Must Fix Our Food System to Withstand Disasters (April 23, 2020), <https://www.nrdc.org/experts/andrea-spacht-collins/we-must-fix-our-food-system-withstand-disasters>.

- **Ensuring nutritious food gets to everyone’s plate.** While food insecurity could increase as the planet warms, climate-smart hunger policies can provide stable markets for farmers and healthy food for families.⁹
- **Minimizing food waste while scaling up composting capacity.** Each year, 30%-40% of all food in the U.S., accounting for about 4% of U.S. greenhouse gas emissions, is wasted¹⁰ – heading straight to landfill, incineration, down the drain, or tilled under in the field.

These fundamental elements of a climate-smart food system offer a wide range of benefits that extend far beyond its climate footprint. A holistic transition to organic and regenerative agriculture will:

- Safeguard the health of farming communities and the public;
- Make farms more resilient to extreme weather that is becoming increasingly common;
- Protect biodiversity and natural resources; and
- Support local economic development.

Critically, we also agree with Rural Coalition’s comments in this docket that **“A food and agriculture system that is not equitable, inclusive and just is, by definition, not sustainable.”** A successful climate-smart approach to food, fiber, and forestry must result in both climate benefits and equitable outcomes – including enhanced benefits for our most underserved communities and food system participants, and not a further skewing of the marketplace. We also agree with Rural Coalition that USDA’s goal should be “comprehensive programs that economically support all producers who engage whole farm solutions based on best practice for their regions, operations, local economies and the climate.”

In a recent interview,¹¹ Shalanda Baker, the Department of Energy’s Deputy Director for Energy Justice and Secretary’s Advisor on Equity, spoke about the need for a strong commitment to energy justice, to ensure communities of color are well-represented in our energy transition. The same is true for our transition to climate-smart agriculture: USDA must lead with a commitment to equity and center the needs of farmers of color, farming communities, neighboring communities, and workers who have been harmed and underserved by our extractive food system.¹²

⁹ See, e.g., FAO, IFAD, UNICEF, WFP and WHO, The State of Food Security and Nutrition in the World 2020 (2020), <https://doi.org/10.4060/ca9692en>.

¹⁰ “Roadmap to 2030: Reducing US Food Waste by 50% and the ReFED Insights Engine” (ReFED, February 2021).

¹¹ Erick Trickey, Energy justice is the next civil rights issue, Experience (Apr. 21, 2021), <https://expmag.com/2021/04/energy-justice-is-the-next-civil-rights-issue/>.

¹² See, e.g., Jared Hayes, EWG, USDA Data: Nearly All Pandemic Bailout Funds Went to White Farmers (Feb. 18, 2021), <https://www.ewg.org/news-insights/news/usda-data-nearly-all-pandemic-bailout-funds-went-white-farmers> (data obtained by the Land Loss Prevention Project showed that as of October 2020,

1. Climate-Smart Agriculture and Forestry Questions

- A. How should USDA utilize programs, funding and financing capacities, and other authorities, to encourage the voluntary adoption of climate-smart agricultural and forestry practices on working farms, ranches, and forest lands?

Scaling up investments in climate-smart agriculture and forestry, both through existing programs and new initiatives, will help farmers navigate financial, technical, and social challenges that may arise as they innovate, as well as ensure that public investments prioritize the needs of the most underserved populations and maximize benefits to public health, ecosystems, and local economies.

1. *How can USDA leverage existing policies and programs to encourage voluntary adoption of agricultural practices that sequester carbon, reduce greenhouse gas emissions, and ensure resiliency to climate change?*

USDA already administers numerous programs and funding streams with great potential to advance climate-smart agriculture, including Federal Crop Insurance Program, the National Organic Program, and conservation programs. In addition, USDA should direct more resources toward climate-smart priorities including building demand for compost, practical research and technical assistance, and procurement.

a. Leverage Federal Crop Insurance

Covering over 90% of U.S. cropland, the Federal Crop Insurance Program provides an important opportunity to leverage an existing program to reduce greenhouse gas emissions and increase resiliency. There are several steps that USDA could take to better utilize Federal Crop Insurance to achieve climate outcomes,¹³ including:

- **Collecting additional data about agricultural practices that may provide both risk mitigation and climate benefits.** Practices such as cover cropping and diverse cropping rotation offer a number of agronomic benefits, while also potentially reducing climate-related yield variability and improving climate outcomes. USDA should collect additional data about how farmers who use these practices perform within the Federal Crop Insurance Program, either by adding additional “practice codes” to crop insurance forms to collect this data directly, or by instructing FSA to collect this data during the annual reporting process and to share that information with RMA. If data shows that these

nearly 97% of USDA’s \$9.2 billion Coronavirus Food Assistance Program funds went to white farmers); Colton Fagundes et al., *Ecological costs of discrimination: racism, red cedar and resilience in farm bill conservation policy in Oklahoma*, Renewable Agriculture and Food Systems (2019) (finding disproportionate USDA resources go to white farmers and ranchers).

¹³ See Claire O’Connor and Lara Bryant, NRDC, *Covering Crops: How Federal Crop Insurance Program Reforms Can Reduce Costs, Empower Farmers, and Protect Natural Resources* (Dec. 19, 2017), <https://www.nrdc.org/resources/covering-crops-how-federal-crop-insurance-program-reforms-can-reduce-costs-empower-farmers>.

practices do make farmers a lower risk to insure, crop insurance premium rates should be adjusted accordingly.

- **Supporting state efforts to incentivize cover crops.** Several states have partnered with RMA to offer farmers \$5 per acre additional subsidies on their crop insurance premiums.¹⁴ These efforts have been incredibly popular with farmers, a fantastic example of state-federal partnership, and a successful mechanism to increase the number of acres using the climate-friendly practice of cover cropping. USDA could significantly expand these programs by establishing a block grant pilot program, which would allow additional states to offer these incentives and/or current programs to expand to additional acreage.
- **Implementing a pilot program to explore “trend adjustments” or additional subsidies for climate-smart practices.** The Federal Crop Insurance Corporation is authorized to conduct pilot programs to evaluate whether new risk management tools are suitable for the broader marketplace, and should explore new products that could encourage practices that mitigate climate-related risk, both in the macro (i.e., overall risk to society of climate change) and micro (i.e., individual farmers’ risk of climate-related crop loss) senses. Pilots could be established for practices including cover crops, diverse crop rotation, returning some lands to their natural state, and other practices that reduce risk and improve soil health.
- **Ensuring cover crops are encouraged during “prevented planting” and other disaster scenarios.** Climate change is already causing more frequent extreme weather, such as the devastating derecho that flattened crops in 2020, as well as more challenging agronomic conditions, such as wet springs that delay or prevent planting. When weather conditions preclude production of commodity crops, it is essential to plant cover crops on bare fields to retain soil and nutrients and mitigate downstream water quality and flooding problems. RMA has shown flexibility with producers in the face of disaster, by easing haying/grazing restrictions on cover crops, for example. But a proactive approach to encouraging cover cropping before disaster strikes would be even more effective. RMA should revise prevented planting regulations to encourage planting of covers, providing higher indemnification rates to farmers who plant covers when commodity crops cannot be planted or are completely destroyed before harvest by natural disasters, and lower rates to farmers who chose to leave their unharvested fields bare.

¹⁴ Iowa, Illinois, and Indiana currently offer such programs. See, Clean Water Iowa Cover Crop Crop Insurance Project, <https://www.cleanwateriowa.org/covercropdemo>; Illinois Department of Agriculture, “Fall Covers for Spring Savings Cover Crop Premium Discount Program,” <https://www2.illinois.gov/sites/agr/Resources/LandWater/Pages/Cover-Crops-Premium-Discount-Program.aspx>; Indiana State Department of Agriculture, “Cover Crop Premium Discount Program,” <https://www.in.gov/isda/divisions/soil-conservation/cover-crop-premium-discount-program/>.

b. Grow the National Organic Program

The Organic Foods Production Act¹⁵ codifies a suite of climate-smart farming practices and rigorous oversight and enforcement for organic farmers. Critically, OFPA prohibits the use of fossil-fuel based inputs¹⁶ and requires farmers to support soil health¹⁷ – two essential elements of climate-smart farming. USDA should dramatically increase investment in and support for organic farming, particularly with an eye toward helping more farmers become certified organic, including:

- **Restore the Senior Advisor on Organic Agriculture to the Office of the Secretary**, to ensure that organic agriculture is considered and incorporated into every aspect of USDA's work, including the research, technical assistance, and other programs outlined in these comments.
- **Expand the Organic Transitions Program**, with a particular focus on regionally relevant climate-related research (see new programs section for a proposal to make the program more comprehensive).
- **Expand the Organic Certification Cost Share Program** to maximize support available to organic farmers, especially for small and socially disadvantaged farmers, and publicize and streamline access to the program (i.e. consider providing funds directly to certifiers, rather than to states).
- **Invest in the National Organic Program** to ensure timely rulemaking, clarifications, guidance, and other action on recommendations of the National Organic Standards Board, as well as robust enforcement. In particular, ensure that the NOP offers meaningful guidance and oversight of soil health and animal welfare requirements that are critical to maximizing the climate benefits of organic farming.

c. Strengthen Conservation Programs

USDA's existing suite of conservation programs offer significant opportunities to support climate-smart farming. Used and trusted by farmers for decades, these programs offer a solid foundation for supporting farmers as they help the U.S. achieve its climate goals. The following improvements would help strengthen this set of programs to deal with climate change:

- **Dramatically expand funding for USDA conservation programs**, such as CRP, CSP, and EQIP, as well as for the "subprograms" within these programs, including the Soil Health Demonstration Trial. The demand for USDA's conservation programs consistently outstrips available funding, indicating vast

¹⁵ 7 U.S.C. § 6501 et seq.

¹⁶ 7 U.S.C. § 6508.

¹⁷ 7 U.S.C. § 6513(b).

unmet potential for these programs to address climate and other environmental issues.

- **Advance “bundles” of practices** and other revisions to practice codes to specifically support efforts that address climate change.
- **Adjust programs to make them more compatible with high carbon practices**, such as riparian buffers and agroforestry, that may require more technical assistance and upfront costs and may take multiple years to establish.
- **Redirect EQIP funding from concentrated animal feeding operations (CAFOs) to climate-smarter practices**, such as regenerative grazing and transitioning to sustainable pasture-based production, which are more likely to reduce agriculture’s negative environmental footprint. USDA should also require CAFOs that receive conservation dollars to implement nutrient management plans effectively, make those plans available and easily accessible to the public, and to efficiently implement these plans during their EQIP contracts.
- **Increase technical assistance available to implement the practices supported by USDA conservation programs.** The House Select Committee on the Climate Crises Report identified technical assistance from trusted partners as “critical” to maximize opportunities for farmers and ranchers to improve climate stewardship. NRCS and FSA need to scale up staffing to meet demand for this technical assistance and on-the-ground support and to help farmers overcome administrative barriers.

d. Build Demand for Compost

Composting is both a key strategy for keeping food out of landfills where it creates methane and for creating a valuable soil amendment. USDA should take an active role in shifting waste from liability to asset and stimulating demand for finished compost products by:

- **Updating USDA’s definition of compost products** so that a greater number of potential buyers (such as farms, golf courses, or other operations near waterways) are encouraged to purchase compost.
- **Developing a marketing campaign** to build compost demand.
- **Streamlining the compost contracting process** (e.g., by helping to match compost generators with potential buyers).¹⁸

¹⁸ NRDC, Food Scrap Recycling Assessment: Baltimore - Report (2019) (recommending marketing campaign for compost and streamlining contracting).

e. Support Research and Innovation

Funding for on-farm research and pilot projects provides additional revenue for farmers and practical opportunities to learn and innovate. As such, research and innovation projects that serve small- and mid-sized producers and producers of color, especially in underinvested regions like the South, are a particularly promising area for expansion. In particular:

- **The ATTRA sustainable agriculture program** provides practical, cutting edge information to millions of farmers, livestock operations, extension agents, conservation professionals and many others. The resources that ATTRA provides to the farm community free of charge are in high demand and have helped thousands of farmers build more profitable and sustainable farming operations. An expansion of ATTRA could facilitate Armed-to-Farm trainings and other outreach for military veterans, enhanced outreach and educational materials for producers related to soil health, support for marketing of products that are sustainably produced, more farm energy programs, and wider distribution and production of educational materials in visual and audio formats.
- **The Rural Energy for America Program (REAP)** provides grants and loan guarantees for renewable energy projects across the country that have helped farmers and rural businesses generate renewable energy and make efficiency upgrades. USDA should direct REAP funding to regional demonstration competitions that incentivize farmers and ranchers to reduce their greenhouse gas emissions to the largest extent possible, through the use of both energy efficiency improvements and renewable energy systems.
- The Climate Hubs that USDA created in 2013 have great potential to serve as regional gathering points, to help producers make regionally appropriate, science-based, practical planning decisions in response to a changing climate. These hubs should be scaled and staffed up to realize their full potential as a climate resource.

f. Adopt Climate-Smart Procurement & Waste Management Practices

Reducing food waste and plant-rich diets are ranked as top climate solutions by Project Drawdown, a climate mitigation project involving a team of more than 200 scientists, policymakers, and other experts.¹⁹ Procurement-focused solutions, like expanding purchase specifications to allow for a greater variety of product grades in recipes, and using technology-enabled tracking of food loss and waste to highlight opportunities for right-sizing purchasing, could significantly reduce food waste. If implemented at a national level across sectors, these two solutions alone could lead to a total of 4.9M

¹⁹ Project Drawdown, Table of Solutions (Aug. 6, 2020), <https://drawdown.org/solutions/table-of-solutions>.

tons CO₂e emissions reduction.²⁰ The types of foods purchased also significantly impact the climate footprint of a procurement portfolio, and small shifts toward organic and plant-based foods by large food purchasers can add up to significant emissions reductions.

In addition to administering programs for agricultural producers, USDA has significant power to shift the climate footprint of our food system as a market player and regulator of other market players. USDA should flex its procurement power as follows:

- **Commit to a target of reducing embedded greenhouse gas emissions associated with food purchases** within its purview by 25% by the year 2030. Tracking food purchases and gradually shifting purchasing toward climate-smart foods and reducing food waste is a crucial climate solution. The federal government's own procurement practices are the most direct and high impact point of leverage to reduce emissions associated with food consumption.
- **Encourage procurement from climate-smart producers.** USDA should look to the California Department of Agriculture's Farm to School Program as a model. That program encourages partnerships with producers "that have demonstrated and documented the use of a variety of climate-smart agricultural management practices such as crop rotation, composting, reduced fossil-fuel based inputs, rotational grazing, cover cropping, hedgerow plantings, reduced tillage, or others that increase resilience to climate change, improve the health of communities and soil, protect water and air quality, increase biodiversity, and help store carbon in the soil. These include, but are not limited to, organic, transitioning to organic, certified 100% grassfed and more."²¹
- **Facilitate purchases from small- and mid-sized and socially disadvantaged producers.** At the height of the pandemic, USDA took emergency measures, such as developing the Farmers to Families Food Box program, to help farmers find new distribution channels for unprecedented levels of surplus.²² This created new supply lines between distributors, farms, food banks and other non-profits, and families in need.²³ Anti-hunger experts believe that up to 50% of food bank supplies came from these emergency programs during a time when demand for food at food banks increased 60%²⁴ and as many as one in four American adults

²⁰ ReFED, Roadmap to 2030: Reducing U.S. Food Waste by 50% and the ReFED Insights Engine (Feb. 2021), <https://d1qmdf3vop2l07.cloudfront.net/brawny-garden.cloudvent.net/hash-store/0e516069c6e73d4572d25b1317584c7e.pdf>.

²¹ Cal. Dept. of Ag., 2021 California Farm to School Incubator Grant Program, Request for Applications (Dec. 21, 2020), https://www.cdfa.ca.gov/grants/pdf/2021_Farm_to_School_Incubator_RFA.pdf.

²² Emily M. Broad Leib et al., "An Evaluation of the Farmers to Families Food Box Program", The Harvard Law School Food Law and Policy Clinic (Feb. 1, 2021).

²³ Jessica Fu, "The Farmers to Families Food Box Program Is Winding down. Some Farmers Say It Left Them High and Dry.," The Counter (Oct. 2020).

²⁴ Laura Reiley and Greg Jaffe, "Trump's Farmers to Families Food Box Program Was Set to End Dec. 31, but Vendors Are Already Running out of Money", The Washington Post (Dec. 8, 2020).

were facing hunger.²⁵ USDA should incorporate learnings from pandemic-era programs into ongoing food assistance programs. For example, while flawed, elements of the Farmers to Families Food Box Program could be a model for future procurement and distribution of fresh products, such as commodity purchasing programs like TEFAP and the USDA Foods in School program. USDA should ensure the contracting process for public procurement is transparent and explicitly prioritizes small- and mid-sized and socially disadvantaged producers.²⁶ USDA's efforts should include outreach to train and develop the capacity of these producers to participate in online and direct-to-consumer distribution—and include them in published regional lists of “USDA-encouraged” or “USDA-supported” producers for USDA contractors to easily reference.²⁷ USDA should also work with Congress to ensure that SNAP benefit amounts are adequate to ensure a nutritious diet, and to support the roll out of technology that allows small-scale producers, independent retailers, farmers, and farmers markets to participate as vendors in online SNAP markets (building on the support from Congress in the American Rescue Plan). These efforts can help to increase the nutrition security of SNAP participants, ensure small producers maintain market opportunities for their nutritious foods, and strengthen regional supply chains.

2. *What new strategies should USDA explore to encourage voluntary adoption of climate-smart agriculture and forestry practices?*

While significant advances in climate-smart agriculture can be made through numerous existing programs and initiatives, USDA should seek out opportunities to take a more holistic approach to building equitable, regionally focused, healthy, and climate-smart food systems. Promising strategies include proactive support for producers during the transition to climate-smart agriculture, a scaled-up food waste reduction agenda, and a regional approach to supply chain management.

a. Provide Comprehensive Support for Transition

In addition to bolstering existing programs that support climate-smart farming, USDA should **redirect existing resources to create a new “Farming for the Future” program** that offers a comprehensive support system for farmers transitioning to organic and regenerative agriculture. Farmers need extra financial and technical support as they adopt a new, climate-smart approach to farming, especially in regions and communities that have been underserved. This program should provide a robust

²⁵ Diane Whitmore Schanzenbach, “Not Enough to Eat: COVID-19 Deepens America’s Hunger Crisis”, Food Research Action Center (Sept. 2020).

²⁶ Jessica Fu, “The Farmers to Families Food Box Program Is Winding down. Some Farmers Say It Left Them High and Dry.”, The Counter (Oct. 22, 2020); Emily M. Broad Leib et al., “An Evaluation of the Farmers to Families Food Box Program”, The Harvard Law School Food Law and Policy Clinic (Feb. 1, 2021).

²⁷ Emily M. Broad Leib et al. “An Evaluation of the Farmers to Families Food Box Program”, The Harvard Law School Food Law and Policy Clinic, (Feb. 1, 2021).

set of tools to help farmers successfully navigate the transition period. The program should include the following components:

- Non-competitive transition and on-farm research grants available to socially disadvantaged producers and small- and mid-sized farms (income below \$1M), which may be used for:
 - Adoption of organic-compliant practices, including cover cropping, crop rotation, rotational grazing, use of compost and manure, hedgerows, pollinator habitat, watershed restoration
 - Development of a plan to transition to organic farming, which may include an Organic System Plan
 - Organic certification costs, including during the three-year transition period
 - Improvements to workplace safety
 - Employee training on transition implementation, purposes, etc.
 - Hosting a job-creating initiative, such as a Civilian Climate Corps project
 - Establishing a mentor/mentee relationship between an organic farmer and a transitioning farmer (stipends for both parties)
 - Conducting on-farm research related to implementation of organic-compliant practices
 - Completing organic inspector training
 - Establishing organic processing infrastructure
 - Business and/or market development
 - Forming a cooperative
 - Debt relief
 - Land conservation (e.g., easements that require organic management)
- Participants must agree to quarterly meetings (phone/in-person) to check on progress, provide feedback, participate in on-farm research
- Create new, regional positions for organic technical assistance and outreach, which may include positions at: USDA, cooperative extension, universities and other institutions (with priority for those serving socially disadvantaged producers), NRCS (including partnerships with other organizations), state departments of agriculture
- Grants to non-profit organizations to recruit program participants and/or provide technical assistance to them, with preference for organizations in underserved regions (e.g., the South)

b. Support Efforts to Manage Organic Waste

USDA should further efforts to create a closed loop food system that prevents food waste where possible, rescues surplus food, and recycles any remaining food scraps, by advising on best practices and ensuring that compost production can be linked to climate-smart farming.

- **Disincentivize waste.** California has implemented a leading waste diversion model for its jurisdictions and already invested \$140 million in organic waste infrastructure funding.²⁸ USDA should promote policy options for states and cities looking to follow a similar model, including: organic waste landfill bans or organic waste recycling,²⁹ mandated food scrap³⁰ Pay-As-You-Throw (PAYT) policies that disincentivize landfilling and incineration as opposed to recycling and composting,³¹ and landfill taxes per unit of trash added to the existing tipping.^{32 33} Organic waste bans have shown particular promise.^{34 35}
- **Promote quality standards for compost.** Application of compost is a potent strategy for building healthy soil, and the National Organic Program rules include rigorous handling standards for compost that safeguard public health and ecosystems.³⁶ USDA should advise states and regions on best practices for compost production, to maximize the potential for use in climate-smart agriculture.
- **Eliminate restrictions and barriers to feeding food scraps to animals.** Many restaurants, grocery stores, food manufacturers, and farms produce food scraps that are no longer suitable for human consumption but are still safe and wholesome for animals. In order to support more uniformity and science-based regulations on this process, USDA should work with FDA to provide guidance and technical assistance to states on optimal regulations regarding feeding food scraps to animals,³⁷ to help state governments review and eliminate any overly stringent restrictions or bans in place today.³⁸ This solution has the potential to annually reduce 60.4k tons of food waste and cut emissions by 817 tons CO₂e.³⁹

²⁸ “California’s Progress Toward SB 1383 Organic Waste Reduction Goals,” BioCycle (Aug. 25, 2020).

²⁹ FLPC, *Bans and Beyond: Designing and Implementing Organic Waste Bans and Mandatory Organics Recycling Laws* (2019).

³⁰ Yerina Mugica, NRDC, “Tackling Food Waste in Cities: A Policy and Program Toolkit” (Feb. 11, 2019).

³¹ Yerina Mugica, NRDC, “Tackling Food Waste in Cities: A Policy and Program Toolkit” (Feb. 11, 2019).

³² ReFED, “A Roadmap to Reduce US Food Waste by 20 Percent.”; Alicia Kelso, “Startup’s Solution Lowers Prices on Food as Expiration Date Approaches,” Grocery Dive (July 9, 2018).

³³ NRDC, “Food Scrap Recycling Assessment: Baltimore - Report” (2019).

³⁴ Vermont Agency of Nat. Resources & Vermont Dep’t of Env’tl. Conservation, *Biennial Report on Solid Waste 3* (Jan. 15, 2019).

³⁵ Kevin Pink, *Food Rescue and Donation Continue to Increase Across Massachusetts*, Recyclingworks Mass. (June 20, 2018).

³⁶ 7 CFR § 205.203(c)(2) (“The producer must manage plant and animal materials to maintain or improve soil organic matter content in a manner that does not contribute to contamination of crops, soil, or water by plant nutrients, pathogenic organisms, heavy metals, or residues of prohibited substances”).

³⁷ “ReFED - Solution Database: Livestock Feed,” accessed Mar. 9, 2021, <https://insights-engine.refed.com/solution-database/livestock-feed>.

³⁸ Emily Broad Leib et al., “Leftovers for Livestock: A Legal Guide for Using Food Scraps as Animal Feed”, Harvard Food Law & Policy Clinic (2016).

³⁹ “ReFED - Solution Database: Livestock Feed,” accessed Mar. 9, 2021, <https://insights-engine.refed.com/solution-database/livestock-feed>.

c. Establish New Positions for Regional Supply Chain Coordinators at USDA

A lack of real-time food supply data has led to an inability to efficiently find and transport food from where it is grown or stored to where it is needed most. In addition to investing in more transparent and centralized waste information flows, there is a critical need to invest in new positions within the USDA and with trusted partners to achieve supply chain resiliency goals. Regional Supply Chain Coordinators, who could join the staff at Climate Hubs, would oversee the efficiency and adaptability of regional food supply chains by aggregating critical data sources on surplus products, stranded assets, and gaps in cold storage and distribution infrastructure. These positions could be especially effective in bringing federal funding and assistance to communities facing barriers to access.

B. How can partners and stakeholders, including State, local and Tribal governments and the private sector, work with USDA in advancing climate-smart agricultural and forestry practices?

While federal resources will expedite a comprehensive transition to climate-smart agriculture, robust buy-in from farming communities, workers, and consumers are also critical to success.

- To build the trust necessary for a strong working relationship with stakeholders, including those who have suffered as a result of discriminatory policies, USDA should **proactively engage and seek out stakeholders, using a variety of methods**. Written comment opportunities are valuable, but also can be time-consuming, resource intensive, and challenging to track and navigate. USDA should eliminate barriers to participation wherever possible. Strategies for doing so include:
 - Hosting stakeholder meetings in under-resourced communities, at a variety of times, in accessible locations, with childcare and translation available, and
 - Providing stakeholder engagement grants to trusted community organizations that can facilitate communication of USDA opportunities and provide assistance with applications.
- The Biden-Harris Administration's proposal for a **Civilian Climate Corps could be expanded to help private landowners partner with USDA**. The Corps concept could be leveraged to provide the labor and technical assistance needed for successful restoration projects in high carbon ecosystems – such as wetlands, riparian areas, and native prairies – on private land. Including private land restoration in the Corps' scope would build on the legacy of past public works successes, such as the New Deal Era Shelterbelt Program, and greatly expand the impact of such a program. The Corps should also employ people to collect, monitor, and verify data about program outcomes.

- USDA can assist organizations with limited resources and lead by example by **sharing climate-smart procurement and food waste reduction models and guidelines** for other entities to adopt.

C. How can USDA help support emerging markets for carbon and greenhouse gases where agriculture and forestry can supply carbon benefits?

Carbon markets raise numerous equity,⁴⁰ environmental, science, and economic concerns that must be addressed before investing public dollars to support their application in agricultural contexts. Some of the major questions that agricultural carbon markets raise include:

- **Will the proposal exacerbate existing inequities?** Barriers to participation, such as the administrative burden of measurement and tracking, may prevent small farms and socially disadvantaged farmers with limited resources from benefiting from carbon markets. Additionally, farmers with uncertain land tenure (e.g., short-term leases), including many beginning farmers, may not be able to commit to practices for a long enough time period to be rewarded in a carbon market. If the farmers least served by the current system cannot participate in carbon markets, then carbon markets will be yet another source of revenue – and in the case of a publicly funded carbon bank, another public investment – that disproportionately benefits large scale, well-resourced, white-owned farms that already dominate the landscape. In other words, the players that stand to benefit most from carbon markets are those who need the least help.
- **Will the proposal properly recognize the benefits of a holistic approach to climate-smart farming?** Measurement and tracking challenges are likely to be greatest for diversified operations, and a focus solely on carbon could lead to negative externalities and counterproductive outcomes. For example, a farm that grows a wide range of crops, in a complex rotation, is likely to face challenges quantifying the carbon it captures in soil; at a minimum, it will be more time-consuming and complicated to do so than for a simple monoculture operation, even though the diversified farm may capture more carbon and offer a wider range of environmental and health co-benefits, while the monoculture farm may

⁴⁰ NRDC is a signatory of the Equitable and Just National Climate Platform, *available at* <https://ajustclimate.org/#platform>, which states, among other things: “To effectively address climate change, the national climate policy agenda must drive actions that result in real benefits at the local and community level, including pollution reduction, affordable and quality housing, good jobs, sustainable livelihoods, and community infrastructure. This will require a realignment of public dollars at all levels toward policy structures that rely heavily on holistic nonmarket-based regulatory mechanisms that explicitly account for local impacts. ... We understand that there are EJ concerns about carbon trading and other market-based policies. These concerns include the fact that these policies do not guarantee emissions reduction in EJ communities and can even allow increased emissions in communities that are already disproportionately burdened with pollution and substandard infrastructure. In order to ensure climate solutions are equitable, support for climate research that assesses how policies affect overburdened and vulnerable communities is essential.”

result in negative, non-climate related externalities for the surrounding communities and ecosystems (e.g., reduced wildlife habitat, exposure to dangerous pesticides), as well as reduced climate resiliency for the farmer.

USDA's approach to climate-smart agriculture should be holistic, with a focus on well-designed policies that achieve climate goals while also supporting biodiversity, water quality and efficiency, human health, and equity. There are significant hurdles to designing equitable and effective incentives for climate-smart farming in a market-based framework, and creating a federal soil carbon market is not the best use of USDA's resources. Any initiative that moves forward should be developed in a participatory process that includes Tribal government consultation and strong representation of populations most likely to be impacted, including producers of color, diversified farmers, and farm and food chain workers, and should be designed to incentivize farming practices and create funding streams that benefit overburdened communities.

However, USDA has a potentially important role to play in **supporting research to identify best farming and forestry practices to maximize carbon sequestration, along with other co-benefits**, which could inform a wide range of financial incentives for climate-smart farming (for example, private actors who wish to compensate for past emissions). Publicly funded research should be regionally tailored, explore the impacts of application of multiple practices, examine carbon at various depths, and prioritize underserved regions. USDA should also offer technical support and financial assistance to farmers and ranchers who wish to monitor their soil carbon and other soil health indicators, and should support research into low-cost, simple methods for tracking soil carbon changes over time.

D. What data, tools, and research are needed for USDA to effectively carry out climate-smart agriculture and forestry strategies?

USDA's research agenda should seek to identify best practices in climate-smart agriculture and strategies to shift key behaviors.

a. On-Farm and Practical Research

As noted above, USDA should prioritize on-farm research and tools and data that can be directly used by farmers. Investments in on-farm research opportunities should both pay farmers for practices and monitor their progress. Specific key areas for public research investments include:

- On-farm loss
- Technology to support whole crop utilization
- Regionally adapted seeds and breeds
- Simple, low-cost approaches to soil health and soil carbon monitoring.

USDA should also scale up the following existing research programs:

- **Expand crucial regional, farmer-driven research focused on sustainable agricultural farming systems, including organic systems, through Sustainable Agriculture Research and Education (SARE).** Funding should be dedicated to agroecological research focused on climate mitigation and adaptation and extension and research that benefits farmers of color.
- **Target Agriculture and Food Research Initiative (AFRI) research** toward agroecology, interdisciplinary approaches, and the social, health, equity and economic aspects of food system sustainability, including: research on climate change adaptation and mitigation; research that benefits producers and communities of color; and public cultivar development to increase access to regionally adapted cultivars.
- **Expand long-term sustainable agriculture research focused on climate mitigation and adaptation through the Long-Term Agroecosystem Research (LTAR) Network,** to allow researchers to focus on slow-acting phenomena such as changes in soil carbon, climate, and the effect of land use changes.

In addition, land access continues to be among the biggest challenges facing farmers of color and aspiring new farmers, as well as a major barrier to climate-friendly farming. Without secure land tenure, farmers may be unable to invest in on-farm infrastructure or conservation practices critical to building soil quality, financial equity, and successful businesses. We agree with Rural Coalition’s comments urging USDA to understand and stem loss of land tenure. The Administration should request full funding for immediate implementation of the NASS Survey of Tenure Ownership, and Transition of Agricultural Land (TOTAL) authorized in the 2018 Farm Bill. The survey results will provide comprehensive data on farmland ownership, tenure, transition, and entry of beginning and socially disadvantaged farmers and ranchers as a follow-on to the Census of Agriculture – information that is critical to understanding land tenure challenges and appropriate policy interventions.

b. Interagency Food Waste Reduction Strategy

Coordinated public campaigns to educate consumers on food waste reduction strategies can provide straightforward savings to government agencies, businesses, and consumers – as well as significant greenhouse gas savings. Policymakers can leverage existing national ad campaigns like NRDC’s Save The Food,⁴¹ social marketing campaigns like the US EPA’s Food Too Good To Waste,⁴² consumer education provided by FDA through web resources and consumer education animated

⁴¹ “Save The Food,” Save The Food, accessed Mar. 4, 2021, <https://savethefood.com>.

⁴² EPA, “Food: Too Good to Waste Implementation Guide and Toolkit,” Reports and Assessments (Feb. 4, 2016), <https://www.epa.gov/sustainable-management-food/food-too-good-wasteimplementation-guide-and-toolkit>.

shorts, as well as sector toolkits (developed by WWF for restaurants, hotels, hospitality, and schools) to build unified campaigns that businesses, governments, educators, NGOs, and others can use to drive awareness and action. However, additional research is needed to determine which household activities offer the greatest potential reductions and how to shift public behavior. The USDA Food Loss and Waste Liaison—in partnership with EPA and FDA, and close coordination across USDA agencies (such as the National Institute of Food and Agriculture or Food and Nutrition Service)—should ultimately oversee these efforts.

E. How can USDA encourage the voluntary adoption of climate-smart agricultural and forestry practices in an efficient way, where the benefits accrue to producers?

As previously mentioned, USDA should prioritize on-farm research on diverse landscapes, as modeled by the Conservation Innovation Grants On-Farm Research Trials. Farmers who follow a systems-based approach of adaptive management will manage their farms differently than a controlled, research trials and thus, the measurable climate benefits of on-farm management will differ from university research in ways that more accurately predict the climate benefits we can expect from investments in climate-friendly farming. We recommend that USDA use every resource at its discretion to publicize and promote on-farm research results among your staff and communicate research findings to the public.

We also recommend that USDA use resources at its discretion to compensate farmers using climate-friendly practices for their time invested in research and in educating other farmers. Early adopters of conservation practices often invest hours of their time working with researchers, hosting field days, educating the public, and teaching and mentoring other farmers. USDA could offer these farmers assistance and compensation for their valuable time, which would go a long way toward increased adoption and effective use of climate-friendly farming practices. Similarly, we suggest that USDA offer an education stipend to farmers who wish to increase their knowledge of climate-friendly farming, by paying for the cost of classes, conference registration, travel stipends, and compensation for time spent in professional development.

Finally, USDA should assist community-based organizations with funding, education, and technical assistance, to ensure that the benefits of climate-friendly farming stay in communities. Following a similar model to NIFA's Beginning Farmer and Rancher Development Program, USDA could fund local organizations to provide technical, education, and research services to for climate-friendly farming in the community.

2. Biofuels, Wood and Other Bioproducts, and Renewable Energy Questions

A. How should USDA utilize programs, funding and financing capacities, and other authorities to encourage greater use of biofuels for transportation, sustainable bioproducts (including wood products), and renewable energy?

Forest biomass as a fuel for energy production is not uniformly carbon neutral. This conclusion has been reached and endorsed by numerous scientific societies and by many hundreds of scientists around the world, including the EPA’s own scientific advisors.⁴³ Multiple credible and deliberative scientific bodies have demonstrated that using forest biomass for energy can have significant adverse climate impacts.⁴⁴ Any effort to broadly characterize forest bioenergy as “carbon neutral” is scientifically unsupported and would have large, damaging impacts on the climate and our native forest ecosystems. It risks increasing emissions, rewarding poor forest management and undermining current and future emissions permits and regulations.

B. How can incorporating climate-smart agriculture and forestry into biofuel and bioproducts feedstock production systems support rural economies and green jobs?

NRDC would welcome a future opportunity to discuss this topic.

C. How can USDA support adoption and production of other renewable energy technologies in rural America, such as renewable natural gas from livestock, biomass power, solar, and wind?

As USDA considers climate solutions and analyzes whether biogas from poultry or livestock feedstocks (manure) could be part of a climate solution, we urge strong caution and request that USDA take a critical look at the science on environmental impact of biogas, consider the impacts on communities of biogas and the operations that feed into them, and consider the impact of climate change on the facilities that feed into biogas, such as CAFOs, and discourage or disallow biogas infrastructure in climate-vulnerable areas.

There are very limited quantities of gas that can be sustainably produced from animal manure. Livestock operations can and should manage manure in ways that protect environmental and human health, but often large livestock operations cause significant human and environmental harm, and using manure to produce methane is economical only for large-scale, concentrated livestock operations. Large concentrated manure sources should be required to reduce their methane emissions and to work with local

⁴³ Specifically, EPA’s own Scientific Advisory Board has rejected the conclusion that forest bioenergy is “carbon neutral.” Its final report finds that, “not all biogenic emissions are carbon neutral nor net additional to the atmosphere, and assuming so is inconsistent with the underlying science,” underscoring that different biomass feedstocks have varying carbon impacts. Environmental Protection Agency, Office of the Administrator, Science Advisory Board, SAB Review of EPA’s Accounting Framework for Biogenic CO₂ Emissions from Stationary Sources (Sept. 2018).

⁴⁴ European Academies’ Science Advisory Council, Commentary by the European Academies’ Science Advisory Council on Forest Bioenergy and Carbon Neutrality (June 2018), https://easac.eu/fileadmin/PDF_s/reports_statements/Carbon_Neutrality/EASAC_commentary_on_Carbon_Neutrality_15_June_2018.pdf.

communities to avoid environmental harms.⁴⁵ On-site use of gas should be considered instead of extending pipelines. Small operations with sustainable grazing practices and other sustainable manure management practices that prevent methane creation should be encouraged over large-scale operations.

USDA must **holistically examine the pollution caused by biogas, including CAFOs, as well as the community impacts of biogas facilities and the operations that feed into them.** GHGs are only part of the picture. Some of the air pollution associated with biogas, as well as the pollution from the CAFO waste that feeds it.⁴⁶ In addition, the digestate from biogas is more concentrated, and according to NRCS, there may be a higher likelihood of pollution from biogas effluent than regular manure because the pollutants are more bioavailable.⁴⁷ There are other similar concerns in the attached document “Concerns with Directed Biogas Projects in North Carolina,” and detailed in the comments in this docket submitted by Earthjustice. USDA should consider those pollution impacts and whether there is a disparate or unfair impact of that pollution, before supporting any biogas expansions.

USDA should also **consider the impact of climate change on facilities that feed into biogas, such as CAFOs, and discourage or disallow biogas infrastructure in climate-vulnerable areas.** Climate change impacts both biogas facilities and the CAFOs that produce the manure for biogas. One special consideration is that biogas, especially directed biogas, requires adding additional infrastructure. USDA should consider the climate vulnerability of biogas and biogas feedstocks. For example, facilities located in low-lying coastal areas, floodplains, or drought-prone regions will need to make special arrangements for the changes of the coming decades. Any policy must be forward-looking and examine how these conditions pose threats to infrastructure, and of course the environment and communities.

3. Addressing Catastrophic Wildfire Questions

NRDC would welcome a future opportunity to discuss this topic.

4. Environmental Justice and Disadvantaged Communities Questions

Environmental justice and the needs of disadvantaged communities should not be separated from other aspects of a climate-smart agriculture agenda. Rather, USDA’s approach to transforming agriculture must value and be guided by traditional ecological knowledges and the producers, workers, and communities who have been most burdened by extractive agriculture.

⁴⁵ Merrian Borgeson, NRDC, A Pipe Dream or Climate Solution? The Opportunities and Limits of Biogas and Synthetic Gas to Replace Fossil Gas (June 15, 2020), <https://www.nrdc.org/sites/default/files/pipe-dream-climate-solution-bio-synthetic-gas-ib.pdf>.

⁴⁶ See Public Justice et al. letter to House Select Committee on the Climate Crisis (Nov. 22, 2019) (attached).

⁴⁷ USDA, NRCS, Conservation Practice Standard No. 366, Anaerobic Digester (June 2017).

In addition to the specific interventions highlighted below, it is critical for USDA to recognize that major land tenure issues continue to threaten the survival of farms owned or operated by producers of color. For example, the Federation of Southern Cooperatives estimates that at least 40% of Black-owned properties are held in undivided interests or heirs property, which creates uncertainty for anyone farming the land and can be a barrier to participation in many of the USDA programs we propose to expand. We support Rural Coalition's comments calling on **USDA to take immediate steps to address longstanding challenges for farmers of color**, including through a USDA Equity and Access Program that "supports and enables Tribal and BIPOC farmers and ranchers to secure land tenure and fair access to USDA programs and services, and to build and secure viable operations that also benefit and provide an economic base for the poor rural communities where many reside."

A. How can USDA ensure that programs, funding and financing capacities, and other authorities used to advance climate-smart agriculture and forestry practices are available to all landowners, producers, and communities?

USDA has systematically excluded producers of color, especially Black⁴⁸ and Indigenous⁴⁹ farmers and ranchers, from publicly funded programs, and has supported agricultural practices, including the use of toxic pesticides and industrial animal production, that disproportionately harm workers and communities of color. In light of USDA's discriminatory history, and the centrality of justice to truly climate-smart agriculture, the key question is (C), below: **How can USDA ensure that resources are equitably distributed?**

B. How can USDA provide technical assistance, outreach, and other assistance necessary to ensure that all producers, landowners, and communities can participate in USDA programs, funding, and other authorities related to climate-smart agriculture and forestry practices?

USDA should expand funding for successful technical assistance and outreach programs that focus on sustainable farming, including SARE, ATTRA, and Cooperative Extension, with particular attention to serving socially disadvantaged producers and small- and mid-sized diversified, organic, and regenerative farms.

In addition, USDA should increase funding for community-based organizations that provide technical assistance, as well as historically Black colleges and universities, Tribal colleges, and other institutions positioned to assist socially disadvantaged producers with climate-smart practices.

⁴⁸ See *Pigford v. Glickman*, 206 F.3d 1212 (D.C. Cir. 2000).

⁴⁹ See Settlement Agreement for *Keepseagle v. Vilsack*, Civil Action No. 1:99CV03119 (EGS) (D.D.C. 2010).

C. How can USDA ensure that programs, funding and financing capabilities, and other authorities related to climate-smart agriculture and forestry practices are implemented equitably?

To ensure equitable distribution of USDA resources, USDA should understand and eliminate barriers to participation for socially disadvantaged producers, ensure funding remains available for small- and mid-sized farms, and engage a wide range of stakeholders early in program design.

Key USDA programs remain out of reach for certain groups of producers. For example, as Rural Coalition notes in comments, recent research⁵⁰ by Dr. Michael Kotutwa Johnson in Arizona found that management based on Indigenous Agricultural Knowledge leads to the same conservation outcomes as NRCS standard practices, but producers face **significant and arbitrary barriers to NRCS approval** of these conservation methods. USDA should engage stakeholders, including Tribal governments and groups representing socially disadvantaged producers, to explore this and other barriers to participation in USDA programs, and identify additional methods for recognizing and valuing time-tested climate-smart farming practices.

The **structure of grant opportunities** can also prevent producers with limited resources from participating. For example, when an agency offers fewer, large grants (sometimes for administrative efficiency purposes), this precludes participation for smaller producers who may not need (or have capacity to manage) a large grant. Programs with cost-share or matching requirements also limit participation by producers or community organizations with limited resources. To ensure funding is accessible and available to those with the greatest need, USDA should seek out opportunities to streamline application processes, eliminate financial barriers to participation in its programs, carve out small grant opportunities, avoid competitive grants, and ensure that opportunities for support are regionally equitable and appropriate.

In addition, USDA programs and materials should be created with input from a wide range of stakeholders, beginning at an early stage. Agency materials should **maximize accessibility** – simple, streamlined, and available in multiple languages.

Finally, we agree with Earthjustice’s comments in support of specific set-asides for producers of color in all programs. USDA should mandate that 40% of program benefits go to Black and Indigenous producers and other producers of color, consistent with the Justice40 initiative created by the Climate EO. In addition, USDA should establish separate set-asides for Black, Indigenous, Latino, beginning, young, women, and other socially disadvantaged farmers, in consideration of their unique barriers to participation.

⁵⁰ M.K. Johnson, Indigenous Agricultural Knowledge: Barriers, Integration, Policy, and Outreach, University of Arizona: A Dissertation Submitted to the Faculty of the School of Natural Resources and the Environment in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy with a Major in Natural Resources in the Graduate College (2019).

Conclusion

We are grateful for the actions USDA has already taken this year to advance climate-smart agriculture and natural climate solutions, including listening sessions and the recent expansion of the Conservation Reserve Program.⁵¹ We look forward to collaborating with USDA and other key decisionmakers in the days and years ahead.

Attachments:

Cape Fear River Watch, NRDC et al., Concerns with Directed Biogas (Mar. 2021)

Public Justice et al., Letter to House Select Committee on the Climate Crisis (Nov. 22, 2019)

⁵¹ USDA, FSA, USDA Expands and Renews Conservation Reserve Program in Effort to Boost Enrollment and Address Climate Change (Apr. 21, 2021), <https://www.fsa.usda.gov/news-room/news-releases/2021/usda-expands-and-renews-conservation-reserve-program-in-effort-to-boost-enrollment-and-address-climate-change>.