

Mr. Robert Bonnie, USDA Deputy Chief of Staff for Policy and Senior Advisor on Climate
Mr. Thomas Vilsack, USDA Secretary of Agriculture

U.S. Department of Agriculture

Washington, D.C. 20250

Re: Recommendations regarding USDA's climate strategy.

Dear Mr. Bonnie and Secretary Vilsack,

We write to provide recommendations, based on our scientific expertise and experience, on how to best use Department of Agriculture programs, funding and financing capacities, and other authorities, and how to otherwise encourage the voluntary adoption of climate-smart agricultural practices. We are agricultural, environmental, and social scientists affiliated with a research project, supported by the USDA-AFRI SAS CAP funding program, entitled ***Grassland 2.0 - Agroecological Transition to Grassland Agriculture***.

Our recommendations are stated below, as responses to questions posed in this request for input. Thank you for your consideration and we would be pleased to meet with you to discuss these recommendations. Please feel free to reach out to Prof. Randy Jackson (University of Wisconsin, Grassland 2.0 Project Director, rdjackson@wisc.edu) or Prof. Nick Jordan (University of Minnesota, Grassland 2.0 participant, jorda020@umn.edu).

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?

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 should leverage *existing* policies and programs to restore grasslands and other forms of perennial agriculture as a fundamental basis of our agricultural system.

We can do this by incentivizing farming that a) improves farmer profitability by reducing feed costs, b) restores animals to agroecosystems, c) encourages more, diverse farms, processors, distributors, and retailers, and d) builds soil, retains nutrients, manages water movement through the landscape, and supports biodiversity. Well-managed grasslands, savannas, and other forms of perennial agriculture can do each of these things.

Policy mechanisms to grow grassland agriculture:

- Deploy USDA's existing conservation programs to focus on practices that sequester carbon and improve water quality, including managed grazing, perennials, and agroforestry.
- Expand grant and loan programs such as EQIP, CSP, CTA, and RCPP to incentivize payments for clean water, flood mitigation, and pollinator habitat.
- Prioritize perennial and grassland agriculture in cross-agency (NRCS and USEPA) conservation initiatives that support resiliency to climate change, such as the National Water Quality Initiative.
- Develop grassland value-added supply-chains by supporting regional processors, aggregators, distributors, and marketers focused on grassland products and their stories.
- Encourage beginning and underserved farmers by providing stipends for mentor farmers, programs that lower interest on loans, and providing tax incentives.

- Support pastured pork, chicken, sheep, and goats, which have lower ‘barriers to entry’ than more capital-intensive beef or dairy farming.
- Require federal purchasing of grass-fed products.
- Encourage conservation easements that secure grasslands while making managed grazing more affordable and profitable and supporting public recreation opportunities.

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

USDA should launch a coordinated plan for expanding perennial agriculture—including grassland agriculture—to combat climate change.

Because perennial crops sequester relatively large amounts of carbon, perennial agriculture serves as a key measure to mitigate climate change via agricultural interventions. As an integrated, all-lands solution, perennial agriculture elevates ecosystem services production while yielding abundant food. But its major components—perennial forages, tree crops, and perennial grain crops—are often excluded from policies or isolated in separate policy silos. Further integrating agriculture and forestry through practices such as silvopasture can further enhance the carbon storage potential of managed grazing while providing shade to livestock.

USDA should develop a USDA-wide Perennial Agriculture Transition Plan, including specific and time-bounded milestones, and create a Perennial Agriculture Transition Program to coordinate interagency implementation of a perennial agriculture transition.

In addition, USDA should ensure that any carbon payments program established under the Commodity Credit Corp or otherwise acknowledges the high GHG- mitigation potential of perennial agriculture and provides appropriate technical assistance and verification resources.

USDA should ensure that climate justice is a component of all initiatives. This means the fair distribution of resources and meaningful participation of all people, including BIPOC, women, veterans, beginning farmers, small to medium sized farm operations, and farmworkers. USDA should incorporate program metrics that track progress toward justice and equity in USDA programs.

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?

USDA should foster development of innovative financing mechanisms, as these appear crucial to development and scaling of climate solutions from grasslands and other forms of perennial agriculture.

Rapid and extensive implementation of perennial agriculture--leading to major climate benefits--will require robust financing that allows participants to appropriately manage risk. However, current federal policy limitations impair the flow of capital investment in grasslands and other forms of perennial agriculture, and in associated supply chains and markets. Public financing programs should also be considered to ensure that implementation of grasslands and other forms of perennial agriculture strongly enhances public goods that such agriculture can produce, such

as climate solutions, restoration of water quality, flood prevention, rural community development, and protection of those most vulnerable to environmental or economic risks. Specifically, USDA should consider these innovative finance initiatives in support of climate solutions from agriculture.

- Establish a new federal grant funding mechanism to assist small businesses engaged in establishing supply chains and markets for grasslands and other forms of perennial agriculture.
- Financing low-interest loans to help manage and limit risks inherent in new ventures based on such agriculture.
- Partner with USEPA on innovative conservation finance strategies that support cost-effective urban-rural partnerships to sequester carbon on agricultural working lands and improve water quality and supply.
- Funding for “Enterprise Incubators” and regional-scale economic development programs targeted to support such agriculture through the US Farm Bill.
- Increase federal support for Tribal climate-smart perennial agriculture and forestry through support for market development and federal purchasing of food for tribal members and nontribal consumers.

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

USDA should invest to accelerate the development of highly-productive grassland and savanna agroecosystems, and of other forms of perennial agriculture.

To realize the promise of grasslands and other forms of perennial agriculture, highly-productive perennial agroecosystems are needed to contribute to human food systems at scale, while also providing climate solutions, including both climate adaptation and mitigation. These contributions include meat and dairy foods, but also encompass new foods, such as protein concentrates from grasslands, for livestock feeds and for direct human consumption. These developments will require major increases in public investment in research and development.

Specifically, dedicated funding should be provided for enhancing food production and climate solutions from grasslands and other forms of perennial agriculture, within the National Institute for Food and Agriculture (NIFA) and Foundation for Food and Agriculture (FFAR) grant programs. Funds should prioritize partnerships with tribal colleges and minority serving institutions.

Moreover, USDA should offer a greater proportion of long-term research grants to accommodate the research timelines of perennial agriculture. USDA should greatly increase the proportion of in-house USDA research capacity focused on perennial agriculture, and provide for expanded coordination across the Agricultural Research Service (ARS), Natural Resources Conservation Service (NRCS), and the U.S. Forest Service (USFS) to coordinate activities relating to perennial agriculture.

Finally, USDA should provide additional funding for universities, ag lenders, and others to 1) collect more data on the short and long-term impacts of perennial agriculture on farm balance sheets and 2) summarize that data to assist farmers and investors in assessing and mitigating operational risks associated with climate change and shifts to perennial agricultural systems

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?

USDA should encourage voluntary adoption of climate-smart agriculture by market-based strategies and growing local capacity to provide sound conservation advice to producers.

Development of new markets and supply chains for products of grassland and other forms of perennial agriculture is a market-driven path for developing climate solutions and addressing other major environmental challenges facing US agriculture.

Market-based strategies can address major limitations of current strategies for expanding climate solutions from agriculture. For example, while use of cover crops is often advocated as a key step in providing climate solutions from US agriculture, cover crops by definition *do not* produce any harvestable commodity, and there are major economic constraints on their wide use. By contrast, grasslands and other forms of perennial agriculture provide agricultural commodities in addition to climate solutions and other environmental benefits.

Crucially, farmers and industry are broadly enthusiastic about grassland and perennial agriculture, recognizing its potential to provide climate solutions and enhance commodity production. However, to realize the potential of this market-driven pathway to climate solutions from fixing key problems in US agriculture, viable markets and robust supply chains for these crops and systems are critically needed; otherwise farmers cannot obtain adequate economic return on the production of these crops.

In particular, we recommend that USDA strongly support development of new enterprises based on grasslands and other forms of perennial agriculture by providing technical assistance and economic development funding for these new enterprises. These new enterprises begin with on-farm production and understanding how to access the potential balance sheet benefits associated with perennial agriculture. These are complex challenges. Therefore, technical assistance for farmers implementing perennial agriculture is crucially important. Assistance should also be directed to smaller value-added companies that play an indispensable role in rural economic development, and which often partner with farmers and researchers to test new products or systems.

Policy & funding initiatives:

- Establish a new USDA-certified Perennial Crop Advisor Program within NRCS to train crop advisors on how best to incorporate grasslands and other forms of perennial agriculture into existing cropping systems.
- Enhanced local technical assistance delivery through additional funding for soil and water conservation districts, university extension and other local technical advisors.
- Funding, tax incentives and grants to farm services providers, supply chain companies, and commercial buyers and manufacturers to engage with farmers producing grasslands and other forms of perennial agriculture.