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Request for Comments: Climate-Smart Agriculture and Forestry Partnership Program

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- Response to questions: 3, 5, 6, 8
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Thank you for the opportunity to provide input on a new Climate-Smart Agriculture and Forestry (CSAF) Partnership Program. The Organic Trade Association (OTA) is the membership-based business association for organic agriculture and products in North America. OTA is the leading voice for the organic trade in the United States, representing over 9,500 organic businesses across 50 states. Our members include growers, shippers, processors, certifiers, farmers' associations, distributors, importers, exporters, consultants, retailers and others. OTA's mission is to promote and protect organic with a unifying voice that serves and engages its diverse members from farm to marketplace.

Organic agriculture is a key part of the solution to tackle climate change

Organic agriculture provides a critical opportunity to mitigate climate change, while creating economic, environmental and health benefits for all involved in our food system--from the grower and the processor, to the distributor and the consumer. The \$62-billion-a-year U.S. organic industry is a voluntary, market-based, federally backed, independently certified agricultural system that can reduce greenhouse gas emissions, store away huge amounts of carbon, and enable farmers to be resilient in an evolving climate.

Organic farming is a production system of cultural, biological, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity. Organic standards require that farmers use practices that maintain or improve natural resources, including soil, water, wetlands, woodlands, and wildlife. Producers maintain and improve natural resources with a variety of methods that produce stacked benefits.

The science says organic farms:

- Sequester 26% more carbon than soils from non-organic farms¹
- Have a global warming potential 18% lower than their conventional counterparts²

¹ Cooper, J.M., et al. 2016. "Shallow Non-Inversion Tillage in Organic Farming Maintains Crop Yields and Increases Soil C Stocks: A Meta-Analysis." *Agronomy for Sustainable Development* 36: 1–20.

² Goh, Kuan M. 2011. "Greater Mitigation of Climate Change by Organic than Conventional Agriculture: A Review." *Biological Agriculture & Horticulture* 27(2): 205–29.

- Create around 50% less new reactive nitrogen³
- Have 30% more species and support up to 50% more pollinators.^{4, 5, 6}

3. In order to expand markets, what types of CSAF project activities should be eligible for funding through the Climate-Smart Agriculture and Forestry Partnership Program?

Public and private initiatives to support organic agriculture as a climate mitigation tool already exist, but organic can reach its full potential to fight against climate change with stronger federal support. Given the inherent climate change benefits of organic, we recommend directing CSAF funding toward the following initiatives to integrate organic into climate-smart programs, support the adoption of climate-smart agricultural practices through increased technical assistance and support growth of the organic sector through market development and infrastructure investments.

Integrate organic into climate-smart agriculture programs

Organic is unique in that it has federally defined, enforceable standards that are third-party certified. Organic farmers are required to keep extensive records as part of their annual certification, and it is important that new programs do not increase barriers or require duplicative record-keeping for organic farmers who are already implementing climate-smart agriculture practices. Organic farmers should not be additionally burdened with proving their eligibility for CSAF Programs, rather USDA should facilitate and streamline the participation of organic producers in climate-smart initiatives utilizing the existing USDA organic certification process. We recommend the following:

- **Fund a pilot project between USDA accredited organic certifiers and organic farmers that integrates climate smart-agriculture practices into the Organic System Plan (OSP).** The pilot would jumpstart modernizing and linking OSPs to climate outcomes which could then encourage updates to the National Organic Program Standards to facilitate those outcomes. This type of project will ensure that the organic standards and regulations can evolve and adapt to capture the latest climate-friendly practices and systems, leading to the continuous improvement over time of the organic standards. For example, activities funded by this project could include certifiers working directly with organic farmers interested in participating in private carbon markets to integrate qualifications for those programs into their OSP. Additionally, certifiers could employ testing for soil health and measuring GHG reductions as part of their inspection process.

³ Shade, Jessica et al. 2020. “Decreasing Reactive Nitrogen Losses in Organic Agricultural Systems.” *Organic Agriculture*. <https://doi.org/10.1007/s13165-020-00297-0> (July 14, 2020).

⁴ Tuck, Sean L. et al. 2014. “Land-Use Intensity and the Effects of Organic Farming on Biodiversity: A Hierarchical Meta-Analysis.” *Journal of Applied Ecology* 51(3): 746–55.

⁵ Kremen, C, N. M. Williams, and R.W. Thorp. 2002. “Crop Pollination from Native Bees at Risk from Agricultural Intensification.” *Proceedings of the National Academy of Sciences* 99(26): 16812–16.

⁶ Andersson, G.K.S., et al. 2014. “Effects of Farming Intensity, Crop Rotation and Landscape Heterogeneity on Field Bean Pollination.” *Agriculture, Ecosystems & Environment* 184(0): 145–48.

Increase technical assistance and knowledge of organic farming systems

Successful organic and transitioning farmers rely on agronomists and extension agents who are trained in organic production methods. However, there is a large gap in technical assistance investment to meet the needs of organic and transitioning farmers across production systems, scales, and geographic regions.⁷ This lack of assistance undercuts organic farmers and those seeking to adopt climate-smart practices. We recommend the following:

- **Fund a public-private partnership for providing technical services to organic and transitioning farmers.** The CSAF program should support existing efforts by partnering with the [Organic Agronomy Training Service \(OATS\)](#), a privately funded program sponsored by the Organic Trade Association, to expand the network of agronomists and technical service providers for organic and transitioning farmers. A “train-the-trainer” model, OATS provides science-based trainings for agriculture professionals to gain competency in organic systems to better serve their farmer clients.

Promote organic through market and infrastructure development

Organic producers deserve support in marketing the crops that help them achieve climate-smart outcomes. Successful organic production requires market access, local processing infrastructure, and market stability. Investment in distribution systems and infrastructure, facilitating more market connections between buyers and sellers for the organic market, and educating consumers on the benefits of organic will create opportunities to expand organic production. We recommend the following:

- **Fund a competitive grant program that expands organic processing and infrastructure.** Organic is a distinct supply chain that requires certified organic handlers to process organic products and crops. For example, while the production capacity and market demand for domestically produced organic grains are high, the processing infrastructure has not kept pace, and farmers face challenges in finding local grain mills to process organic. The CSAF program should partner with private businesses to fund projects that invest in organic processing capacity across all regions, commodities and scales of production.
- **Provide market and infrastructure development grants for minor rotational crops that improve soil health by funding partnerships between food companies and farmers to create food-grade markets for these soil-building crops in both organic and conventional systems.** For organic farms practicing diverse crop rotations and cover cropping, it can be challenging to market the full range of crop types produced on a farm. The organic market would benefit from improved market infrastructure and development, particularly around minor rotational crops such as oats, yellow peas, and others that are critical for soil health building but are not the primary cash crops. Cover and rotation

⁷ Farmer, James R., Graham Epstein, Shannon Lea Watkins, and Sarah K. Mincey. 2014. “Organic Farming in West Virginia: A Behavioral Approach.” *Journal of Agriculture, Food Systems, and Community Development* 4(4): 155–171–155–171.

crops are important for carbon sequestration and organic farm production due to the benefits they have for soil health, suppressing weeds, nitrogen fixing, biodiversity, and climate change mitigation.^{8,9} Small markets may exist for these minor crops, but it can be challenging for organic producers to access those markets. Small, diversified producers deserve support in this effort. Expanding the market infrastructure for soil-building crops will incentivize all farmers to implement conservation practices.

- **Promote USDA organic through a consumer education campaign.** The CSAF program can support the growth of organic and marketing of climate-smart agriculture by funding a campaign to educate consumers on what the USDA organic label means. This would improve organic literacy amongst consumers by clearly communicating the many environmental, human health, and societal benefits organic agriculture provides. The proliferation of unregulated and single attribute claims in the marketplace has increased confusion of consumers. USDA should invest in promoting the successful USDA organic seal as an option for consumers seeking clarity.

Additionally, we recommend the following:

- Invest in research projects that address crops most impacted by climate change and develop alternative options for impacted farms.
- Invest in water reduction technologies that improve yields while addressing concerns over drought.
- Invest in research on organic inputs and their climate footprints to drive continuous improvement and GHG reductions.
- Invest in projects to set up ecosystem service banks not just carbon banks.

5. In order to expand markets, what criteria should be used to evaluate project proposals for receiving funding through the Climate-Smart Agriculture and Forestry Partnership Program?

Employ life-cycle analysis

CSAF programs should utilize comparative long-term studies and life cycle analysis to ensure rewarded practices are backed by science that supports their furtherance of climate goals. If CSAF programs result in the development of a climate-smart label, products should not be eligible for climate-smart labeling based on the adoption of a single practice. Rather, climate-smart label eligibility must be based on a life cycle analysis of the relevant product to ensure climate-positive outcomes of the entire soil-to-retailer process. CSAF should consider restricting climate-smart or climate-friendly labeling to producers or groups that can demonstrate net-zero carbon greenhouse gas emissions without the use of offsets. Alternatively, a climate-friendly

⁸ Farmer, James R., Graham Epstein, Shannon Lea Watkins, and Sarah K. Mincey. 2014. "Organic Farming in West Virginia: A Behavioral Approach." *Journal of Agriculture, Food Systems, and Community Development* 4(4): 155–171–155–171.

⁹ Syswerda, S. P., and G. P. Robertson. 2014. "Ecosystem Services along a Management Gradient in Michigan (USA) Cropping Systems." *Agriculture, Ecosystems & Environment* 189: 28–35.

label should incorporate a ratings system so producers with the greatest dedication to climate-smart outcomes are recognized for their work.

6. In order to expand markets, which CSAF practices should be eligible for inclusion?

CSAF program funding should prioritize farmers and ranchers who are implementing conservation practices used in organic production and climate-smart practices like crop diversification, low toxicity pest control measures, cover cropping, maintaining natural buffer zones, and other practices that are determined to improve agricultural resilience.

The production, transport and use of fossil fuel-based fertilizers and pesticides are the main uses of energy in agriculture, and are significant contributors to greenhouse gas emissions, particularly carbon dioxide.^{10, 11} Therefore, CSAF should reward practices that minimize the use of and eliminate the dependency on fossil-fuel based inputs, especially synthetic nitrogen fertilizers. Petroleum-based fertilizers are prohibited in organic, as are most synthetic pesticides. Instead of relying on energy-intensive synthetic pesticides and fertilizers that can deplete the soil of valuable nutrients and increase environmental degradation, organic farmers build soil and plant health using practices that incorporate organic materials like manure and compost. The four key organic farming techniques that improve soil health outcomes are cover cropping, crop rotation, organic soil amendments, and conservation tillage.¹²

The following practices should be prioritized for CSAF funding:

- ✓ **Cover Crops:** Cover crops enhance soil health by protecting soil from erosion and nutrient losses while providing weed suppression. Cover crops are also often a critical source of nutrients for cash crops through nitrogen fixation and green manure.
- ✓ **Crop Rotation:** Crop rotation is the practice of alternating the annual crops grown on a specific field in a planned pattern or sequence in successive crop years so that the crops of the same species of family are not grown repeatedly without interruption on the same field. Cover rotations break pest and weed cycles, help cycle nutrients, and reduce economic risks associated with single cropping strategies. Organic farms tend to have longer and more complex crop rotations than their conventional counterparts, which lead to higher on-farm diversity and greater soil health outcomes.
- ✓ **Organic Amendments:** In addition to managing soil and plant fertility through cultivation and crop rotation strategies, organic farms may also apply plant and animal materials. Organic amendments such as compost and manure can enhance nutrient content in soils and increase soil carbon sequestration capacity.

¹⁰ Scialabba, N.E., and Muller-Lindenlauf. 2010. "Organic Agriculture and Climate Change." *Renewable Agriculture and Food Systems*; Cambridge 25: 158.

¹¹ Camargo, G.G., M.R. Ryan, and T.L. Richard. 2013. "Energy Use and Greenhouse Gas Emissions from Crop Production Using the Farm Energy Analysis Tool." *BioScience* 63: 263–73.

¹² Tully, Katherine L., and Cullen McAskill. 2019. "Promoting Soil Health in Organically Managed Systems: A Review." *Organic Agriculture*. <https://doi.org/10.1007/s13165-019-00275-1> (July 14, 2020).

- ✓ **Conservation Tillage:** Tillage is a mechanical and physical weed control technique commonly used by organic farmers in place of chemical herbicides. Although tillage has been criticized for releasing carbon dioxide from the soil, shallow non-inversion tillage practices in organic systems actually reduce greenhouse gas emissions while simultaneously increasing soil organic carbon, providing a viable greenhouse gas mitigation strategy in comparison to conventional no-till systems that rely on chemical herbicides. Even when organic full-till is compared to conventional no-till, organic still sequesters more carbon than conventional. The suite of soil fertility management practices used by organic farmers in combination with tillage leads to greater increases in soil organic carbon.

- ✓ **Livestock and Crop Integration:** Organic livestock operations can build soil health through integrated grazing practices. Large-scale livestock production is criticized for contributing to green-house gas emissions because it results in the release of huge amounts of methane. However, organic ruminant livestock are required to be on pasture during the grazing season. Well-managed pastures can improve soil quality and store carbon, which would otherwise contribute to climate change as carbon dioxide and methane in our atmosphere. This is especially true when livestock are incorporated into organic crop rotations because the manure from animals can reduce reliance on synthetic nitrogen fertilizer, which is energy intensive to produce and releases carbon dioxide into the atmosphere. The organic livestock production benefits are in stark contrast to conventional concentrated animal feeding operations that depend on conventional corn and soy, are reliant on energy intensive synthetic nitrogen, and manure storage facilities that release more greenhouse gases.

8. How can USDA ensure that partnership projects are equitable and strive to include a wide range of landowners and producers?

Early adopters including organic producers should be rewarded for their climate-smart practices and not harmed by new incentive programs. Benefits should not only accrue to new-adopters. Organic should be recognized as a sustainable farming practice in markets or programs designed to incentivize climate-smart agriculture due to their adherence to rigorous USDA organic standards, which require maintaining or improving natural resources.

Additionally, we recommend the following:

- Prioritize partnerships that service small and medium-sized producers to ensure equity in CSAF funding allocation and administration. Avoid prioritizing large producers who stand to display extreme shifts in climate-smart practices because of their scale.

- CSAF programs should prioritize projects that measure climate benefits and outcomes of diversified operations and farms whose benefits may not be initially clear but could be demonstrated over time.

- Reward resiliency in addition to mitigation.

- Prioritize partnerships that incentivize local and regional market development to decrease the greenhouse gas emission cost of product transportation and empower local economies.
- USDA should seek to complement emerging markets and ensure that all producers, regardless of geographic location or farm size, are supported and incentivized to identify the best opportunities on their operation to reduce emissions and increase carbon sequestration.
- USDA should seek to partner with indigenous nations, tribes, or organizations to ensure indigenous farmers are fairly compensated and recognized for any climate-smart practices they have employed through direct payments or grant prioritization.
- USDA should invest in projects that minimize the use and eliminate the dependency on synthetic fertilizers and pesticides on farms and consider the impacts that the most toxic chemicals used in agriculture have on farmworkers and vulnerable populations.
- Prioritize partnerships that ensure equity and access to climate-smart foods for low-income households.

In conclusion, organic agriculture is a climate-smart production system that deserves recognition and support. CSAF programs should facilitate, promote and reward certified organic agriculture by funding partnerships between organic certifiers and farmers to update the Organic System Plan to include climate-smart agriculture practices, expand technical assistance for organic producers and support market and infrastructure development. Lastly, CSAF programs should reward early adopters and diversified operations and avoid putting organic farms and businesses at a competitive disadvantage in the development of climate-smart markets by ensuring climate outcomes are met in order to qualify for project funding. Thank you for providing the opportunity to share our feedback. We are committed partners in encouraging the widespread adoption of climate-smart, resilient agriculture.

Sincerely,



Organic Trade Association