



# ORGANIC FARMING RESEARCH FOUNDATION

*Fostering the improvement and widespread adoption of organic farming.*

December 17, 2020

Dear Dr. Jacobs-Young and National Program Leaders,

The Organic Farming Research Foundation ([OFRF](#)) is a national non-profit organization that works to foster the improvement and widespread adoption of organic farming systems. OFRF cultivates organic research, education, and federal policies that bring more farmers and acreage into organic production. Over the past 27 years, OFRF has awarded over 300 small grants (totaling over \$3 million) to producers and researchers trialing innovative organic strategies to build soil health and fertility; manage pests, plant pathogens, and weeds; and develop improved crop cultivars for organic farming systems. Many of these grants provided seed money for initial “proof of concept” studies that established a foundation for larger endeavors funded by the U.S. Department of Agriculture (USDA) and other sources, and led to substantial practical outcomes for organic and other producers.

OFRF believes that the Agriculture Research Service (ARS) is ideally positioned to help producers sustain production and contribute to climate mitigation through better coordination and an expanded research investment in organic agriculture. Climate disruption, soil and resource degradation, a global pandemic, and inequitable distribution of natural, financial, and social resources threaten farmer and rancher livelihoods and food security nationwide, and especially in communities of color and other vulnerable populations. Organic agricultural systems show great potential to build agricultural and food system resilience in the face of today’s multiple crises, and ARS can play a critical role in advancing organic agriculture as a climate solution.

ARS works at the forefront to find solutions to agricultural problems, and the long-term research carried out at the agency will be critical in preparing farmers and ranchers, organic and non-organic, to adapt to and mitigate the climate crisis. We believe that by establishing a National Program Leader for organic research at ARS and increasing funding for organic research, the agency can address the historical lack of investment in organic agriculture research and help organic and non-organic producers alike to overcome challenges to realize their potential to mitigate and adapt to the impacts of the climate crisis.

The organic method builds and maintains healthy, living soils as the foundation for successful production, and largely excludes synthetic agrochemicals to protect soil life and other beneficial organisms. Research shows that organic practices have great potential to sequester carbon (C) in soil and plant biomass, reduce net greenhouse gas (GHG) emissions of agricultural operations, build resilience to the impacts of climate disruption and other stresses, and enhance long-term sustainability of agriculture and food systems.

Organic producers also face unique challenges. These include managing weeds without herbicides while minimizing the soil health costs of tillage and cultivation, managing nutrients from organic sources for optimal crop yield and soil health, and maintaining satisfactory and profitable yields without synthetic pesticides. Weather extremes related to climate change further complicate production and can compromise soil health itself. A coordinated nationwide effort directed by a dedicated National Program Leader for organic and an increased investment in organic research are urgently needed to help organic producers overcome these challenges and meaningfully contribute to our climate mitigating efforts.

Lack of research investment in organic agriculture is largely responsible for the approximately 20% yield gap between organic and conventional yields. Most modern crop cultivars and livestock breeds have been developed for input-dependent conventional systems and are poorly adapted to organic methods that rely on biological processes for crop nutrition and crop protection.



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Since 2002, extramural funding through the Organic Research and Extension Initiative (OREI), Organic Transitions Program (ORG), and Sustainable Agriculture Research and Education (SARE) administered by the National Institute for Food and Agriculture (NIFA) has begun to address this research gap, yielding valuable practical outcomes for organic producers. Inclusion of organic systems in ARS Long Term Agricultural Research (LTAR) at Beltsville, MD has made important contributions to understanding and optimizing organic crop rotations. However, ARS organic funding remains at \$12 million per year, or 1.2% of the agency's total budget, which lags far behind the exponential growth of the organic industry's market share, now approaching 6%. Furthermore, both ARS and NIFA organic funding declined significantly between 2010 and 2013, and ARS funding for organic research has since remained relatively flat. The 2018 Farm Bill increases OREI funding to \$50 million by 2023, but does not mandate increased ARS investment in organic.

ARS National Programs and LTAR sites support long-term basic and applied research vital to the understanding of phenomena such as soil carbon sequestration, nutrient cycling, plant-soil-microbe interactions, and climate resilience in different farming systems. NIFA, on the other hand, awards shorter term grants (1 – 5 years) for projects that emphasize practical application and farmer engagement. Coordination between ARS and NIFA can leverage their complementary roles. For example, ARS-funded plant breeding research conducted in the context of organic systems can speed progress toward finished cultivars through OREI farmer-participatory breeding networks. To better support the organic community, we set forth the following recommendations for ARS.

## ***Recommendations:***

- Establish a National Program Leader to coordinate organic research efforts at ARS and create a new National Program devoted to organic.
- Devote at least \$60 million per year (6% of the ARS annual budget) to organic systems.
- Strengthen coordination between ARS and NIFA organic research on soil health, climate mitigation and resilience, crop cultivar development, and other priority topics.

## ***Recommended ARS organic research priorities:***

- Optimize organic systems that integrate cover crops, crop rotation, amendments, innovative nutrient management, judicious tillage, and livestock-crop integration on a site-specific basis for soil health, climate change resilience and mitigation, yield stability, and farm economic viability.
- Understand and optimize soil microbiomes and biological processes in organic systems.
- Understand the role of crop genetics in efficacy of plant-soil-microbe relationships for nutrient and moisture uptake, disease resistance, and overall crop resilience and vigor.
- Advance the cutting edge of organic integrated pest management for crop diseases, pests, and weeds.
- Develop regionally adapted, climate-resilient, public crop cultivars that perform well in organic systems, partner effectively with beneficial microbes, resist disease, use nutrients and moisture efficiently, outcompete weeds, and meet market needs of organic producers.
- Advance the science and practice of management-intensive rotational grazing for organic livestock production systems, including regional adaptation of advanced rotational grazing and pasture management methods.
- Develop soil health, climate mitigation, and organic production methodologies suited to small-scale, diversified, and limited resource production systems.



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We look forward to working with ARS to advance research to better serve the organic community and to address the climate crisis through organic agriculture. To learn more about our [policy recommendations](#) and [research priorities](#) for organic agriculture as a climate solution, please visit our [website](#). OFRF conducts periodic surveys of organic producers across the country and summarizes the research priorities identified by producers in our National Organic Research Agenda (NORA) publications. The next NORA report will be published in 2021, which we will share with ARS National Program Leaders once it is published. We appreciate your serious consideration of our recommendations and welcome the opportunity to partner with ARS to advance organic research at the agency.

Sincerely,

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Cristel Zoebisch, Climate Policy Associate

Mark Schonbeck, Research Associate



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cc:

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