

**Written Testimony of the  
Organic Farming Research Foundation  
to the  
Subcommittee on Agriculture, Rural Development, Food and Drug Administration, and  
Related Agencies  
United States Senate Committee on Appropriations  
Pertaining to FY 2022 Appropriations for the  
Agricultural Research Service**

**May 2021**

**Summary**

Organic farming is a bright spot in the agriculture economy, yet organic producers across the country remain challenged by the lack of research on basic agronomic challenges. Funding from the USDA Agricultural Research Service (ARS) for organic farming research is not commensurate with the continued rapid growth of the organic market. In fact, according to ARS data, organic funding has declined from over \$15 million in FY 2007 to just \$12 million in FY 2020. This represents less than one percent of the total ARS research budget, versus organic's market share of six percent. If ARS invested the equivalent six percent, the total ARS organic research budget would be closer to \$80 million. Clearly a huge gap exists, one that needs to be closed to bring about a greater degree of equity, address barriers to wider adoption, and advance the substantial contributions of organic agriculture to pressing environmental, climate, and human health concerns. We believe that appropriators can and should take action, over a multiyear period in stair-step fashion, to ensure organic agriculture gets its fair share of the ARS research budget. **We urge you to start with a down payment in the FY 2022 bill at a level of at least \$20 million for ARS organic farming research, while also directing ARS to develop a long-range national strategic plan for organic research.**

**Proposed Bill Language**

We urge you to request the following clause be added to the list of statutory clauses that follow the total line item for ARS research that says:

“\$X,XXX,XXX,XXX,...., including not less than \$20 million for research directly related to organic agriculture and for the agency to develop a five-year plan for organic food and agriculture research encompassing all relevant crop, animal, nutrition, and natural resource national programs; ....”

**Proposed Report Language**

The Committee is aware of the important role organic farming can play in enhancing farm income, developing new markets, improving soil health, mitigating climate change, and protecting water quality. The Committee provides an increase for research directly related to organic agriculture. The Committee also notes that the percentage of direct organic research relative to the total research budget lags far behind the share of organic food in the marketplace.

Therefore, the Committee directs the agency to develop a five-year national strategic plan to close the gap. The plan should include all of the relevant national programs within the crop, livestock, nutrition, and natural resources mission areas, and should include robust stakeholder involvement from the organic farming and organic research communities. To improve coordination and accountability, the Committee also encourages the agency to name one of its existing National Program Leaders in each of those four mission areas as the lead for organic research within their mission area. In developing the strategic plan, the Committee also encourages the agency to coordinate with the National Institute for Food and Agriculture on soil health, climate mitigation and resilience, crop cultivar development, pest and weed management, grazing systems, and other priority topics.

## **Background**

The Organic Farming Research Foundation ([OFRF](#)) believes 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, 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. 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 increasing funding for organic research, developing an iterative five-year strategic plan for organic research, and appointing a National Program Leader to coordinate organic research within each of the four mission areas at ARS, the agency can address the historical lack of investment in organic agriculture research and help organic and non-organic producers alike 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.

While organic agriculture is a key component to mitigating climate change, organic producers 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 should be directed by dedicated National Program Leaders for organic within the crops, livestock, natural resources, and nutrition mission areas. Increased investment in organic research is urgently needed to help organic producers overcome these challenges and help more farms transition to organic to more meaningfully contribute to climate mitigation 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 natural biological processes for crop nutrition and crop protection.

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 and others wishing to adopt more sustainable farming practices.

Inclusion of organic systems in ARS Long Term Agricultural Research (LTAR) at Beltsville, Maryland has made important contributions to understanding and optimizing organic crop rotations. In addition, the nation's one dedicated ARS organic research facility, based in Salinas, California, where long-term research (now in year 17) is making significant strides in understanding the effects of cover crops and crop rotations on fertility and weed management. This has critical implications not just for organic but for the whole agriculture sector, as all farmers can utilize and benefit from cover cropping.

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, meaning NIFA's contribution is increasing, while ARS investment in organic remains disproportionately low.

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, ARS should:

- Appoint National Program Leaders within each mission area to coordinate organic research efforts at ARS and create a new, coordinated iterative five-year national program plan devoted to organic.
- Devote at least \$80 million per year (6% of the ARS annual budget, equivalent to the organic share of the marketplace) to organic systems by the end of the first 5-year cycle.
- Strengthen coordination between ARS and NIFA organic research on soil health, climate mitigation and resilience, crop cultivar development, and other priority topics.
- Include within ARS organic research priorities the following:
  - 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 farm 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.

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 the Subcommittee and ARS National Program Leaders.

To learn more about our [policy recommendations](#) and [research priorities](#) to advance organic agriculture as a climate solution, please visit our [website](#).