



April 1, 2024

Ms. Michelle Arsenault
National Organic Standards Board
USDA-AMS-NOP
1400 Independence Avenue, SW
Room 2648-So., Ag Stop 0268
Washington, DC 20250-0268

RE: Materials Subcommittee - Research Priorities Spring 2024 (Discussion Document)

Dear Ms. Arsenault:

Thank you very much for this opportunity to provide comments on the Materials Subcommittee proposal on the Spring 2024 Research Priorities.

The Organic Center is a non-profit organization with the mission of convening credible, evidence-based science on the environmental and health benefits of organic food and farming and communicating findings to the public. We are a leading voice in the area of scientific research on organic food and farming, and cover up-to-date studies on sustainable agriculture and health while collaborating with academic and governmental institutions to fill knowledge gaps.

The Organic Center thanks the Materials Subcommittee for its recommendations on Research Priorities. We appreciate the creation of the Research Priority Framework and the efforts to set priorities.

Summary:

- ✓ The Organic Center generally supports the subcommittee's proposed Spring 2024 Research Priorities. The proposed priorities are in line with the needs of the organic community, and will serve as an important resource to guide The Organic Center's research priority focus and project development.
- ✓ Based on feedback we have received during our own stakeholder engagement efforts, we suggest that some ongoing crop research topics (systems and nutrition research) be elevated to top research priorities. We also recommend some topics that we have identified as missing be added to the research priority list, particularly in the areas of socioeconomic impacts of organic and measurements of effectiveness of research and extension.
- ✓ While not a research topic, we suggest that the RFA administration process for federal funding programs be highlighted as an important consideration that impacts the equity and diversity of grantees, as well as the quality of proposed research.



We offer the following more detailed comments:

Research Priority Adjustments

We have reviewed the list of topics included for Spring 2024 Priorities, and while we were pleased to see the inclusion of “Whole farm ecosystem service assessments to determine the economic, social, and environmental impact of farming systems choices,” and “Factors impacting organic crop nutrition, and organic/conventional nutrition comparisons,” we encourage the subcommittee to elevate these topics to a top priority. There is a general deficiency in research results for both topics and these results are of great interest to consumers and businesses attempting to meet Science Based Targets.

Whole farm ecosystem service assessments to determine the economic, social, and environmental impact of farming systems choices:

In the past two years, The Organic Center has convened Life Cycle Assessment (LCA) technicians and industry experts to discuss the limitations of LCAs in measuring the sustainability of organic farming. As a group, we have identified the following challenges that currently exist, and recommend that future sustainability metrics include whole-system measurements of organic farming outcomes:

- While Life Cycle Assessments have become a popular standard to measure the sustainability of ingredients and cropping systems, there are many challenges associated with this measurement strategy that limit the accuracy of calculations and interpretations of results. For instance, there is a lack of Life Cycle Inventory (LCI) data that are representative of organic ingredients/cropping systems and when organic data is missing, data from non-organic systems is often relied upon to fill the gaps. This prevents calculations from reflecting the true impact of organic in sustainability reporting, e.g., Scope 3 carbon accounting.
- Additionally, the quality of data that does exist is not standardized nor held to the highest standard. Many published studies on organic farms do not adequately define the organic system studied—time since organic transition, scale of operation, rotation length and composition, crop configuration (e.g. polyculture), non-crop vegetative diversity, organic soil amendments, and pest management inputs are rarely described, yet all are important factors that would impact yield and therefore the interpretation of the study and LCA outcomes. For example, research shows that as the duration of organic management increases, so does yield, closing the yield gap. Since LCAs measure the climate impacts on a per-yield basis, if an LCA includes only young organic farms, or the age is not known, then the results may be inaccurately interpreted, misrepresenting the impacts of organic management.
- Another challenge is that the current LCA frameworks/time horizons do not include key metrics that are critically important outcomes of organic systems like improved biodiversity, water and air quality, health and livelihoods of rural communities, etc. Instead, they focus almost entirely on GHG emissions-- soil organic carbon metrics are only now beginning to be integrated into carbon accounting and LCAs, which also have a bearing on an organic system’s ability to mitigate climate change. This wrongfully penalizes organic ag systems in a GHG/Climate metric debate and is likely to disincentivize investment in organic programs as



2030 goals, legislation, etc. take effect. Therefore, sustainability measurements should include additional ecosystem service/disservice parameters that result in an output of multifunctionality and a truer representation of the impacts of organic management.

We believe whole farm ecosystem assessments are of top priority given the increasing popularity of LCAs as the gold standard tool to measure the sustainability of organic.

Factors impacting organic crop nutrition, and organic/conventional nutrition comparisons:

This topic is growing in popularity amongst consumers who want to better understand the benefits of organic food to their families. While the interest in potential dietary exposure to pesticide contamination is of concern, the most recent OTA Consumer Survey shows that consumers are most willing to pay for products that they believe to be healthy and nutritious. Published research predominately shows that organic crops have more micronutrients and antioxidants, and that organic animal products like dairy and meat contain healthier fatty acid profiles, antioxidants, and increases in some vitamins and minerals, but much more research in this area is needed. Given the high consumer interest in this topic and therefore the potential for this research topic to improve the market for organic products, we recommend that this research topic be elevated to a top priority.

Additional Research Needs

The Organic Center is continually collecting information on research needs from multiple sectors of the organic community. We conduct industry roundtables, work with the Organic Trade Association's Farmers Advisory Council, meet with professors on our Science Advisory Board and hold one-on-one meetings with individual companies, farmers, professors, and consumers. In December 2023, we also co-hosted a virtual convening with FFAR, Clif Bar, and Tuskegee to assess organic research and extension needs in the Southeastern U.S. Based on all of this engagement, we feel that the NOSB Materials Subcommittee's proposed Spring 2024 Research Priorities are largely in line with the needs of the organic industry, and appreciate the release of this report as an important resource to guide research priorities and project development.

Based on feedback we've received during our own outreach efforts, we suggest the following research topic areas be added to the currently proposed list:

All crop research questions should include a focus on minor crop varieties of high cultural importance to BIPOC communities. BIPOC farmer and consumer interviews/surveys that aim to identify preferred crops and unique research topics and resource needs should be administered to develop a more comprehensive list of crops that need additional research.

State-by-State socio-economic impacts of organic farming

The Organic Center has been interested in the economic and social impacts of organic farming for a number of years, as there is extremely limited research on these issues. Understanding the economic impact of organic farming is especially important because it can influence advocacy and policymaking, and funding support for organic research, transition and market development. Specific topics that could help increase advocacy include:



- Impacts of organic production on employment opportunities/rates/stability, household income, livelihoods/wellbeing metrics, farmer recruitment and retention.
- Impacts of federal funding investments on organic transition, farmer retention, sales/income.
- A refresh of the organic hotspots research that was based on census data from 2015 and a contrasting look at organic coldspots to see how regions with a wealth or dearth of organic impact various socioeconomic metrics.

Results from this kind of research would provide more power when talking with policymakers and congresspeople across the aisle.

Time to maturity for organic crops

Crop insurance provisions require crops to be planted between the earliest and latest planting dates to be eligible for a loss payment. 7 C.F.R. § 457.8. Coverage also ends at the end of the crop year, which is the “period within which the insured crop is normally grown.” If an organic crop has different planting and harvesting timelines, it could result in a loss in coverage. It may be necessary to adjust planting dates for varieties of crops grown under organic production if the genetics or ambient conditions impact the time to maturity for organic crops compared to conventional. The data needed to assess the necessity of these adjustments is lacking, but implications could be major if organic crops do indeed have different maturity rates that do not align with current crop insurance provisions.

Measuring the effectiveness of research extension programs

Land grant institutions receive federal funding to support extension programs and specialists/agents, and current NIFA funding programs require integration of research extension into funded projects. And yet, we continue to hear from farmers that there is a disconnect between research and their access to results. This communication breakdown can occur when various audiences are not given information, or when the information delivered is not communicated in effective ways (e.g. language, cultural barriers). At our recent virtual convening, we heard from BIPOC farmers and representatives that this is a continual problem—that university extension is not meeting their needs.

These testimonies are supported by preliminary research that was recently presented at the Kentucky Black Farmers Conference in early 2024. A Master’s student explored records of contact hours from two major universities in KY, one of which is a designated HBCU and found that contact hours were disproportionately spent (90%) on communication with white constituents (this group includes farmers and other stakeholders as extension programs reach rural and urban communities), including those contact hours conducted by extension specialists from the HBCU. While these results are preliminary, they highlight the need to conduct additional research that assesses the reach, quality and impact of research extension broadly, and also within the organic sector. The inclusion of end users in this research would help identify more impact strategies for future extension programs.



Considerations of funding program administration: the application process

Several USDA NIFA funding programs like OREI, ORG, AFRI, SCRI, etc. play a pivotal role in advancing organic agriculture research and extension. These funding programs help ensure that organic systems remain productive and profitable while also providing a myriad of planetary benefits. The OREI and ORG funding programs are the primary drivers of organic systems research that lead to the development of new tools and practices that help organic farmers be more competitive in a changing global market.

While these invaluable sources of funding have the potential to dramatically improve organic production, the administration of the grant programs must also be considered in their influence on the long-term success of organic research, extension, and production.

The Organic Center and the Organic Farming Research Foundation (OFRF) have years of high engagement with organic researchers and their own participation as project leads/collaborators, and together our organizations have collectively identified some opportunities and challenges with the administration process of two vital programs, OREI and ORG.

Beginning with what has helped make the application process more equitable and successful, we would like to acknowledge that publishing multi-year RFAs (requests for applications) with deadlines for more than one year in advance is very helpful. This gives all interested applicants a hard deadline to work with and under-resourced institutions more time to develop necessary collaborations, research questions and methods, and ensure their institutions have the capacity to submit proposals on their behalf. In the past, OREI has set deadlines in the summer, which aligns better with teaching schedules and avoids delays/challenges associated with winter holiday closures.

To ensure that applicants are set up for success in an inclusive and fair way to increase the submission of high-quality grant proposals with high-impact potential, we suggest three things:

- 1. There should be predictability in the timing of the RFA release and the deadlines should better accommodate academic calendars.** Over the past several years the time of releasing the RFA for these two programs has been unpredictable. For OREI, it has ranged from October to March since 2014. When considering the academic calendar and the capacity constraints placed on research professors who teach (and those from less-resourced institutions tend to have high teaching loads), this inconsistency negatively impacts application rates and creates a significant barrier to less-resourced institutions. With more consistency in the timing of RFA release, we expect that applicants will be able to better fit the whole application planning and execution process into their workflow for the year. Publishing multi-year RFAs with deadlines in non-teaching months, particularly towards the end of summer so that fieldwork is already underway, will relieve the pressure that occurs when deadlines are placed in winter or spring.



2. **Consistency in available time for application with more time between release of RFA and application deadline.** Similar to the release date of the OREI and ORG RFAs, a more-consistent timeframe to draft a grant application is prudent. Since 2014, the number of days to apply ranged from 37 to 91, which reflects 5 to 13 working weeks. Many universities require an internal review process that can take up to 10 business days. Therefore, considering the administrative processes and requirements many institutions have to meet for grants of the scale of OREI, the actual time between RFA release and the deadline **may** severely limit potential applicants. This is especially true for applicants who have heavy teaching loads, limited administrative support, and are at institutions that have limited resources all around.
3. **Coordination of deadlines across NIFA programs is needed.** Some organizations and institutions submit multiple applications to various NIFA funding programs within a given year. For example, in 2024, The Organic Center lead or collaborated on seven grant proposals across three NIFA programs with deadlines of Feb 6, Feb 15, and March 7. The administrative burden alone to meet this cluster of deadlines put an enormous and unnecessary strain on our capacity.

We also had an experience where one of our collaborating academic institutions, an under-resourced Hispanic Serving Institution, could not accommodate the tight turnover between program deadlines and asked us to be the lead and submit on their behalf or else they would have to pull their OREI application this year. We were not well positioned to absorb the extra work, but committed to the submission to ensure that a worthy application was not abandoned. We heard other testimonies of academic faculty and administrative support limitations due to the stacked deadlines, which was exacerbated by the timing of winter holiday closures, teaching loads, and the need to build collaborations and request letters of support at a time of year when many people were out of office and/or stretched very thin.

And finally, The Organic Center's science staff provides review services for NIFA and other government funding programs. For two years in a row, we have had to back out of reviewing for the NIFA SCRI program because their review coincided with the due date for OREI. This limits organic representation on non-organic sources of funding.

These suggested changes will not only increase the feasibility of the application process for all researchers, but they will also increase support for organic agriculture research at institutions that have historically been underfunded and unrecognized in programs like these.

To that end, in addition to the need for increased organic research funding and refinement of the grant application program administration, we acknowledge that more infrastructure development to support applications and administration of grants across all institutions is needed, but primarily at minority-serving institutions and under-resourced institutions/organizations.



Again, on behalf of The Organic Center, I would like to extend my thanks to the Materials Subcommittee for your commitment to furthering organic agriculture.

Please do not hesitate to contact us for information on the data that we have been collecting or with questions you would like us to ask the research community.

Respectfully submitted,

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