

REPORT

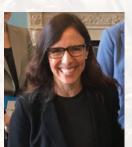
These are challenging times for the people who grow our food.

Flooding left farm fields across the Midwest under water last spring. At the same time, growers across the Southeast were working to recover from devastating hurricanes and tropical storms. In the West, farmers and ranchers were dealing with the aftermath of record-breaking wildfires intensified by increasingly warm and dry weather.

Sustainable organic management practices that build soil health such as cover cropping, minimizing soil disturbance, and increasing biodiversity, help farmers and ranchers become more resilient to changing weather conditions. As OFRF celebrates its 30th anniversary, I am proud to share the work we have done to put forth science-based solutions that inform decision-making, reduce risk, and increase yields. From the seed grants we provide to support innovative research across the country, to the breadth of educational materials we distribute for free, to our advocacy work on Capitol Hill—everything we do is aimed at supporting the success of organic producers and others looking to farm more sustainably.

And, we couldn't do it without you!

To all of our supporters, partners, and the greater organic community, thank you for collaborating with us to continue this important work. Organic systems are the answer, we believe, to building resiliency, restoring the health of our soils and waterways, and improving human health.

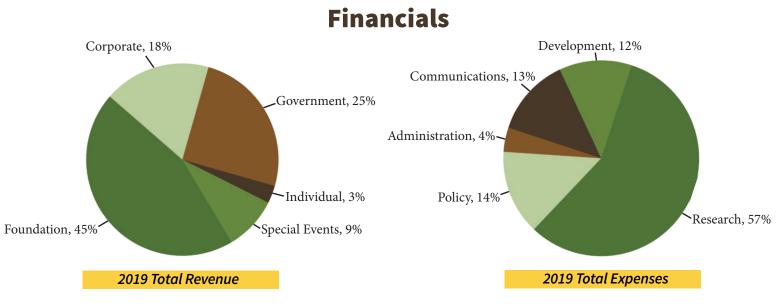


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Brise Tencer Executive Director, OFRF

OFRF 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.

All OFRF-funded research results and educational publications are shared freely at ofrf.org.





Education & Outreach

National Organic Farmer Survey to Set Research Agenda

OFRF and the Organic Seed Alliance (OSA) are partnering on a national survey of certified organic and transitioning producers. Previous survey results reported in both OFRF's National Organic Research Agenda (NORA) and OSA's State of Organic Seed reports have helped ensure research funding is responsive to the needs of organic producers, while also identifying gaps where additional investment is necessary.

This work is supported by the Organic Agriculture Research and Extension Initiative (OREI) grant no. 2019-51300-30249 from the USDA National Institute of Food and Agriculture.





New Online Training Program for Beginning Farmers

OFRF introduced the first learning module, Organic Soil Health Management, in its free online training program for beginning organic farmers.

In total, the online training program will contain six learning modules:

1) soil health, 2) weed management, 3) irrigation and water management, 4) insect and mite management, 5) disease management, and 6) business management and marketing.

This open educational resource is a joint effort between OFRF, the University of California Sustainable Agriculture Research and Education Program (UC SAREP), and California Polytechnic State University in San Luis Obispo (Cal Poly). The self-paced program combines descriptive essays, video lectures from university faculty, and virtual field trips to demonstrate organic principles and practices.

The soil health module is now live at **ofrf.org/programs/education** and the five remaining modules will be introduced as they are completed, with the entire program available in spring 2020.

Funding for this project was made possible by the U.S. Department of Agriculture's (USDA) Agricultural Marketing Service through grant AM170100XXXXG011. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the USDA.

Soil Health Guidebook & Webinar Series

To support farmers and ranchers in selecting the best management practices for building soil life and soil health, we released the ninth topic in our immensely popular Soil Health and Organic Farming Series of guidebooks and webinars, Understanding and Optimizing the Community of Soil Life.



▶ **10,000** VIEWS OF SOIL HEALTH WEBINARS

↓ 20,000 DOWNLOADS OF SOIL HEALTH GUIDEBOOKS

Timothy Bowles, Assistant Professor of Agroecology, UC Berkeley Assessment of Nitrogen Flows on Diversified Organic Farms: A Road Toward Enhancing Soil Health from the Ground Up



Soil health is a central part of organic farm management. This project seeks to determine how diversification practices such as crop rotations and cover crops that build soil health influence nitrogen availability from soil organic matter. This is particularly important to consider when determining the timing and choice of organic fertilizer application on diversified organic farms. The goal of this project is to provide farmers in Yolo County, California—an area with a high concentration of diversified farms—with both technical support and a community of practice that allows for more informed decision-making about nutrient management.

Impact: More precise information for making informed decisions about fertilizer application, ultimately reducing added costs and environmental impacts associated with nutrient losses from organic fertilizers.

Alex Woodley, Assistant Professor, North Carolina State University *Evaluating Benefits of Winter Annual Cover Crop Systems for Organic Sweet Potato in North Carolina*

Despite a steady demand for organic sweet potatoes in North Carolina, marketable yield often does not reach the yield potential for this region due to challenges in weed, insect, and soil fertility management. Weed proliferation and soil borne pests such as wireworm have been identified as two areas of concern. Using a roller-crimper modified to work on raised beds, this research will assess the viability of winter cover crops seeded onto autumn formed beds and terminated in the spring as effective tools for weed control. The researchers will also determine if there is a trade-off of including cover crops in rotation by potentially providing improved overwintering conditions for wireworms, and if this translates into increased root damage and marketable yield losses. Lastly, by embedding increasing rates of organic nitrogen fertilizer in each cover crop treatment, they will determine if this management practice requires modification to nutrient recommendations.



Impact: Innovative weed, insect, and soil fertility management options to help increase organic sweet potato yields.

Jed Eberly, Assistant Professor, Montana State University

Evaluating the Effects of Seeding and Inoculant Rates on Weed Suppression, Nodulation, and Soil Health on Organic Lentil Production in the Northern Great Plains



Lentils are important for diversifying wheat-based cropping systems and are also beneficial in enhancing soil health. These benefits have contributed to the exponential growth in pulse crop acreage in The Northern Great Plains. However, little is known about the optimum seeding and appropriate inoculation rates to improve crop growth, nutrient acquisition, weed management, and yield potential for lentils in organic systems. The goals of this project are to evaluate effects of seeding rates on lentil yields and weed competition. These goals will be achieved through multi-site replicated trials on grower's fields in three different lentil growing areas of Montana. Three lentil varieties will be selected based on seed sizes; large, medium, and small and will be seeded at four different rates.

Impact: Improved lentil yields, nutritional quality, and better returns on investments for organic lentil growers.

Aysha Peterson, Ph.D. Student, University of California, Santa Cruz *Plant-based Nutrient Management for Socially Disadvantaged Organic Farmers*



This research aims to promote successful utilization of best organic nutrient management practices by employing qualitative social science research. The researchers will examine barriers to implementation of plant-based nutrient management strategies among organic, socially disadvantaged farmers in California's Salinas Valley. Findings will directly inform educational programming via Agriculture and Land-Based Training Association's Farmer Education Course and will be incorporated into economic and infrastructural assistance available through ALBA's Organic Farm Incubator. Empirically based conclusions will provide for comparative analysis with other agricultural regions of the U.S.

Impact: Widespread improvement of organic farmer assistance services among socially disadvantaged organic farmers.

Edmund Frost, Farmer, Common Wealth Seed Growers LLC, Louisa, Virginia Development and Assessment of Bacterial Wilt and Downy Mildew Resistant Cucumber Seedstocks - Year Two

Downy mildew (DM) is a central limiting factor for cucumber production in the eastern U.S, especially for mid-season and late-season crops. Frost will continue his assessment of DM resistant cucumber seedstocks, with increased focus on evaluating and advancing high-performing lines selected in 2018. Trials will take place at University of Massachusetts, North Carolina A&T University, University of Mount Olive, and four farms around the Southeast U.S. Trials will evaluate yields in high-DM conditions, rate the impact of DM on foliage, and provide feedback on fruit quality and marketability. Frost will conduct a Bacterial Wilt-focused trial in early-planted, low-DM conditions on his own farm, as well as a lateseason breeding trial of his selected slicing and pickling cucumber lines.



Impact: New cucumber varieties that are easier to grow, offer a longer harvest window, yield better under disease pressure, and help assure conventional farmers considering organic certification that transition is workable.

These grants were supported in part by a match from the Foundation for Food and Agriculture Research (FFAR) aimed at funding research related to improving soil health and reducing the environmental impacts of agriculture.

Advocacy Highlight



The need for increased investment in organic research—particularly in the face of a changing climate—was at the forefront of OFRF's advocacy efforts in 2019. At a Town Hall meeting in Salinas, CA, where United States Secretary of Agriculture Sonny Perdue met with agriculture stakeholders, Brise Tencer spoke to Perdue about the potential of organic practices to sequester carbon, reduce greenhouse gas emissions, and adapt to climate change—emphasizing the need to invest in research in this area.

In June, Brise appeared before the House Committee on Agriculture's Subcommittee on Biotechnology, Horticulture, and Research of the House Committee on Agriculture to discuss issues of resiliency and risk in agriculture. She spoke about the need for integrated research, education, and outreach to provide farmers with the tools, technology, and support they need to build healthy resilient farming systems that can withstand climate change and steward the land for future generations.

30 years 1990-2020 **OF SEEDING CHANGE**



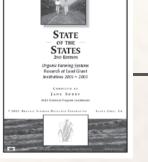
1990 Organic Foods Production Act authorizes the National Organic Program. OFRF founded by grower members of CCOF.

> SEARCHING — For The — "O-WORD"



OFRF's assessment of USDA research, Searching for the "O" Word, shows only 34 out of 30,000 projects relevant to organic agriculture.





State of the States report documents lack of service to organic agriculture by U.S. land grant institutions. Fifteen states launch new organic initiatives in response.



1992 Bob Scowcroft named

Executive Director, office opens in Santa Cruz. First research grant awarded.



OFRF successfully lobbied to have organic recognized as "good farming practice" in the Agricultural Risk Protection Act, making organic operations eligible for federal crop insurance for the first time ever.

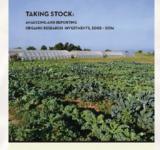




As a result of OFRF's lobbying, the USDA Organic Agriculture Research and Extension Initiative passage in Farm Bill provides \$15M for organic research.

2007

OFRF releases National Organic Research Agenda. U.S. House of Representatives holds first ever hearing on organic agriculture.



2014 OFRF receives \$100,000 USDA grant to analyze and report on research investments through USDA grant programs, identifying gaps and providing roadmap for future investments.

2007 NATIONAL ORGANIC RESEARCH AGENDA

> Organic Farming for HEALTH and PROSPERITY August 2012





2016

OFRF releases updated National Organic Research Agenda. Soil Health research emerges as the top priority.

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2017-



OFRF's Soil Health & Organic Farming guidebooks and webinars make science accessible to thousands.



2019

OFRF releases Basics of Organic Farming free online training program for beginning farmers.

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Thank you for your support!

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