



2016 ANNUAL REPORT

PLANTING THE SEEDS OF INNOVATION



FOUNDATION FOR FOOD AND AGRICULTURE RESEARCH



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Letter from the Executive Director



Dear Friends of the Foundation for Food and Agriculture Research,

Thank you for your support and engagement in 2016, a landmark year for the Foundation and my first full year at the helm of this exciting new organization.

In 2016, we awarded our first grants, received our first contributions, grew the staff from three to 12, expanded our board, established advisory councils, and built important relationships with you: our friends, partners and supporters.

As a scientist myself, I am particularly proud of the New Innovator in Food and Agriculture Research Award, an idea born in one of the first meetings of the inaugural FFAR Board of Directors, appointed by former Secretary of Agriculture Tom Vilsack. The goal of the program is to keep talented, early-career scientists firmly implanted in agriculture with a substantial research grant awarded when they need it most. By requiring nominees to demonstrate a commitment to mentorship, our vision for these grants is to not only support this generation of talent, but also to inspire the next one. It was an honor for FFAR to award the first New Innovator grants in partnership with nine universities.

After establishing Advisory Councils and receiving valuable feedback from hundreds of academic, governmental, nonprofit, and business groups, we launched a new research framework focused on major hurdles impeding our ability to sustainably provide nutritious food to the future population. Through our Challenge Areas, FFAR will support science that drives solutions to these hurdles and takes advantage of the Foundation's nimble, collaborative model. To immediately start "Seeding Solutions," we closed the year with a call for bold research ideas within the Challenge Areas. In response to this call, we expect to award at least \$1 million or more of FFAR funds in each Challenge Area. As with each FFAR project, we leverage our investment by matching it with non-Federal funds. In the case of Seeding Solutions, we asked applicants to identify matching funds and expect a variety of funding partners for this exciting program.

I know we will look back on 2016 as an important, formative year spent planting the seeds of innovation and I also know that the best is yet to come. The relationships, scientific ideas, and organizational framework in which we have invested so much energy are just now beginning to prosper. As we publish the 2016 Annual Report, FFAR is poised in 2017 to invest nearly half our initial funding, matched dollar for dollar by partners like you, in support of scientific solutions to critical issues facing food and agriculture.

I look forward to seeing the Foundation for Food and Agriculture Research continue to climb toward its exciting potential in the next several months, and with your support, for years to come. I thank you for your engagement and invite you to join us in advancing scientific innovation in food and agriculture.

Sincerely,

A handwritten signature in black ink, appearing to read "Sally Rockey". The signature is fluid and cursive, written over a light-colored background.

Sally Rockey, Ph.D.
Executive Director



Program Highlights

National Academy of Sciences Prize in Food and Agriculture Sciences

The Foundation for Food and Agriculture Research demonstrated its commitment to elevating food and agriculture in the scientific arena by establishing the first-ever National Academy of Sciences Prize to be dedicated to the food and agriculture sciences.

Beginning in 2017, the prestigious National Academy of Sciences Prize honors one mid-career recipient annually for an extraordinary contribution to agriculture or to the understanding of the biology of a species fundamentally important to agriculture or food production. Joint support from the Foundation for Food and Agriculture Research and the Bill & Melinda Gates Foundation endows the \$100,000 per year prize in perpetuity.

MATCHING PARTNER: BILL & MELINDA GATES FOUNDATION

“This encouragement of mid-career scientists is a really key part of the mission [of the new Prize] that reflects the Foundation for Food and Agriculture Research priorities.”

**- Rob Horsh
FFAR Board Member
Bill & Melinda Gates Foundation**

New Innovator in Food and Agriculture Research Award

The Foundation for Food and Agriculture Research awarded its first research grants in 2016 to nine talented early-career scientists who demonstrated an innovative research approach and a commitment to mentoring. Each selected scientist received a research award that will total up to \$600,000 over three to five years to conduct impactful work that will fill critical gaps in food and agriculture science, and unlock potential for a more sustainable, productive, and health-promoting food system.na

“Among the things that FFAR is doing is to encourage a whole new generation of agriculturalists through our New Innovator program. We need more human beings in this field in order to move the ball forward as it relates to the future of food and agriculture.”

**— Dan Glickman
Inaugural FFAR Board Chair
Former U.S. Secretary of Agriculture**

The Foundation for Food and Agriculture Research is pleased to recognize each New Innovator’s respective institution, listed below, for matching the FFAR New Innovator grants for a total investment of \$4.8 million in the future of food and agriculture.

More about the 2016 New Innovators: foundationfar.org/new-innovator/2016-winners/.

Nutrition and Healthy Food Choices



Mary Anne Roshni Amalaradjou, Ph.D., University of Connecticut

Dr. Amalaradjou investigates the effect of dairy foods on gut health using mice as a model.



Geoffrey Fisher, Ph.D., Cornell University

Dr. Fisher explores new ways of promoting healthy food choices using a variety of eye tracking techniques to investigate how attention to food attributes such as healthiness, tastiness, calories and packaging, might affect food purchasing decisions.

Water Use



Isaya Kisekka, Ph.D., Kansas State University

Dr. Kisekka’s research integrates data related to agricultural water use from a number of sources including soils, weather, and plant-based measurements to develop methods and tools for optimizing water use in agriculture.

Plant Efficiency



Mary Jamieson, Ph.D., Oakland University

Dr. Jamieson uses her New Innovator award to investigate beneficial insects and the ecosystem benefits they provide, such as pollination and pest control, in urban agriculture environments.



Anjali Iyer-Pascuzzi, Ph.D., Purdue University

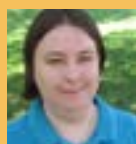
Dr. Iyer-Pascuzzi seeks to improve plant disease mitigation by investigating which genes are associated with root-mediated resistance, how diseases change root architecture, and whether roots and shoots signal each other to suppress disease symptoms.

Soil Health



Amelie Gaudin, Ph.D., University of California, Davis

Dr. Gaudin's research explores the relationship between root systems, soil health promoting practices, and crop productivity in order to shed light on how breeders and producers can grow more productive and resilient crops using sustainable practices on a large scale.



Lisa Tiemann, Ph.D., Michigan State University

Dr. Tiemann's research focuses on the interactions between crop diversity, soil microorganisms and soil organic matter, and how they may be managed to enhance soil services and sustainably increase crop yields.

Sustainable Farm Animal Productivity, Resilience and Health



Crystal Levesque, Ph.D., South Dakota State University

Dr. Levesque aims to increase protein production from pigs, while reducing inputs and environmental impacts through her research on dietary requirements during sow pregnancy.



Benjamin Reading, Ph.D., North Carolina State University

Dr. Reading uses artificial intelligence to determine the genetic factors responsible for heterosis, or instances of offspring performing better than their parents, in hybrid striped bass.



Rapid Outcomes from Agricultural Research Program Opened for Participation

The Rapid Outcomes from Agricultural Research (ROAR) program, initiated by the FFAR Board of Directors even before the Foundation had a staff to begin implementation, is inspired by a program at Michigan State University, Project GREEN.

Through ROAR, FFAR made available up to \$150,000 in matching funds per one-year grant to combat or prevent new or emerging pest and pathogen outbreaks that threaten U.S. food and agriculture systems.

ROAR will enhance the nation's capacity to mitigate and prevent outbreaks by ensuring rapid review of grant applications within one week of submission, and rapidly disbursing funding for research and extension. In this way, ROAR serves as a bridge to traditional, longer-term funding sources.

FFAR also seeks to increase collaboration and spur results into application by encouraging applicants to establish teams of experts and funding sources before applying for a ROAR grant. Learn more about this ongoing opportunity at foundationfar.org/ROAR.

Emergency Support: Preventing and Mitigating Threats to the Food System

The spread of a pest or pathogen can cause immediate and severe damage to multiple industries across the value chain. In 2015, avian influenza outbreaks caused the loss of an estimated 50 million birds nationwide and \$1 billion in damage, including 8,000 jobs lost, in Iowa alone. The Foundation for Food and Agriculture Research designed the ROAR program to accelerate research and outreach efforts.





Laying the Groundwork for Growth

In 2016, the Foundation for Food and Agriculture Research expanded from three to 12 staff members and crossed a number of operational milestones. After continued work by the Board and newly hired Scientific Program Department to engage with stakeholders on research priorities, the Foundation launched the seven Challenge Areas that now form the focus of the Foundation's research efforts. In order to remain open to emerging innovation potential and facilitate public engagement in research opportunities, FFAR also opened the online Concept Portal for public input on research concepts for potential development into a FFAR research program or project. To submit a research concept idea to the Foundation, visit: foundationfar.org/get-involved/research-concepts.

Critical resources and processes were established in 2016 to support the Foundation's ability to solicit and review grant applications and issue research funding. The organization enhanced the network of experts that guide and govern FFAR by expanding the Board of Directors and establishing six Advisory Councils made up of industry, producer, government, academic, and nonprofit leaders.

Seeding Solutions Grant Program

Building on the momentum of the Challenge Area launch, the Foundation for Food and Agriculture Research a call for research proposals seeking to address the Challenge Areas in bold and potentially transformative ways. The positive community response resulted in more than 100 pre-proposals. In summer 2017, FFAR anticipates issuing at least one Seeding Solutions grant of up to \$1 million in each Challenge Area.

The Foundation challenged Seeding Solutions applicants to identify matching funds for each proposal to demonstrate industry support and at least double the Foundation's investment.

A Research Framework: Challenge Areas

The Foundation for Food and Agriculture Research works toward more productive, sustainable agriculture and better health through food by bringing partners together to support innovative science. Focusing research efforts on the seven Challenge Areas below, FFAR is committed to addressing today's most pressing food and agriculture issues.

Using stakeholder feedback gathered through FFAR convening events and other forums, FFAR identifies potentially transformative research questions within these seven Challenge Areas and builds partnerships that multiply impact.

Learn more about current opportunities within each area: foundationfar.org/Challenge.

Overcoming Water Scarcity



Innovating and translating sustainable new approaches to increasing productivity and quality of food production while reducing water use, enhancing water use efficiency, and/or increasing drought tolerance.

The potential for harnessing big data to overcome water scarcity challenges was the topic of the first Foundation for Food and Agriculture Research convening event. The discussion was held as a session of the Water for Food Global Conference in Lincoln, Nebraska.

Learn more on page 12.

Protein Challenge



Sustainably increasing production of high quality protein, both animal protein and alternative sources, to meet current and future consumer demands.

Did you know? As incomes rise in developing countries, per capita meat consumption is expected to increase nearly 60% by 2050.

Learn more: foundationfar.org/challenge/protein-challenge/.

Healthy Soils, Healthy Farms

Enhancing soil health by building knowledge, fueling innovation, and enabling adoption of existing or new and innovative soil health promoting practices.

In November 2016, the Foundation sought input on the areas of soil science primed to yield the greatest benefit from investment through public-private partnership.



Learn more on page 13.

Forging the Innovation Pathway to Sustainability



Understanding and addressing the barriers and decision-making processes that prevent the adoption of technology and research results into practice.

Learn More: foundationfar.org/challenge/innovation-pathway-sustainability/.

Urban Food Systems



Augmenting the current food system's ability to feed urban populations through urban and peri-urban agriculture.

Did you know?

More than half of the global population now lives in urban areas.

Learn more:

foundationfar.org/challenge/urban-food-systems/.

Food Waste and Loss

Harnessing opportunities to influence economic impacts and environmental consequences through reclamation of agricultural products that are lost along the food chain.

Did you know? 40% of food in the U.S., or \$165 billion each year, is lost or wasted.

Learn more:

foundationfar.org/challenge/food-waste-and-loss/.



Making "My Plate" Your Plate



Increasing production and accessibility of fruits and vegetables with optimal nutritional quality and taste desirability while optimizing farmer profitability.

Learn more:

foundationfar.org/challenge/my-food-plate/.



Cultivating Progress Together

Engaging the Community at Events and Conferences

Public Board Meeting Session

The October 5, 2016 Public Session closely followed the one-year anniversary of inaugural Executive Director Dr. Sally Rockey joining the Foundation. The meeting, which was open to the public and held in Washington, was an energizing opportunity to share the Foundation's progress in its first 12 months under Dr. Rockey's leadership and engage with attendees who share the Foundation's commitment to advancing food and agriculture science.

At the public session, Executive Director Sally Rockey and Board Chair Dan Glickman announced the new Challenge Areas and newly appointed expansion of the board (page 17).

The Foundation for Food and Agriculture Research is pleased to recognize the Association of Public and Land Grant Universities for hosting the meeting as an in-kind contribution to FFAR.

Convening Events

The Foundation for Food and Agriculture Research seeks diverse perspectives to inform and enhance each research program. Welcoming expertise from academic, industry and other expert leaders is essential to developing a research program that yields results primed for application.

An additional way that FFAR planted seeds in 2016 for future benefit was to hold its first Convening Events to hone in on critical research questions in four areas, explore different program models, and begin to identify the right groups to bring to the program development table in order to multiply return on investment for the public. FFAR Convening Events bring together thought leaders and end users to discuss scientific areas that are ripe for investment through public-private partnerships.

The more than 300 participants in FFAR Convening Events held in 2016 played an invaluable role in developing research programs and partnerships to be launched in 2017. The following pages contain brief summaries of events held.

North American Plant Phenotyping Network Inaugural Event

Uniting Public and Private Sector Leaders to Spur Collaboration in Plant Phenotyping

The rapidly developing plant field of phenomics has the potential to transform the agriculture industry by providing the tools and knowledge to make crops more productive, sustainable and resilient in the face of variable weather patterns and the need to meet the growing global demand for food. FFAR and Purdue University co-hosted the event to unite the field of phenomics by facilitating opportunities for collaborative research.

Attendees from 11 countries, 34 companies, 30 academic institutions and a variety of commodity groups, nonprofit organizations and government agencies joined the discussion on plant phenomics at Purdue University.

Purdue University and the Foundation for Food and Agriculture Research support this field's potential to generate crop varieties that benefit producers, consumers, and the environment.

The fruitful discussions at this Convening Event helped cultivate the North American Plant Phenotyping Network and formed the basis of a new public-private partnership model developed by FFAR and expected to launch in summer 2017.

The event was made possible in part by support from the Iowa Corn Promotion Board, the Indiana Corn Marketing Council, the Indiana Soybean Alliance and Monsanto.



Why Phenotyping?

Enhancing scientific understanding of a plant's phenotype, or the interaction between a plant's genetic makeup and its environment, will enable plant breeders to anticipate and breed for the characteristics that crops need to thrive in different environments and climates.

“Interest in the phenotyping event exceeded our highest expectations, which speaks to the critical importance of connecting plants’ DNA information to meaningful traits.”

— April Carroll
Director of Phenomics
Purdue University College of Agriculture

Our Healthy Purpose

Improving Health through Behavior Change at the Nexus of Agriculture, Food and Health



While a multitude of incentive-based programs exist to promote health through food choices, the sector is inhibited by challenges including the capacity to collect and evaluate data in real time and the ability to measure the effectiveness of multiple interacting interventions. The creation or adoption of new technologies could not only significantly impact the ability to effectively facilitate these programs, but also the capacity to rigorously evaluate effectiveness and uncover ways to adjust for better outcomes. Recognizing the need and significant impact deployable technologies could have on our ability to overcome barriers that inhibit the agriculture, food, and healthcare systems from effectively changing health outcomes, the Foundation for Food and Agriculture Research convened a diverse group of people working at the intersection of food, agriculture, and health in October 2016.

The presentations and discussions at this event helped refined the FFAR approach to breaking down barriers that hinder different behavior change-based incentive programs from reaching their full potential. While part of the discussion focused on the tools necessary for these programs to succeed, participants also discussed potential future FFAR research that could leverage existing funding and programs to sustainably increase economic development and improve health within communities. The fruitful discussions at this Convening Event helped form the basis of a new program developed by FFAR and expected to launch in summer 2017.

FFAR is pleased to thank Kaiser Permanente Center for Total Health for sponsoring this event.



Phytobiomes

A New Opportunity to Sustainably Enhance Agricultural Production

The Foundation for Food and Agriculture Research and the American Phytopathological Society (APS) convened a discussion on the phytobiome on July 29, 2016 in Tampa, Florida, preceding the APS Annual Meeting.

FFAR believes that the surging commercial interest in areas like microbiome-based crop management, increasing demand for community-driven data collection and management strategies, and advances in high-throughput phenotyping technology make the time ripe for investment in a coordinated phytobiome research program. This event was an opportunity to provide input to FFAR on the scope of a potential FFAR funding opportunity.

The event was made possible in part by support from The BioAg Alliance.



Outcomes

TECHNOLOGY NEEDS

The group discussed broad technology goals for studying the phytobiome. Several major themes emerged:

- Non-Destructive, Real-Time High-Throughput Phenotyping: High throughput phenotyping for canopy measurements, root structure and physiology, microbial metabolic products, and soil characteristics.
- Tools that help researchers build “topographical” maps of microbe distribution in the soil would be particularly valuable.

PRECISE MICROCLIMATE CHARACTERIZATION

- Understanding phytobiome variation across a field will require a precise spatial analysis of microclimate (temperature, pH, salinity, humidity, etc.) in real time.
- Smart Plants: Plants that have in situ sensors for various conditions. Sensors could derive from genetic manipulation or from inoculation with endophytic microbes.



Overcoming Water Scarcity

Harnessing Big Data for Water Use Efficiency

The Foundation for Food and Agriculture Research and the U.S. Water Partnership hosted a session as part of the Water for Food Global Conference in Lincoln, Nebraska in April 2016 to explore opportunities for research related to water and big data. Attendees from nonprofits, government organizations, companies, producer groups and academic institutions gathered for a day-long meeting to discuss opportunities to address water scarcity.

The event helped inform the Foundation's approach to addressing Water Scarcity, which was further developed with the launch of the Challenge Area and a subsequent Convening Event in 2017. Attendees identified two key opportunities for potential pursuit in the future:

- Developing “digital agriculture training” to give graduating students a diverse grounding in computer science, agricultural sciences, and industry experience.
- Bringing together diverse data sets and making them available for analysis.

Dr. Rockey gave the prestigious University of Nebraska-Lincoln Heurmann Lecture to close the 2016 Water for Food Global Conference.

MATCHING PARTNERS: ROBERT B. DAUGHERTY INSTITUTE - WATER FOR FOOD AND U.S. WATER PARTNERSHIP



“The pace of technology is absolutely breathtaking because we have this combination of understanding how things work coupled with new technologies. For agriculture, we want to take advantage of not only the increases to our knowledge base but also this technological pace.”

- Excerpt from Heurmann Lecture by Sally Rockey, Ph.D., seen at left being recognized for her lecture by Ronnie Green, Ph.D., then Chancellor-elect of University of Nebraska-Lincoln.

Healthy Soils, Thriving Farms

Cultivating Progress

FFAR hosted three Healthy Soils, Thriving Farms convening sessions on November 9-10, 2016 in Phoenix, AZ, immediately preceding the 2016 International American Society of Agronomy-Crop Science Society of America-Soil Science Society of America Annual Meeting. For those unable to attend the meeting, a recap session was held via webinar and is available on the Foundation's website.

The sessions were designed to help guide and shape the strategic direction of the Foundation for Food and Agriculture Research scientific program in the Healthy Soils, Thriving Farms Challenge Area aimed at increasing soil health by building knowledge, fueling innovation, and enabling adoption of existing or new innovative soil health promoting practices.

FFAR will publish the results of these sessions and other engagements with the scientific and stakeholder community in a 2017 Vision for Soil Health. Input gathered at the sessions helped inform the Foundation's first soil health focused research programs to be launched in 2017.

Learn More about the Healthy Soils, Thriving Farms Challenge Area:
foundationfar.org/challenge/healthy-soils-thriving-farms/



Connecting at Conferences

With partnership at the heart of the Foundation's operating model, the Foundation for Food and Agriculture Research makes it a priority to hear from stakeholders and stay attuned to the latest scientific opportunities for food and agriculture innovation. Below are highlighted conferences and speaking engagements in 2016.

World Food Prize Borlaug Dialogue

The Foundation for Food and Agriculture Research, the Bill & Melinda Gates Foundation and the National Academy of Sciences celebrated the establishment of the NAS Prize in Food and Agriculture Sciences (described on page 1) as part of the 2016 Borlaug Dialogue International Symposium in Des Moines, Iowa.

The following speakers discussed the critical importance and impact of scientists working toward more productive, sustainable agriculture and better health through nutritious food at the World Food Prize event:

- **Sally Rockey, Ph.D.**, Executive Director, Foundation for Food and Agriculture Research
- **Pam Johnson**, Secretary, Foundation for Food and Agriculture Research Board of Directors; Second Vice President, Maizall and Past President, National Corn Growers Association
- **Lawrence Kent**, Senior Program Officer, Agricultural Development Program, Bill & Melinda Gates Foundation
- **Ronald Phillips, Ph.D.**, National Academy of Sciences Member; Regents' Professor Emeritus and former McKnight Presidential Chair in Genomics, University of Minnesota Department of Agronomy and Plant Genetics
- **Kenneth Quinn, Ph.D.**, President, The World Food Prize Foundation

The celebration was held as part of the 2016 Borlaug Dialogue, an annual symposium bringing together international leaders, policy makers, farmers, executives from agribusiness and non-governmental organizations, and scientific, academic and development experts to address critical food security issues and honor recipients of the World Food Prize. The World Food Prize is awarded annually to recognize individuals who have improved the quality, quantity or availability of food in the world.





Speakers at World Food Prize Borlaug Dialogue pictured from left to right: Ronald Phillips, Ph.D., Pam Johnson, Sally Rockey, Ph.D., and Lawrence Kent.

CQUEST: Charting a Course for Climate Research in Agriculture

The International Life Sciences Institute (ILSI) Research Foundation, together with Monsanto Company, Soil Health Partnership and Washington University in St. Louis, the Foundation for Food and Agriculture Research, and the Howard G. Buffett Foundation held a two-day workshop in October 2016 focusing on developing research targets for supporting agricultural goals that: advance achievement of the U.S. Department of Agriculture “building blocks” for climate smart agriculture; integrating existing U.S. Midwest field research networks for climate adaptation; and developing a research agenda to achieve a “carbon-neutral” agri-food system in the U.S. through a focus on soil carbon and soil health.

Executive Director Sally Rockey, Ph.D., was a featured speaker at the event, sharing the Foundation’s commitment to supporting farmers’ work to meet future production demand while adapting to a changing climate and conserving natural resources.

MATCHING PARTNER: THE HOWARD G. BUFFET FOUNDATION



GODAN Summit

The Foundation for Food and Agriculture Research is a partner of the Global Open Data for Agriculture and Nutrition (GODAN) Network, a global movement to advance food and agriculture innovation through data. In September 2016, FFAR joined organizations and government leaders in support of improving accessibility of open data in agriculture for the 2016 GODAN Summit.

Dr. Sally Rockey, FFAR's Executive Director spoke to summit attendees on the importance of open data in agriculture from a nonprofit foundation perspective. The event promoted and advanced opportunities to use open data to spur scientific advances that bring the world closer to GODAN's mission to eliminate hunger.

FFAR joined with the Laura and John Arnold Foundation, the United States, United Kingdom, and Kenyan governments, Presidents United to Solve Hunger (PUSH), the ONE Campaign and others to support this event.

MATCHING PARTNER: LAURA AND JOHN ARNOLD FOUNDATION

Growing Networks of Expertise

Board Expansion and New Advisory Councils

New Members of the Board of Directors

The Board of Directors appointed six new members, significantly increasing food and agriculture industry representation on the board. The new Directors joined a roster of 19, including Agriculture Secretary Tom Vilsack, an ex-officio member of the Board.

“My first job out of college was with an agricultural start-up company and I have been passionate about the importance of research and innovation in food and agriculture ever since. I look forward to helping to address opportunities and challenges in these areas through my service on the Foundation for Food and Agriculture Research Board of Directors.”

**— Doug Cameron
Member of the Board of Directors**



Doug Cameron, Ph.D., is managing director of First Green Partners, an early-stage venture investment company and of Alberti Advisors, a family business focused on innovation and education. Cameron’s extensive background in business and research includes serving as a professor of chemical engineering at University of Wisconsin-Madison. He is a board director for several startup companies and on the advisory board of AgTech Accelerator, which supports the launch of innovative agriculture companies.



Carl Casale is president and CEO of CHS Inc., an energy, grains and foods company and the nation’s largest member-owned cooperative. Casale, who operates a family-owned blueberry farm, was previously executive vice president and chief financial officer for Monsanto Company. He currently serves on the boards of Ventura Foods, LLC; Ecolab Inc., National Council of Farmer Cooperatives and the Minnesota Business Partnership.



Gail Christopher, D.N., is a former senior advisor and vice president at W. K. Kellogg Foundation, where she led the foundation’s Truth, Racial Healing and Transformation enterprise and contributed to overall direction for the foundation. Christopher has received numerous public service awards for her work to infuse holistic health and diversity concepts into public sector programs and health policy discourse. Her contributions to the Kellogg Foundation since 2007 spanned racial equity; food, health and well-being; community and civic engagement; and leadership. She is chair of the Board of Directors of the Trust for America’s Health.



Mehmood Khan, M.D., is vice chairman and chief scientific officer of global research and development (R&D) at PepsiCo. Khan, who has also been faculty member at the Mayo Clinic and Mayo Medical School, oversees the PepsiCo global Performance with Purpose sustainability agenda, which includes planet, product and people sustainability, and leads the company's R&D efforts, creating breakthrough innovations in food, beverages and nutrition—as well as delivery, packaging and production technology—to drive PepsiCo's businesses forward.



Pam Marrone, Ph.D., is founder and CEO of Marrone Bio Innovations, a company Marrone founded to discover and develop natural products for pest management in agriculture and water. Marrone has won numerous awards for her products and businesses, including the Natural Resources Defense Council Growing Green Award recognizing Marrone as a pioneer in sustainable farming and food. She is an alumni-elected Board Trustee of Cornell University.

“As someone who has formed and overseen innovative R&D groups in large companies and startup companies, I can’t emphasize enough the value of scientific research, partnerships and innovation to meet the challenges of food production. I am honored to work with the Foundation for Food and Agriculture Research to lead the way.”

**— Pam Marrone, Ph.D.
FFAR Board Member**



Bob Stallman is a rice and cattle producer and past president of the American Farm Bureau Federation, a nonprofit membership organization with affiliates in 50 U.S. states and Puerto Rico. Stallman has served on numerous state and federal panels, advising on economic issues including farm and trade policy. He was appointed by the President to the White House Advisory Committee for Trade Policy and Negotiations and served from 2007 through 2016.

“I am pleased to have the opportunity to work with the other board members and staff of the Foundation for Food and Agriculture Research to find real solutions to the challenges facing today’s food and agriculture systems”

**- Bob Stallman
FFAR Board Member**

Advisory Councils

In August 2016, the Foundation established six Advisory Councils to advise Foundation staff and board members on program development and implementation, potential partnerships, and other avenues for advancing the organization's mission to support innovative science addressing today's food and agriculture challenges.



“Real collaboration between disparate segments of the irrigation industry is needed with irrigation research, demonstrations, and training as a focus. FFAR’s role in expediting the discussion is outstanding.”

**— Stephen Smith, Ph.D.
FFAR Advisory Council Member
Farmer, Irrigation Association Board Member**

More than 70 food and agriculture leaders representing diverse industries, geographic areas, and professional backgrounds were selected from a competitive pool of applicants nominated through an open solicitation to serve two-three year terms. The six Advisory Councils were realigned to correspond with the Challenge Areas launched later in 2016. The current list of Advisory Councils is below.

Food Waste and Loss

Forging the Innovation Pathway to Sustainability

Making “My Plate” Your Plate and Urban Food Systems (Joint Council)

Nutrition and Healthy Food Choices

Healthy Soils, Thriving Farms

Protein Challenge

Overcoming Water Scarcity

All current FFAR Advisory Council members are listed here: foundationfar.org/advisory-councils.



Board of Directors

2016 Roster



Kathryn Boor, Ph.D.

*Ronald P. Lynch Dean of the
College of Agriculture and Life
Sciences*

Cornell University



Doug Buhler, Ph.D.

*Director, AgBioResearch and
Assistant Vice President for
Research and Graduate Studies*

Michigan State University



Doug Cameron, Ph.D.

Managing Director

First Green Partners and
Alberti Advisors



Carl Casale

Chief Executive Officer

CHS Inc.



Gail Christopher, D.N.

*Former Senior Advisor and
Vice President for Truth, Racial
Healing & Transformation*

W. K. Kellogg Foundation



Nancy Creamer, Ph.D.

*Distinguished Professor of
Horticulture and Sustainable
and Community-Based Food
Systems*

North Carolina State University



Debby Delmer, Ph.D.

Professor Emeritus

University of California - Davis



Dan Glickman

2016 Board Chair

*Executive Director,
Congressional Program*

Aspen Institute



Rob Horsch, Ph.D.

*Deputy Director, Agricultural
Research and Development*

Bill & Melinda Gates
Foundation



Pam Johnson

Past President

National Corn Growers
Association



Mark Keenum, Ph.D.

President

Mississippi State University



Mehmood Khan, Ph.D.

Vice Chairman and Chief Scientific Officer, Global R&D

PepsiCo



Michael Ladisch, Ph.D.

Director of the Laboratory of Renewable Resources Engineering

Purdue University



Chris Mallett, Ph.D.

Corporate Vice President, Research and Development

Cargill, Inc.



Pam Marrone, Ph.D.

Founder and CEO

Marrone Bio Innovations, Inc.



Terry McElwain, Ph.D.

Regents Professor in the Paul G. Allen School for Global Animal Health

Washington State University



Stanley Prusiner, Ph.D.

Professor of Neurology and Director of the Institute for Neurodegenerative Diseases

University of California - San Francisco



Yehia "Mo" Saif, Ph.D.

Professor Emeritus, Food Animal Health Research Program, Ohio Agricultural R&D Center

The Ohio State University



Bob Stallman

Past President

American Farm Bureau Federation



Alton Thompson, Ph.D.

Executive Director

Association of Research Directors of 1890 Land Grant Universities

Ex-Officio Board Members



Hon. Tom Vilsack

Secretary of Agriculture

U.S. Department of Agriculture



Dr. Cathie Woteki

Chief Scientist and Under Secretary for Research, Education, and Economics

U.S. Department of Agriculture



Dr. Sonny Ramaswamy

Director, National Institute of Food and Agriculture

U.S. Department of Agriculture



Dr. Jim Olds

Assistant Director for Biological Sciences

National Science Foundation

Designee of Dr. France Córdoba, Director



Dr. Chavonda Jacobs-Young

Administrator, Agricultural Research Service

U.S. Department of Agriculture





Donors and Matching Partners

The Foundation for Food and Agriculture Research received its first contributions in 2016 and is pleased to recognize the following 2016 donors:

Visionary Level

Bill & Melinda Gates Foundation

Enthusiast Level

Laura and John Arnold Foundation

Friend Level

American Phytopathological Society

Association of Public Land-grant Universities

The BioAg Alliance

Fair Food Network

The Howard G. Buffett Foundation

Indiana Corn Marketing Council

Indiana Soybean Alliance

Iowa Corn Promotion Board

Irrigation Association

Kaiser Permanente Center for Total Health

Monsanto

Purdue University

Robert B. Daugherty Institute - Water for Food

U.S. Water Partnership

2016 Financial Information

Balance Sheet

December 31, 2016

ASSETS	
Cash	\$ 464,955
Award Match Receivable	1,661,143
Investments	196,197,807
Other Assets	137,968
	<u>\$ 198,461,873</u>
LIABILITIES AND NET ASSETS	
Liabilities	
Accounts payable and accrued expenses	664,486
Grants payable, net of discount	3,437,463
Conditional grant (Deferred appropriation)	194,275,588
Deferred rent	84,336
	<u>198,461,873</u>
NET ASSETS - UNRESTRICTED	<u>-</u>
	<u>\$ 198,461,873</u>

Statement of Activities

Year ended December 31, 2016

REVENUE	
Recognition of deferred appropriation	\$ 4,599,291
Matching award revenue	4,060,122
Sponsorships	35,000
Investment income, net of fees	2,056,361
Total Revenue	<u>10,750,774</u>
EXPENSES	
Grants and awards program	9,309,517
General and administrative	1,316,564
Development	124,693
Total Expenses	<u>10,750,774</u>
Change in net assets	<u>\$ -</u>

The Balance Sheet and Statement of Activities were derived from the financial statements that were audited by RSM LLP, whose unmodified audit opinion was dated April 25, 2017. A copy of the full audit report is available upon request.

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