



NATIONAL COALITION FOR FOOD AND AGRICULTURAL RESEARCH

Statement of the

National Coalition for Food and Agricultural Research

Committee on Agriculture, Nutrition & Forestry

U.S. Senate

June 15, 2017

Hearing on Agricultural Research

Perspectives on Past and Future Successes for the 2018 Farm Bill

Chairman Roberts, Ranking Member Stabenow and Members of the Committee:

The National Coalition for Food and Agricultural Research (NCFAR) is pleased to submit this testimony for today's hearing record. NCFAR is a nonprofit, nonpartisan, consensus-based and *customer-led* coalition that brings food, agriculture, nutrition, conservation, and natural resource stakeholders together with the food and agriculture research and extension community. NCFAR serves as a forum and a unified voice in support of sustaining and increasing public investment at the national level in food and agricultural science as a top national priority. A membership list is attached as Exhibit 1. More information about NCFAR is available at <http://www.ncfar.org>.

NCFAR's support encompasses the entire U.S. Department of Agriculture (USDA) research, extension and education (REE) mission area, including extramural programs in the National Institute of Food and Agriculture (NIFA)—such as the Agriculture and Food Research Initiative (AFRI), and capacity funds to support Experiment Stations and Cooperative Extension—and intramural programs in the Agricultural Research Service (ARS), Economic Research Service (ERS), and National Agricultural Statistics Service (NASS), as well as the U.S. Forest Service research program.

NCFAR urges a balanced portfolio, as the various programs serve important and complementary roles. NCFAR supports mandatory programs in the farm bill that provide funding for research. It is important to include investments in both fundamental and applied research, as well as translational education. In addition, publicly funded research serves critically important objectives that private sector research cannot fulfill in a number of areas. For example, the results of publicly funded research are available to the public, including policy makers. Companies are often unable to fund fundamental research that lays the foundation for much of our nation's applied research.

NCFAR applauds the Senate Agriculture Committee for its bipartisan leadership in establishing the Foundation for Food and Agriculture Research (FFAR) in the 2014 farm bill and strongly encourages your continued support for FFAR in the next farm bill.

A group letter to the Committee signed by over 60 organizations supporting FFAR is attached as Exhibit 2.

The initial investment of \$200 million in mandatory funding through the Commodity Credit Corporation has been instrumental in helping the U.S. agricultural research enterprise foster continued innovation. FFAR's emergence as a cutting-edge research institution, leveraging funds to contribute to the long-term competitiveness of our nation's food and agricultural system is well timed considering the many challenges confronting the U.S. food and agricultural system.

FFAR matches every program dollar with outside funding, multiplying value for American taxpayers and growing the food and agriculture funding pool. NCFAR understands that every federal dollar invested by FFAR has been more than doubled by its diverse funding partners, and the U.S. government's \$200 million investment in FFAR is on track to deliver more than \$400 million in vital food and agriculture research programming.

Very much in line with NCFAR's unified and customer-led approach to research policy, FFAR takes advantage of the unique partnership model conceived by this Committee to convene diverse groups that might not otherwise collaborate around common challenges of national and international significance. NCFAR is pleased that FFAR has formed partnerships with farmer and commodity groups, retail and other companies, the public health sector, and leading foundations.

With the farm bill reauthorization process in its early stages, NCFAR has several activities underway with the objective of better informing our leadership, other stakeholders, the Congress, and the Administration in laying the groundwork for a strong research title and supporting funding.

One longstanding initiative is NCFAR's signature 'Lunch~N~Learn' seminar series in which our team works to inform hill staff and other stakeholders by featuring the publicly funded work of leading-edge scientists on a diverse array of disciplines and timely topics. Over the past decade, NCFAR has convened 129 seminars, connecting with nearly 8,200 attendees. A document providing highlights of the seminar series is attached as Exhibit 3. More detail is available at http://www.ncfar.org/Hill_Seminar_Series.asp. NCFAR thanks the Committee for providing a host location for many of these seminars on the Senate side.

NCFAR is taking additional action on several fronts to inform the current farm bill reauthorization process and be a more effective voice for a strong research title.

First, NCFAR's Research Outreach Committee has convened a Farm Bill task force, which is in the early stages of developing recommendations on the reauthorization of the farm bill research title for our Board to consider. NCFAR is also collaboratively engaging allied groups with the objective of providing timely recommendations to this Committee and the Congress.

Second, NCFAR is involved in planning for a *Summit on Integrated Research, Education, and Extension Priorities to Advance American Agriculture*. The aim of the Summit is to engage stakeholders in developing a vision for what the food and agricultural research, extension and education enterprise should look like to best serve the needs of the food and agricultural system in the 21st century and capitalize on the robust potential of the agricultural, food, and resource sectors to fuel further growth in the United States economy. The summit will focus on four critical areas; fueling growth in the agricultural economy through rapid adoption of innovations; harnessing the power of big Ag data in research and extension; advancing the health of U.S. consumers and environmental quality; and assuring the security of U.S. agriculture and food systems. Additional information will be provided in the near future.

Third, NCFAR is actively involved in other collaborative efforts intended to inform and support the reauthorization of a strong farm bill research title, including (1) the unified messaging effort led by the Riley Memorial Foundation, and (2) the *Breakthroughs 2030* study, initiated by the SoAR Foundation with major funding support from the Foundation for Food and Agriculture Research and being conducted by the National Academies of Science (NAS), to produce a 10-year agenda for food and agricultural research.

NCFAR is “customer-led”—meaning the diverse stakeholders who need and benefit from the scientific outcomes that are produced by our nation’s publicly funded research, extension and education system in our own work.

Research is an important means to critical ends—providing science-based information and tools that help those in the food and agricultural system do their jobs for the ultimate benefit of consumers, the nation’s economy, and the world.

The same holds true for a myriad of other “customers”—such as farmers and ranchers across the nation; the agricultural input industry; food processors; professionals in the fields of nutrition and health; natural resources and environment; rural communities; and ultimately all consumers of food and natural fiber around the world.

Furthermore, this Committee and other Members of Congress and policy makers at all levels of government are important “customers” of research, extension and education made possible through the research title of the farm bill.

The research title of the farm bill represents the nation’s *signature federal investment in the future of the food and agricultural sector*. In fact, the success of every other title in the farm bill and those who are charged with carrying out their respective missions is arguably dependent in significant part on scientific outcomes and tools generated by programs authorized through the research title, and then funded by Congress.

Research is not an end in itself—rather it is a vital means to help achieve many national priorities. The research title is critical in providing advancements in food and agricultural research, extension and education that help provide the tools needed to sustain and strengthen America’s food and agricultural sector, rural communities, and the national economy.

Public investment in food and agricultural research, extension and education today and in the future must simultaneously satisfy a range of needs, including food quality and quantity, resource conservation, producer profitability, and food safety and security, and helping to improve health.

At the risk of oversimplification, federal funding is the fuel for USDA's REE engine and determines how effectively the important goals of the research title are realized. NCFAR respectfully submits that our nation is not investing enough in publicly funded research to permit discovery necessary to regain and then maintain our nation's place as the leader in agricultural research.

Investment in food and agricultural science is not only good business, it's good for business. By any measure, publicly funded food and agricultural science represents an outstanding investment. Public and private investments in U.S. agricultural research and practical application of results have paid huge dividends to the United States and the world, especially in the latter part of the 20th century. The CARD report entitled "Measuring Public Agricultural Research and Extension and Estimating their Impacts on Agricultural Productivity: New Insights from US Evidence" (Jin & Huffman, 2016) presents a summary of the most recent returns on investment of agricultural research dollars to have a rate of return of approximately 67 percent.

However, the unparalleled success story in the food and agricultural system is in large part the product of past investments in food and agricultural research and extension. Federal funding for food and agricultural research, extension and education has been essentially *flat for over 20 years* despite much greater demonstrated needs, and has reportedly declined by about 25 percent in real terms since 2003. At the same time support for other federal research has increased substantially. Our nation's competitiveness in global markets is at risk, as investments in food and agricultural science by our global competitors have been growing rapidly.

The 2008 and 2014 farm bills recommitted to an authorized level of \$700 million annually for AFRI. Yet eight years later, FY17 appropriations for AFRI are about \$375 million. NCFAR is on record in support of funding AFRI at the fully authorized level as soon as practicable. Increases in AFRI should represent an addition to funding for REE programs and not come at the expense of other REE programs.

Increased federal investments in the USDA, REE mission area will lead to advances and breakthroughs in agricultural productivity, improved animal, plant and soil health, and nutrition and lead to healthier citizens, a healthier agricultural economy, and a stronger and more globally competitive America.

Tools provided through publicly funded research, extension and education are needed to help achieve safer, more nutritious, convenient and affordable foods delivered to sustain a well-nourished, healthy population; more efficient and environmentally friendly food, fiber and forest production; improved water quality, land conservation, wildlife and other environmental conditions; less dependence on non-renewable sources of energy; expanded global markets and improved balance of trade; and more jobs and sustainable rural economic development.

Societal demands and expectations placed upon the food and agricultural system are ever-changing and growing. Examples of current and future needs include addressing bio-security; food-linked health costs; development of vaccines and diagnostics, antibiotics, de-wormers, antifungals and parasiticides, antimicrobial use strategies, control and therapy for diseases and infections, transboundary disease and foreign animal disease; environment and conservation; water quality; farm income and rural revitalization; biofuels and climate change; the increasing world demand for food and fiber and improved diets; and needed advances in biotechnology and genetic resources research. A United Nations report projects that we will need to double food production to feed 9 billion people by 2050, and that 70 percent of the increase must come through research developing new technologies and increased productivity.

NCFAR appreciates the longstanding support this Committee and its Members have demonstrated over the years to authorize and oversee implementation of a strong research title that can compete more effectively in the funding process, both within the Administration and in the Congress.

NCFAR looks forward to working as a customer-led coalition with this Committee, Congress, the Administration, and other stakeholders to help ensure that the USDA REE mission moves forward as envisioned and receives the resources and funding needed to achieve scientific outcomes that are necessary for the food and agricultural system to address multiple demands, challenges and expectations.

Attachments (3):

- Exhibit 1-NCFAR Member List
- Exhibit 2-FFAR Group Support Letter
- Exhibit 3-‘Lunch~N~Learn’ Hill Seminar Series Highlights



NATIONAL COALITION FOR FOOD AND AGRICULTURAL RESEARCH

MEMBER ORGANIZATIONS

Academy of Nutrition and Dietetics
American Pulse Association and USA Dry
Pea and Lentil Foundation
Agricultural Retailers Association (ARA)
American Seed Trade Association (ASTA)
American Society for Horticultural Science
(ASHS)
American Society for Nutrition (ASN)
American Society of Agricultural and
Biological Engineers (ASABE)
American Society of Agronomy (ASA)
American Society of Animal Science (ASAS)
American Society of Plant Biologists (ASPB)
American Soybean Association (ASA)
American Veterinary Medical Association
(AVMA)
Animal Agriculture Alliance
Animal Health Institute (AHI)
Association of American Veterinary Medical
Colleges (AAVMC)
Biotechnology Innovation Organization (BIO)
Cargill
CoBank
Corn Refiners Association
Council for Agricultural Science &
Technology (CAST)
Council for Biotechnology Information (CBI)
Council on Food, Agricultural, and Resource
Economics (C-FARE)
CropLife America
Crop Science Society of America (CSSA)
Experiment Station Committee on
Organization & Policy (ESCOP)
Extension Committee on Organization &
Policy (ECOP)
Farm Foundation
Federation of American Societies for
Experimental Biology (FASEB)
FASS, Inc.
Illinois Farm Bureau
Institute of Food Technologists (IFT)
International Food Information Council (IFIC)
Iowa State University-CALS
Kansas State University
Michigan State University
Mississippi State University
Monsanto
National Association of State Departments of
Agriculture (NASDA)
National Association of Wheat Growers
(NAWG)
National Corn Growers Association (NCGA)
National Council of Farmer Cooperatives
(NCFC)
National Grain and Feed Association (NGFA)
National Oilseed Processors Association
National Pork Producers Council
National Potato Council
Noble Research Institute, LLC
North American Millers' Association (NAMA)
North Central Regional Association of
State Agricultural Experiment Station
Directors (NCRA)
Northeastern Association of State
Agricultural Experiment Station Directors
(NERA)
SoAR Foundation
Soil Science Society of America (SSSA)
Southern Association of Agricultural
Experiment Station Directors (SAAESD)
Sustainable Agriculture Coalition (SAC)
Syngenta
The Cotton Foundation
The Fertilizer Institute
The IR-4 Project
University of Arkansas
University of Idaho
University of Kentucky
University of Nebraska
University of Tennessee
Weed Science Society of America (WSSA)
Western Association of Agricultural
Experiment Station Directors (WAAESD)

INDIVIDUAL MEMBERS

Dr. Jerry Baker
Dr. Gale Buchanan
Dr. Nancy M. Cox
Dr. William Danforth
Kellye Eversole
Dr. Barbara Glenn
Dr. John Patrick (Pat) Jordan
Dr. Martin A. Massengale
Kristina Owens
Michael Newman, DVM
Dr. Fred Stormshak

SPONSORS

Academy of Nutrition and Dietetics
Agronomy, Crop and Soil Science Societies
American Bakers Association
American Phytopathological Society
American Seed Trade Association
American Society of Plant Biologists
Bayer CropScience
Biotechnology Innovation Organization (BIO)
Corn Refiners Association
Council for Agricultural Science and Technology (CAST)
Council for Biotechnology Information (CBI)
Council on Food, Agricultural, and Resource Economics (C-FARE)
CropLife America
Dr. William Danforth
Eversole Associates
Experiment Station Committee on Organization & Policy (ESCOP)
Extension Committee on Organization & Policy (ECOP)
Institute of Food Technologists
Michael Newman, DVM
National Council of Farmer Cooperatives (NCFC)
National Farmers Union
National Milk Producers Federation
National Oilseed Processors Association
North American Millers' Association (NAMA)
Riley Memorial Foundation
Syngenta
United Soybean Board
University of Wyoming
Weed Science Society of America
Western Skies Strategies

The Honorable Pat Roberts, Chair
Senate Committee on Agriculture,
Nutrition, and Forestry
U.S. Senate
Washington, DC 20510

The Honorable Debi Stabenow, Ranking Member
Senate Committee on Agriculture,
Nutrition and Forestry
U.S. Senate
Washington, DC 20510

RE: Support for Foundation for Food and Agriculture Research (FFAR)

Dear Chairman Roberts and Ranking Member Stabenow:

The undersigned wish to thank the members of the Senate Committee on Agriculture, Nutrition, and Forestry for their bipartisan support in establishing the Foundation for Food and Agriculture Research (FFAR) in the Agricultural Act of 2014, also known as the 2014 Farm Bill. We strongly encourage your continued support for FFAR in the next Farm Bill. The initial investment of \$200 million in mandatory funding through the Commodity Credit Corporation has been instrumental in helping the U.S. agricultural research enterprise foster continued innovation. FFAR's emergence as a cutting-edge research institution contributing to the long-term competitiveness of our nation's food and agriculture sector is well timed considering the many challenges confronting the U.S. food and agricultural system.

The need for advanced solutions remains imperative if we are to continue to lead the world in food and agricultural innovation. Your work in 2014 to create a new institution for leveraged, public-private partnerships and investments through FFAR was as an inspiration. We urge your continued support of FFAR in the next Farm Bill.

Thank you for your consideration and for your leadership on food and agricultural research, extension and education.

Respectfully Submitted,

National Coalition for Food and Agricultural Research (NCFAR)

Academy of Nutrition and Dietetics

Agricultural Retailers Association

American Farm Bureau Federation

American Feed Industry Association

American Seed Trade Association

American Society for Horticultural Science

American Society for Nutrition

American Society of Agronomy

American Society of Animal Science

American Society of Plant Biologists

American Veterinary Medical Association

Aquatic Plant Management Society

Association of American Veterinary Medical Colleges

Cherry Marketing Institute Inc.

Cornell University College of Agriculture and Life Sciences
Council for Agricultural Science and Technology (CAST)
Crop Science Society of America
Experiment Station Committee on Organization and Policy
FASS
Global Harvest Initiative
International Alliance for Phytobiomes Research
Iowa Corn Growers Association
Irrigation Association
Marrone Bio Innovations
Mississippi State University
National Association of Plant Breeders
National Association of State Departments of Agriculture
National Association of Wheat Growers
National Corn Growers Association
National Cotton Council
National Pork Producers Council
North American Millers Association
North Central Regional Association of Agricultural Experiment Station Directors
North Central Weed Science Society
Northeastern Agricultural and Resource Economics Association
Northeastern Weed Science Society
PepsiCo
Pollinator Partnership
Purdue University College of Agriculture
Rural Sociological Society
Society for Range Management
Soil Health Institute
Soil Science Society of America
Southern Agricultural Economics Association
Southern Weed Science Society
Supporters of Agricultural Research Foundation
Syngenta
Taylor Shellfish Farms
The American Phytopathological Society
The Fertilizer Institute
United Egg Producers
Universities Council on Water Resources
University of Delaware College of Agriculture and Natural Resources
University of Nebraska
University of Tennessee Institute of Agriculture

Veterinary Regional Referral Hospital, pc
Wade Water LLC
Weed Science Society of America
Western Association of Agricultural Experiment Stations
Western Society of Weed Science



NATIONAL COALITION FOR FOOD AND AGRICULTURAL RESEARCH

'Lunch~N~Learn' Hill Seminar Series

http://www.ncfar.org/Hill_Seminar_Series.asp

GOAL: Inform Hill Staff & other policy stakeholders about the value of public investment in food & ag research through hill seminars featuring leading edge researchers on topics of high interest. Helps staff make more informed recommendations about federal funding for Food and Ag RE&E.

- **332 attendees** at 5 seminars in 2017. **Nearly 8,200 attendees** over past 12+ years through **129 seminars**.
- Leading presenters from over 60 [institutions](#) across the nation—wide range of disciplines and topics.



2017 TITLES

FARM ECONOMY UPDATE—PRESSURES ON REPAYMENT & SPENDING * PLANT BREEDING AND GENETICS
ACCELERATING THE PATH TO IMPROVING PUBLIC HEALTH THROUGH FOOD BASED SOLUTIONS
ROBOTIC WEED WARS * DIGITAL AGRICULTURE

2017 LINEUP

DIGITAL AGRICULTURE—Technology Innovation in Complex Production Environments, Dr. Harold van Es, Cornell (June 12-62)

ROBOTIC WEED WARS—A New Game, New Players, New Rules, Dr. Steven Fennimore, UC-Davis (May 22-43)

ACCELERATING THE PATH TO IMPROVING PUBLIC HEALTH THROUGH FOOD BASED SOLUTIONS—Leveraging Collaborations between Government and Academia to Create a More Convenient and Healthful Food Supply, Dr. Mario Ferruzzi, North Carolina State; and Dr. Janet Novotny, USDA, ARS (May 12-45)

PLANT BREEDING AND GENETICS—The Need for Ag Innovation to Sustainably Feed the World, Dr. Stephen Baenziger, **U of Nebraska-Lincoln**; and Dr. Rita Mumm, **U of Illinois** (Mar 22-62)

FARM ECONOMY UPDATE—PRESSURES ON REPAYMENT & SPENDING—Cooperative Extension Translates Scientific Research to Help Farmers and Ranchers Manage Financial Risk, Dr. Jason Henderson, **Purdue**; Dr. Allen Featherstone, **Kansas State**; and Dr. Jeff Hopkins, **USDA, ERS** (Feb 13-120)

2016 LINEUP

IMPLICATIONS OF TRADE DISRUPTIONS—The Impact of Asynchronous Trade Approvals for Biotech Crops on Agricultural Sustainability, Trade and Innovation, Dr. Nicholas Kalaitzandonakes, **U of Missouri** (44)

THE LATEST INNOVATION IN PLANT BREEDING—Genome Editing, Dr. Anne Blechl, **USDA, ARS**, (65)

GIVE ME A BREAK!—Using Forest Windbreaks to Reduce Crop Gene Flow, Dr. Carol Auer, **U of Connecticut** (70)

THE ECONOMICS OF DROUGHT—Realities and Policy Choices, Dr. Rob Johannson, **USDA**; Dr. Ariel Dinar, **UC-Riverside**; & Dr. Steve Wallander, **USDA, ERS** (100)

CLIMATE SMART PRECISION AGRICULTURE—Dr. Raj Khosla, **Colorado State** (91)

FOOD FROM THOUGHT—ARS Mission, Programs and Challenges, Dr. Chavonda Jacobs-Young, **USDA, ARS** (101)

LOSING TRACK!—Do You Really Know from Where Your Lunch has Come?, Tejas Bhatt, **Institute of Food Technologists** (75)

INCLUDING THE U.S. ECONOMY BY ADDING FIBER—Challenges of Adding Industrial Hemp Production, Dr. Ron Turco, **Purdue** & Dr. Janna Beckermann, **Purdue** (51)

U.S.-CUBA AGRICULTURAL TRADE—Economic Policy Implications of a Changing Trade Environment, Bryce Cook, **USDA, ERS** & Dr. William Messina, **U of Florida** & Dr. Luis Ribera, **Texas A&M** (84)

MORE CROP FOR THE DROP!—Technology Implementation in Agriculture for Enhancing Crop Water Productivity, Dr. Suat Irmak, **U of Nebraska-Lincoln** (71)

PREVENTING THE NEXT KUDZU—A Life-Cycle Approach to Low-Invasion Potential Bioenergy Production, Dr. Jacob Barney, **Virginia Tech** (62)

2015 LINEUP

BATTLING THE WICKED PROBLEM OF HERBICIDE RESISTANCE—The Human Dimensions of Herbicide Resistance Evolution, Dr. David Shaw, **Mississippi State** (55)

PARTNERS FOR LIFE—The Untapped Potential of Plant Microbiomes in Agriculture, Dr. Jan Leach, **Colorado State** (53)

CHOICES—Improving Nutrition Among Low Income and Food Insecure Individuals, Dr. David Just, **Cornell** (85)

ROLE OF U.S. AGRICULTURE IN CHINESE MARKETS—Factors Affecting Chinese Food and Agricultural Markets, Dr. Holly Wang, **Purdue** (106)

WARNING: THIS FOOD LABEL MAY CAUSE CONFUSION—Process Labeling of Food: Consumer Behavior, the Ag Sector and Policy Recommendations, CAST Issue Paper, Dr. Kent Messer, **U of Delaware** (100)

BIOTECHNOLOGY: GREAT POTENTIAL STIELED BY GOOD INTENTIONS—Arresting Application of Genetic Engineering Solutions, Dr. Kevin Folta, **U of Florida** (100)

THE FUTURE OF FOOD: OPTIMAL OR ORWELLIAN?—How Plant Breeding Decisions Made Today Will Determine the Future of Food, Dr. William F. Tracy, **U of Wisconsin** (66)

WHAT ARE CHILDREN EATING AT SCHOOL LUNCH?—5 Years After the Healthy, Hunger-Free Kids Act, Dr. Bethany Yon, **U of Vermont** (68)

CLIMATE CHANGE: SO WHAT'S UP WITH DINNER?—Climate Changes and Its Impact on our Diverse and Abundant Food Supply, Dr. Michael Hoffmann, **Cornell University** (39)