



United States
Department of
Agriculture

National Institute
of Food
and Agriculture

NPGCC Meeting: NIFA and AFRI Update June 14, 2016 Ed Kaleikau & Rachel Melnick



BIOENERGY, CLIMATE,
AND ENVIRONMENT



FOOD PRODUCTION
AND SUSTAINABILITY



YOUTH, FAMILY,
AND COMMUNITY



INTERNATIONAL
PROGRAMS



USDA NIFA

NATIONAL INSTITUTE OF FOOD AND AGRICULTURE



What NIFA Does

- NIFA provides extramural funding for research, education and extension
- NIFA provides competitive grant and capacity funding for work in food and agricultural sciences



NIFA and AFRI

- NIFA budget for FY 2016 is \$1.491 billion
- AFRI is NIFA's flagship competitive grant program, currently funded at \$350 million
- President's FY 2017 budget request for NIFA is \$1.559 billion (does not include request for \$325 million mandatory increase for AFRI)



Recent Hires

- **Dr. Jeff Steiner** – NPL agronomy, Div. of Plant Systems Production. Broad experience with multi-institutional-interdisciplinary research teams in food production, natural resources, and bioenergy systems. Served as an associate research dean for agriculture at Colorado State University, and NPL and scientist with USDA ARS. Responsible for sustainable production of commodity crops and forages, integration of new technologies to accelerate improvements in production, and design of new systems for natural resources conservation and market challenges.
- **Dr. Steven Thomson** - NPL ag engineering, Div. of Agricultural Systems. Background in aerial application of crop protection materials, irrigation management, crop modeling, decision support systems, sensor systems and electronics, remote sensing, unmanned aerial systems, and general precision ag technologies. Former faculty member at Virginia Tech and Research Lead Scientist with the USDA ARS. Responsible for engineering processes that improve systems relevant to agriculture.



Trending Research

- High throughput phenotyping - new tools to improve capacity, sensitivity and throughput for plant phenotyping, including cyberinformatics.
- Agencies (including DOE, NSF, NIFA, and ARS) are currently investing in various aspects of rapid phenotyping, microbiome and “Big Data”, creating significant opportunities to collaboratively advance the state of the art.



Organization of AFRI

Aligned with the 6 Farm Bill priorities

1. Plant health and production, and plant products
2. Animal health and production, and animal products
3. Food safety, nutrition, and health
4. Bioenergy, natural resources, and environment
5. Agriculture systems and technology
6. Agriculture economics and rural communities



Organization of AFRI

7 Requests for Applications (RFAs)

- Food, Agriculture, Natural Resources and Human Sciences Education and Literacy Initiative RFA
- Foundational Program RFA
- 5 Challenge Area RFAs



Food, Agriculture, Natural Resources and Human Sciences Education and Literacy Initiative (ELI)

- Postdoctoral fellowships – individual applies
- Predoctoral fellowships – individual applies
- Undergraduate research and extension experiential learning fellowships – institution applies for a group of fellowships
- Professional Development for Secondary School Teachers and Educational Professionals – individual or institution applies



AFRI Foundational Program

Program Areas aligned with Farm Bill priorities

- Plant health and production, plant products
- Animal health and production, animal products
- Food safety, nutrition, and health
- Bioenergy, natural resources, environment
- Agriculture systems and technology
- Agriculture economics and rural communities



AFRI Challenge Areas

- Agriculture and Natural Resources Science for Climate Variability and Change
- Childhood Obesity Prevention
- Food Safety
- Sustainable Bioenergy
- Water for Food Production Systems



AFRI Foundational Program versus Challenge Areas

Foundational Program:

- Mostly single function research
- Mostly fundamental research
- Don't change markedly from year to year
- Smaller grant size, \$500,000 maximum
- Individual investigators or small teams



AFRI Foundational Program versus Challenge Areas

Challenge Areas:

- Mostly integrated programs
- Research component is more applied
- Often change markedly from year to year
- Larger grant size, typically >\$1 million
- Multiple investigators or large teams



NEW! Commodity Board Provision

The 2014 Farm Bill (Section 7404) directs USDA to solicit AFRI topics from eligible commodity boards for co-funding

Desired Benefits:

- Increase funding leverage for both parties
- Increase project relevancy
- Increase engagement between NIFA and commodity boards (and commodity groups)



Overview of Implementation

- NIFA incorporates the Commodity Boards provision into the current AFRI framework
 - Ensures rigorous competition
 - Only the best science will be funded
- NIFA will solicit topics for all AFRI RFAs
 - Allows maximum participation flexibility
 - Topics must relate to the established AFRI priorities



Commodity Board Topics FY16

| Submitting Board | Topic | Board committed x1000 | RFA | Program Area |
|------------------------------------|--|-----------------------|---------------|----------------|
| Kansas Wheat Commission | Novel pre-breeding applications for quality enhancement in hard red winter wheat | \$500 | Food Security | Food Security |
| Kansas Wheat Commission | Breeding for genetic resistance to wheat viruses | \$250 | Foundational | Plant Breeding |
| National Pork Board | Evaluation of various compounds as alternatives to antibiotics to treat and prevent disease in pork production | \$150 | Foundational | CARE |
| Iowa Corn Promotion Board | Environmental influence on phenomics in crop improvement and production | \$250 | Foundational | Plant Breeding |
| Washington State Potato Commission | Understanding soil ecology to manage potato soil health | \$150 | Foundational | CARE |
| National Peanut Board | Drought tolerance and efficient use of water resources in peanuts | \$150 | Foundational | CARE |
| National Peanut Board | Improved peanut and food allergy diagnostic method | \$250 | Foundational | Food Safety |



BUDGET &
LEGISLATION

Budget

Legislation

NIFA Administrative
Actions

Centers of
Excellence

Matching
Requirements

Commodity Boards

Commodity
Boards FAQs

Commodity
Boards FY 2016
Webinars

Eligible
Commodity
Boards

FY2017 AFRI
Program
Timeline

Request for Non-
Land Grant
University
Designation

Hispanic-Serving
Agricultural Colleges
and Universities
(HSACU)

Commodity Boards

The 2014 Farm Bill allows eligible national and state commodity boards to propose topics for research and outreach that they are willing to equally co-fund with NIFA through the Agriculture and Food Research Initiative Competitive Grants Program (AFRI).

Federal Register Notice: "Solicitation of Commodity Board Topics and Contribution of Funding Under the Agriculture and Food Research Initiative Competitive Grants Program," was published May 18, 2016. This notice invites topic submissions from eligible commodity boards, outlines the process NIFA will use to evaluate the appropriateness of these topics for inclusion in AFRI Requests for Applications (RFAs); and describes the commitment commodity boards will be required to make regarding jointly-funded AFRI applications selected for an award.

Eligible commodity boards are those which address an agricultural commodity and:

- include a combination of promotion, research, industry information, or consumer information activities;
- are funded by mandatory assessments on producers or processors; and
- are designed to maintain or expand markets and uses for the commodity (as determined by the Secretary of Agriculture).

Proposed topics must relate to the established AFRI priority areas to be considered for inclusion in future AFRI Requests for Applications (RFAs). The established AFRI priority areas, are plant health and production and plant products; animal health and production and animal products; food safety, nutrition, and health; renewable energy, natural resources, and environment; agriculture systems and technology; and agriculture economics and rural communities.

Questions may be submitted to commodityboards@nifa.usda.gov.

RESOURCES

- Federal Register Notice, "Solicitation of Commodity Board Topics and Contribution of Funding Under the Agriculture and Food Research Initiative Competitive Grants Program"
- List of AFRI FY2016 Program Areas, Funding Levels and Award Durations
- List of Eligible Commodity Boards and Procedure to Request Eligibility
- Approximate Timeline for FY2017 AFRI Program
- Frequently Asked Questions
- 2016 Commodity Boards Webinar
- Agriculture and Food Research Initiative Program Information
- Topic Submission Form



Additional Information (See Handouts)

- Institute of Food Production and Sustainability
AFRI, SCRI, OREI
- Institute of Bioenergy, Climate and
Environment
AFRI



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