National Plant Germplasm Coordinating Committee

June 18, 2020

NIFA relocation and AFRI Update

NIFA Relocation

October 1 NIFA officially relocated (~25%) to Kansas City temporary office space—USDA Beacon Building, 6501 Beacon Drive, Kansas City, MO. NIFA Headquarters (~20 staff) remain in DC. Permanent office space at 805 Pennsylvania Avenue, KCMO to serve as the new home for both ERS and NIFA. Currently in maximum telework mode due to pandemic. Current staff are administering multiple programs, managing heavy workloads, and many have stepped up to serve in Acting leadership roles.

Priority is recruitment and hiring new staff, onboarding and training at all levels

- Dr. Ann Stapleton, new NPL, Genetics and Data Science.
- Dr. Neerja Tyagi, new PS, Plant Science.
- Dr. John Erickson, new NPL, Agronomy and Crop Science.
- New NPL recruited, Plant Science, start date August 2020.

NIFA Office of the Director

- Dr. Scott Angle – Director, has accepted a position as Director of the UF/Institute of Food and Agricultural Science (July 13, 2020).
- Dr. Parag Chitnis – Associate Director for Programs and Acting Associate Director for Operations (Acting Director of NIFA effective July 13).
- Dr. Bryan Kaphammer, Associate Area Director for the Agricultural Research Service's Plains region in Ft. Collins, CO, will join NIFA as Acting Associate Director of Programs to support NIFA during its transition. Dr. Kaphammer will report to Dr. Chitnis effective July 13, 2020.

Agriculture Food Research Initiative (AFRI), NIFA's largest competitive grant program~$425M.

Priorities:

- 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;
- Agriculture Economics and Rural Communities

2-year RFA cycle (FY2019 and 2020). The FY2019 review panels are completed, new grants processed, and officially announced. Success rates are 10-20%.

- All panels are virtual. Most are using a triage process to focus discussion on the most competitive proposals as determined by the review panel.

- Required Data Management Plans: Will be considered during the merit review process. Should contain the following components: Expected Data Type, Data Format, Data Storage and Preservation, Data Sharing and Public Access and, Roles and Responsibilities.
- Support for Commodity Board Topics: Commodity boards are invited to propose research topics that they want to co-fund with NIFA. If the topic fits in an existing AFRI program, it will be listed as a priority in that program. If a proposal addressing the priority is to be funded, commodity board will provide half of the funding. Proposal must include a letter of co-funding support from the commodity board. See, https://nifa.usda.gov/commodity-boards

June 17, 2020 announcement: NIFA Invests $11.4 Million to Improve Plant Breeding for Agricultural Production

NIFA recently awarded 22 Plant Breeding for Agricultural Production grants that will advance the development of publicly available cultivars bred to improve the production efficiency, yield, sustainability, resilience, healthfulness, product quality, and value of U.S. agricultural plants while increasing farmer profitability and exports. The awards include both classical and genomics-enabled research focused on pre-breeding and germplasm enhancement, applied quantitative genetics and selection theory, as well as testing and evaluation for cultivar development, including high-intensity phenotyping sites, innovation hubs and collaborative partnerships. These grants are a part of NIFA's Agriculture and Food Research Initiative (AFRI) program.

Plant Breeding Research:

- pre-breeding and germplasm enhancement;
- participatory breeding;
- selection theory;
- applied quantitative genetics;
- phenomics;
- modeling (including crop growth models) in breeding.*

Later Stages of Cultivar Development:*

- testing and evaluation of developed materials in established regional trials with the primary goal of releasing publicly finished cultivars
- **$300,000**, for up to three years.

Crop Breeding Innovation Hubs (integrated research and extension):*

- develop and evaluate research outputs in elite germplasm and subsequently distribute the improved lines to public and private breeding programs.
- **$1,000,000,** for up to five years. Only 1 award.

High Intensity Phenotyping Sites (integrated research and education):*

- Support ongoing community-based experiments; deployment, evaluation, and use of field sensors and imaging technologies; creation of data management, sharing, and analytics platforms; and training the next generation of agricultural researchers.

- **$3,000,000,** for project periods up to three years. Only 1 award.

Commodity Board co-funding opportunities (1:1 matching):

- **Kansas Wheat Commission.** Utilize technologies, tools and methods to access and mobilize genes within collections of wild wheat species for germplasm enhancement and elite cultivar development.
- **National Peanut Board.** Research on marker-trait associations in the core collection and cultivated and wild species of peanut through intensive phenotyping to expand genetic diversity and discover new desirable traits and high quality genetic markers.

Additional Information:

Release or distribution of germplasm: Researchers must consult with the relevant National Plant Germplasm System (NPGS) curator to determine whether and how to deposit germplasm, transgenic plants, mutants, plant populations, or other kinds of materials into the NPGS or stock center. Project directors must confer with the crop curators and crop germplasm committees early in the application development process regarding the desirability of submitting genetic stocks and experimental plant populations generated by NIFA funding for deposit into NPGS repositories. More information is available on the NPGS website.

Looking ahead to FY2021 and FY2022.

- RFA is underdevelopment and pending public release (1-2 months).
- Earlier submission deadlines. Working toward earlier and more consistent deadlines.
- Larger size awards. May mean lower success rates?
- Includes priorities highlighted in the USDA Science Blueprint, USDA Innovation Agenda, and stakeholder input from recent NIFA funded conferences e.g. Breeding Crops for Enhanced Food Safety article published in Frontiers in Plant Science https://www.frontiersin.org/articles/10.3389/fpls.2020.00428/full