Science Policy News

Entomological Society of America Science Policy News

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ESA IN DC

ESA Responds to RFI on Agricultural Innovation

In December, ESA submitted formal comments to a Request for Information (RFI) released by the White House Office of Science and Technology Policy (OSTP) regarding sources of agricultural innovation. The comments outlined critical research gaps in entomology, such as pollinator decline and invasive insects that are vectors of plant and animal diseases. The comments also highlighted federal research programs at USDA, NSF, EPA, NIH, CDC, and DOE that fund vital research necessary to innovate in the agricultural sciences and ensure food security. Submitting comments in response to RFIs effectively communicates ESA's research priorities to the federal policymakers as part of a larger advocacy strategy.

Sources and Additional Information:

- The full text of the comments is available at *http://www.lewis-burke.com/sites/default/files/ostp_rfi_ag_innovation.pdf*.

CONGRESSIONAL UPDATES AND NEWS

Congress Reaches Agreement and Passes FY 2016 Appropriations Legislation

On December 18, Congress passed the fiscal year (FY) 2016 omnibus appropriations bill, which would provide funding for nearly all federal programs. The catch-all spending bill is the result of weeks of closed-door negotiations among Republican and Democratic leaders who were grappling with hot-button policy issues some legislators wanted included in the bill. In the end, most of the controversial provisions were not included in the omnibus.

The final bill provides significant increases to federal investments in many research, education, and healthcare programs important to the research community. Agency funding levels of interest to the Entomological Society of America include:

- The **U.S. Department of Agriculture's (USDA)** research programs received considerable support in the final FY 2016 appropriations omnibus bill, with several programs receiving an increase. The National Institute of Food and Agriculture (NIFA) is funded at $1.326 billion, an increase of $37 million (2.9 percent) over the FY 2015 enacted level. Within NIFA, the Agriculture and Food Research Initiative (AFRI) received $350 million, a significant increase of $25 million (7.7 percent).
- With bipartisan support, the **National Science Foundation (NSF)** received funding above FY 2015 levels for all accounts. The omnibus provided NSF with $7.463 billion overall, which is $119.3 million or 1.6 percent above FY 2015. This increase is higher than either number proposed in the House or Senate FY 2016 appropriations bills, but falls short of the President's requested increase of $379 million. The Research and Related Activities (R&RA) account, which funds all of NSF's research directorates, received an increase of $100 million or 1.7 percent over the FY 2015 level.
- The **Environmental Protection Agency (EPA)** did not experience the funding increases that the omnibus provided to other agencies; although it would avoid steep cuts that had been proposed in both the House and Senate FY 2016 appropriations bills. Overall, EPA received $8.139 billion, which is equal to the FY 2015 enacted level. The Science and Technology account is funded at $734.6 million, which is also level funding with FY 2015.
- The **U.S. Forest Service (FS)** received $5.66 billion in FY 2016. This is a $608 million or 12 percent increase above the FY 2015 enacted levels. Despite an overall increase for FS, the Forest and Rangeland Research and Forest Health Management accounts both received decreases from their FY 2015 funding levels of approximately $5 million each.
- The **National Institutes of Health (NIH)** received $32.1 billion, an increase of $2 billion, or 6.6 percent, above the FY 2015 enacted level. Within the NIH total budget, the National Institute of Allergy and Infectious Diseases (NIAID) received $4.6 billion, or a 6.2 percent increase compared to FY 2015.
- The omnibus provided $7.23 billion for **Centers for Disease Control and Prevention (CDC)** activities.

- The **Department of Defense (DOD)** basic research account received $2.3 billion, a 1.4 percent increase over last year. Applied research and advanced technology development is increased by 9.0 percent and 7.4 percent respectively. Notably, within the Congressionally Directed Medical Research Program (CDMRP), the FY 2016 appropriations bill funds a new $5 million peer-reviewed tick-borne disease research program.

While the two-year budget deal approved by Congress in November provides a budgetary framework for next year's appropriations process, a budget battle may still be unavoidable in FY 2017 for several key reasons: the FY 2017 budget discussions will occur during a Presidential election year when Congress traditionally has a difficult time moving legislation, and the FY 2017 budget cap only increases discretionary spending by $3 billion, or 0.3 percent, above FY 2016. In essence, funding for federal programs in FY 2017 will remain flat, and any significant increase in one program would require cutting another program.

Sources and Additional Information:

- The full text of the omnibus is available at https://rules.house.gov/bill/114/hr-2029-sa.

Highway Bill Signed into Law; Includes Pollinator Provisions

On December 4, President Obama signed into law the *Fixing America's Surface Transportation Act (FAST Act)*. Unlike many authorization bills, which depend on annual appropriations to be realized, the $325 billion, six-year transportation bill sets policy and authorizes new and existing programs at the Department of Transportation (DOT).

Notably, the law includes language similar to the *Highways Bettering the Economy and Environment Pollinator Protection Act* (H.R. 2738; *Highways BEE Act*) introduced in the House in July 2015. The bill recognizes the importance of pollinator populations and would enable the creation of improved habitat and forage for pollinators, including bees, bats, birds, and butterflies, on rights-of-way adjacent to highways. This would be facilitated through the promotion of integrated vegetation management practices, such as reduced mowing on roadsides and the planting of native plants, including noninvasive native milkweed species.

Sources and Additional Information:

- More information on the *Fixing America's Surface Transportation Act* is available at http://transportation.house.gov/fast-act/#top2.
- The text of the House *Highways BEE Act* (H.R. 2738) can be viewed at https://www.congress.gov/114/bills/hr2738/BILLS-114hr2738ih.pdf.

House Subcommittee on Research and Technology Holds Hearing on Biotechnology

On December 8, the Subcommittee on Research and Technology of the House Committee on

Science, Space, and Technology held a hearing entitled "The Future of Biotechnology: Solutions for Energy, Agriculture and Manufacturing." The witnesses stressed the importance of a coordinated national framework for the future of biological engineering and emphasized the need for a clear regulatory system.

Members of Congress were very engaged, particularly about how the United States can lead the biotechnology sector in the future and what Congress can do to ensure its growth. Questions from Members focused on what the agencies have done and could do to help with innovation, which elicited responses focusing on H.R. 591, *the Engineering Biology Research and Development Act of 2015*, the need to update the regulatory framework, and the importance of focused federal investment in biotechnology. Congressman Randy Weber (R-TX), who is not a Member of the Subcommittee but still participated in the hearing, inquired about harassment of professors at public institutions, which prompted a discussion about the responsibility of scientists to educate the public.

Key themes that emerged during the Q&A portion of the hearing were the need for predictability in a regulatory framework, the value of a strategic plan in addition to a regulatory scheme, and the importance of integrated STEM training.

Sources and Additional Information:

- More information on the hearing, including full witness testimony, is available at https://science.house.gov/legislation/hearings/subcommittee-research-and-technology-hearing-future-biotechnology-solutions.
- The July 2 White House memorandum regarding the Coordinated Framework for the Regulation of Biotechnology is available at https://www.whitehouse.gov/blog/2015/07/02/improving-transparency-and-ensuring-continued-safety-biotechnology.
- The full text of H.R. 591, *the Engineering Biology Research and Development Act of 2015*, is available at https://www.congress.gov/114/bills/hr591/BILLS-114hr591ih.pdf.

FEDERAL AGENCY AND ADMINISTRATION UPDATES AND NEWS

FFAR Update: Funding Opportunity and Advisory Committee Nominations

On December 16, the Foundation for Food and Agriculture Research (FFAR) made two announcements. The first is a funding opportunity, a "New Innovator" award. Additionally, FFAR issued a call for nominations for seven new Advisory Councils.

Funding Opportunity

The first funding opportunity issued by FFAR is called the "New Innovator in Food and Agriculture Research Award." Institutions are permitted to nominate one individual for this award, which is "designed to support and inspire the next generation of food and agriculture scientists." Grants will be funded up to $100,000 per year for three years, with a $100,000 cash match required. Nominees must be within the first three years of their tenure-track or equivalent

career. Nominees need not be from a traditional agricultural school or department—out of the box disciplines are encouraged to apply. Nominations are due January 20, 2016.

Nomination Opportunity

FFAR announced a call for nominations for seven Advisory Committees in each of FFAR's initial target areas:

- Optimizing agricultural water use
- Transforming soil health
- Enhancing sustainable farm animal productivity, resilience, and health
- Improving plant efficiency
- Achieving a deeper understanding of nutrition and healthy food choices
- Managing food production systems to enhance human nutritional outcomes
- Spurring food system innovation

Members of the Advisory Councils will work with FFAR staff and the Board "to provide counsel regarding new research opportunities, programming, and specific proposals." Organizations and institutions are invited to submit one candidate for each of the seven target areas. Nominations are due January 20, 2016.

Sources and Additional Information:

- Additional details and the nomination form for the New Innovator in Food and Agriculture Research Award can be found at http://foundationfar.org/project/new-innovator/?mc_cid=8c0b819f75&mc_eid=ef56777d50.
- Additional details and the nomination form for the Advisory Council positions is available at http://foundationfar.org/advisory-councils/?mc_cid=8c0b819f75&mc_eid=ef56777d50.

USDA Extends Comment Period for Public Access Policy

The U.S. Department of Agriculture (USDA) has announced an extension to submit comments for the Agency's public access policy for federally funded scholarly publications and scientific datasets produced with the use of federal funds. All federal agencies were directed to develop and implement policies to increase public access to scientific publications via a 2013 memorandum from the Office of Science and Technology Policy (OSTP).

The proposed USDA policy would require submission of scientific datasets no later than 36 months after collection. USDA is currently in the process of developing a prototype system – Ag Data Commons (ADC) – that will "store, manage, and disseminate digital scientific datasets resulting from USDA funds." USDA will also require data management plans as part of all grant applications. Note that these data management plans will be required for the upcoming fiscal year (FY) 2016 Agriculture Food and Research Initiative (AFRI) competition (solicitations are expected to be released in January).

Those interested can submit comments online to USDAresearchaccess@nifa.usda.gov. Comments will be received through **Saturday, January 9, 2016.**

Sources and Additional Information:

- A fact sheet with more details on USDA's efforts related to public access is available at http://www.ree.usda.gov/ree/news/Public_Access_Fact_Sheet.pdf.

NIFA Releases Organic Agriculture Research and Extension Initiative RFA

The U.S. Department of Agriculture's (USDA) National Institute of Food and Agriculture (NIFA) has released a Request for Applications (RFA) for its Organic Agriculture Research and Extension Initiative (OREI). Through this program, NIFA seeks to support "projects that will enhance the ability of producers and processors who have already adopted organic standards to grow and market high quality organic agricultural products." OREI is especially interested in projects that will deliver research-based information to farmers and ranchers. Applications are due by March 10, 2016 and can be found at http://nifa.usda.gov/sites/default/files/rfa/FY16%20OREI%20RFA.pdf.

Sources and Additional Information:

- More information on OREI is available at http://nifa.usda.gov/funding-opportunity/organic-agriculture-research-and-extension-initiative.

NSF Releases INFEWS Solicitation

Following a series of workshops and an initial Dear Colleague Letter (DCL), the National Science Foundation (NSF) has released a full solicitation for its new Innovations at the Nexus of Food, Energy and Water Systems (INFEWS) initiative. This cross-foundation program involves every NSF research directorate, except for the Directorate for Biological Sciences (BIO), as well as a partnership with the U.S. Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA).

INFEWS was first announced in President Obama's fiscal year (FY) 2016 budget request, which describes the program as an NSF-wide interdisciplinary initiative that aims to understand, design, and model the interconnected food, energy, and water systems. This past fall, NSF supported a series of workshops on the topic and released a first funding opportunity through a DCL for INFEWS: N/P/H2O, which focused on the role of nitrogen, phosphorous, and water.

The goal of the new INFEWS solicitation is to "catalyze the well-integrated interdisciplinary research efforts to transform scientific understanding of the FEW nexus in order to improve

system function and management, address system stress, increase resilience, and ensure sustainability." The solicitation clarifies that the food, energy, water (FEW) systems "must be *defined* broadly, incorporating" physical, natural, biological, social and behavioral processes, as well as cyber elements. NSF is seeking proposals in four tracks to address specific goals:

1. FEW System Modeling to "significantly advance our understanding of the food-energy-water system through quantitative and computational modeling, including support for relevant cyberinfrastructure";
2. Visualization and Decision Support for Cyber-Human-Physical Systems at the FEW Nexus to "develop real-time, cyber-enabled interfaces that improve understanding of the behavior of FEW systems and increase decision support capability";
3. Research to Enable Innovative System Solutions to support "research that will lead to innovative system and technological solutions to critical FEW problems"; and
4. Education and Workforce Development to "grow the scientific workforce capable of studying and managing the FEW system through education and other professional development opportunities." Track 4 awards will include some from NSF that support virtual resource centers and some from NIFA that will support education of "INFEWS thinkers capable of making informed decisions and able to work with diverse teams and audiences."

The solicitation indicates that NSF and USDA are "interested in promoting international cooperation that links scientists and engineers from a range of disciplines and organizations" to address global challenges related to FEW systems. In addition, partnerships are explicitly encouraged (where appropriate) between "universities, research centers, federal agencies and national labs, state government, and private organizations." Proposals must integrate across three or more distinct disciplines encompassing research typically funded by at least three participating NSF research directorates or two directorates and NIFA. NSF hopes to leverage existing cyberinfrastructure, environmental observatories, and other investments with this solicitation, so proposals are encouraged to make use of these resources. NSF will also consider supporting new cyberinfrastructure to enable novel capabilities as part of the solicitation.

Sources and Additional Information:

- The INFEWS website with links to program contacts and the solicitation is available at http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505241.
- The INFEWS solicitation is available at http://www.nsf.gov/pubs/2016/nsf16524/nsf16524.htm.
- The N/P/H2O DCL is available at http://www.nsf.gov/pubs/2015/nsf15108/nsf15108.jsp.
- The list of INFEWS workshop awardees is available at http://www.nsf.gov/news/news_summ.jsp?cntn_id=135642.

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