



National Institute of Food and Agriculture

U.S. DEPARTMENT OF AGRICULTURE

BIOENERGY, CLIMATE, AND ENVIRONMENT  
FOOD PRODUCTION AND SUSTAINABILITY  
YOUTH, FAMILY, AND COMMUNITY  
FOOD SAFETY AND NUTRITION  
INTERNATIONAL PROGRAMS

# NIFA

## Research Funding Opportunities Related to PFAS Research

**Sandeep Kumar, National Program Leader  
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# Outline

- Organization of Agriculture and Food Research Initiative (AFRI)
- AFRI Grant Types
- BNRE programs and funding related to PFAS
- Some examples of funded projects related to PFAS
- Applicant Eligibility and Deadlines
- Discussion



## ○ **Foundational and Applied Science:**

Program Areas directly aligned with the Farm Bill Priorities for AFRI

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





# AFRI Grant Types

- Standard
- Coordinated Agricultural Projects (CAP)
- Conference
- Food and Agriculture Science Enhancement (FASE)
  - New Investigator Grants – two types
  - Strengthening Grants – several types
  - Pre- and Postdoctoral Fellowship Grants



# **Bioenergy, Natural Resources, and Environment - \$33 million**

- Soil Health (A1401)
- Water Quantity and Quality (A1411)
- Sustainable Agroecosystems (A1451)
- Sustainable Agricultural Systems (SAS)
- Cross-cutting
  - Agricultural Microbiomes in Plant Systems and Natural Resources (A1402)
  - Critical Agricultural Research and Extension (A1701)
- **Small Business Innovation Research and Small Business Technology Transfer (SBIR-STTR); Phase I and Phase II**



## Select PFAS Funded Projects

- This project seeks to create a green, nonthermal plasma-based technology for effectively **removing PFAS from cattle drinking water to prevent milk contamination**, using a novel continuous-flow plasma discharge reactor
  - Funding amount: \$199,999 in 2021; University of Idaho.
- PFAS contamination can lead to milk contamination, posing health risks. The project utilizes a novel continuous-flow plasma discharge reactor designed to treat large volumes of water efficiently.



## Select PFAS Funded Projects

- This project aims to identify and assess the health risks of PFAS in **domestic and imported packaged foods** by analyzing chemical migration from packaging and evaluating toxicity to inform safer regulations and consumer choices.
- Funding amount: \$479,712 in 2022; University of Pittsburgh.
- The project findings will help inform safer regulations and guide consumer choices to better manage health risks related to PFAS exposure.





## Select PFAS Funded Projects

- This project aims to study how the use of **biosolids**, which can be contaminated with **PFAS**, affects **water quality** in agroecosystems by examining their **transport and transformation in soils and rivers**.
- Funding amount: \$649,372 in 2024; Stroud Water Research Center, PA.





## Select PFAS Funded Projects

- This project aims to develop **eco-friendly food packaging** by replacing harmful PFAS coatings with lignin micro- and nanoparticles (LMNP) from biorefinery and paper industry streams.
  - Funding amount: \$1,000,000 in 2024; University of Tennessee.
- The research focuses on creating functional LMNP coatings for fiber and paper packaging while raising public awareness about biobased products through educational workshops and outreach initiatives.



## Select PFAS Funded Projects

- This project aims to create eco-friendly fire-retardant additives from agricultural byproducts like wheat bran and biodiesel glycerol.
- Funding amount: \$800,000 in 2024; North Dakota State University, ND.
- Project's goal to reduce the use of harmful PFAS chemicals in firefighting materials by using these new, sustainable additives



## Select PFAS Funded Projects

- **Equipment Grant.**
- This grant will support the purchase of a high-resolution mass spectrometry instrument for analyzing soil nutrients, water toxins, and persistent pollutants like **PFAS**.
- Funding amount: \$482,000 in 2023; Bowling Green State University, OH.

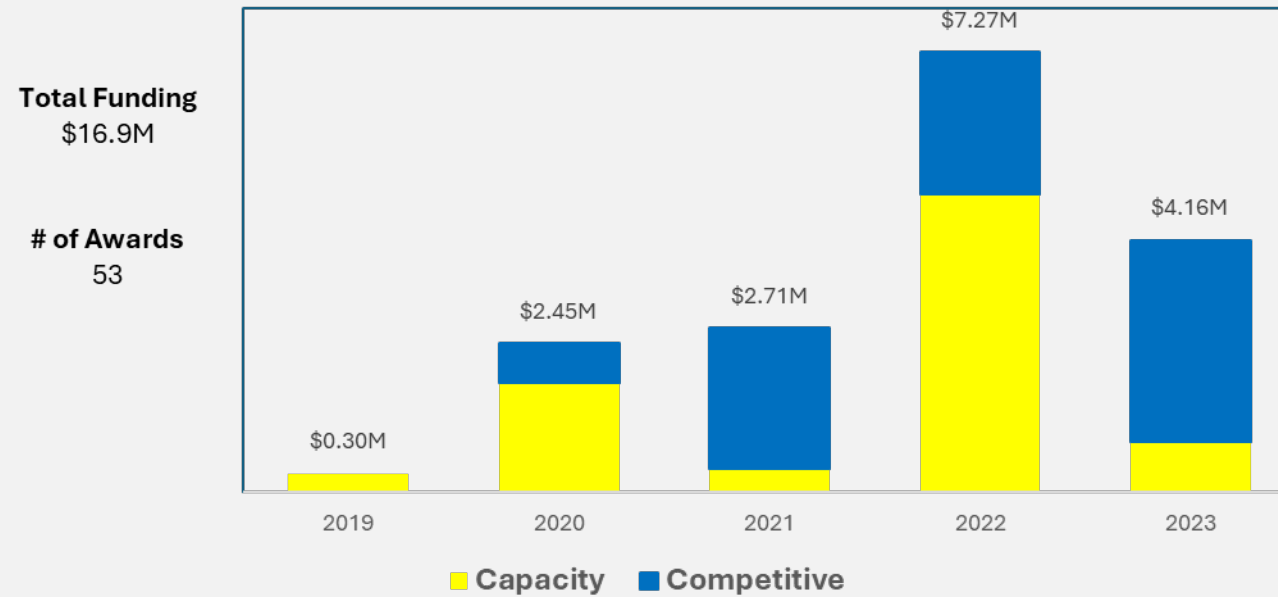


## Select PFAS Funded Projects

- SBIR Phase I project
  - To develop a **UV-based water treatment technology to remove PFAS** from groundwater and recycled wastewater, making it safe for agricultural irrigation.
  - Funding amount: \$175,000 in 2024; WATER ILLUMINATION INC.
- The technology aims to improve water reuse and sustainability by eliminating PFAS without harmful byproducts.

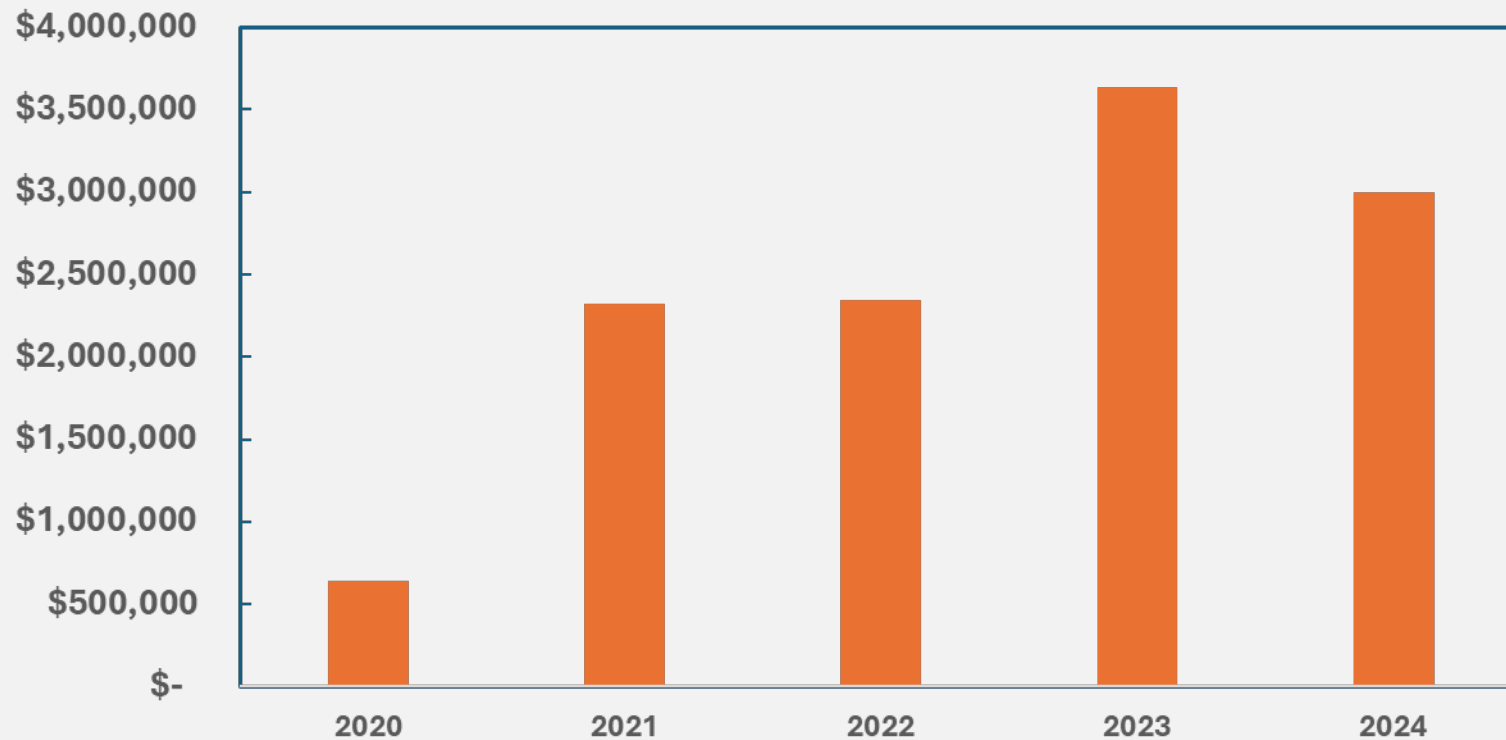


# PFAS Funded Projects (2019-2023)





# PFAS Funded Projects (2020-2024; Competitive only)





# PFAS Funded Projects (2020-2024)

Programs	Amount	Count
<b>[AFRI] Agriculture and Food Research Initiative</b>	<b>\$8,620,566</b>	<b>19</b>
• [A1411] Foundational Program: Agricultural Water Science	\$2,198,920	4
• [A1332] Food Safety and Defense	\$1,531,712	3
• [A1401] Foundational Program: Soil Health	\$1,394,648	2
• [A1414] Bioenergy Feedstock Logistics Program	\$1,000,000	1
• [A1531] Biorefining and Biomanufacturing	\$800,000	1
• [A1521] Agricultural Engineering	\$420,286	2
• [A1701] Critical Agricultural Research and Extension: CARE	\$300,000	1
• [A1511] Agriculture Systems and Technology: Nanotechnology for Agricultural and Food Systems	\$300,000	1
• [A1712] Rapid Response to Extreme Weather Events Across Food and Agricultural Systems	\$300,000	1
• [A1231] Animal Health and Production and Animal Products: Improved Nutritional Performance, Growth, and Lactation of Animals	\$300,000	1
• [A1221] Animal Health and Production and Animal Products: Animal Health and Disease	\$75,000	2
<b>[SBIR] Small Business Innovation Research Program</b>	<b>\$1,348,557</b>	<b>8</b>
• [8.4] Air, Water and Soils	\$873,557	5
• [8.3] Animal Production & Protection	\$175,000	1
• [8.1] Forests & Related Resources	\$175,000	1
• [8.12] Small and Mid-Size Farms	\$125,000	1
• [OP] Other Programs	\$1,226,025	3
• [EGP] Equipment Grants Program	\$1,226,025	3
• [CBGP] 1890 Capacity Building Grants Program	\$599,930	1
• [EQ] Research Project	\$599,930	1
• [NLGCA] Capacity Building Grants for Non Land Grants	\$149,239	1
• [NLGCA] Capacity Building Grants for Non Land Grant Colleges of Agriculture	\$149,239	1
<b>Grand Total</b>	<b>\$11,944,317</b>	<b>32</b>





# Applicant Eligibility

- Colleges or universities (including junior colleges offering associate degrees or higher)
- State agricultural experiment stations
- National laboratories
- Federal agencies
- Private organizations or corporations
- Other research institutions or foundations
- Individuals who are U.S. citizens, nationals, or permanent residents
- A consortium of two or more eligible entities.

# Application Deadlines

Usually in September (check the RFA for FY2024)

- ◇ September 12 (Soil Health and Agroecosystems), September 05 (Water Quality), October 03 (Ag Microbiome)

## Funding available

- ◇ Approx. \$10 million for A1401 (Soil Health) and \$8 million for A1411 for FY 2023

The AFRI Foundational and Applied Science Program RFA  
[www.nifa.usda.gov/grants/funding-opportunities/agriculture-food-research-initiative-foundational-applied-science](http://www.nifa.usda.gov/grants/funding-opportunities/agriculture-food-research-initiative-foundational-applied-science)



# Grant funding dashboard



- The **NIFA Grant Funding Dashboard** allows users to pull information on funding investments by research program and grant type, congressional district, recipient type, and other focused searches.
- **NIFA Application Status Dashboard** enables users to quickly check the status of their application using their assigned Grants.gov tracking number.





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<https://www.usda.gov/non-discrimination-statement>

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## Questions/Comments?

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