

NATIONAL COALITION FOR FOOD AND AGRICULTURAL RESEARCH

Prepared for the Subcommittee on Agriculture, Rural Development, Food and Drug Administration, and Related Agencies; USDA

March 22nd, 2024

The Honorable Andy Harris Chairman Subcommittee on Agriculture House Committee on Appropriations 1536 Longworth House Office Building Washington, DC 20515

The Honorable Martin Heinrich Chairman Subcommittee on Agriculture Senate Committee on Appropriations 303 Hart Senate Office Building Washington, DC 20510 The Honorable Sanford Bishop Jr. Ranking Member Subcommittee on Agriculture House Committee on Appropriations 2407 Rayburn House Office Building Washington, DC 20515

The Honorable John Hoeven Ranking Member Subcommittee on Agriculture Senate Committee on Appropriations 338 Russell Senate Office Building Washington, DC 20510

Dear Chairman Harris, Chairman Heinrich, Ranking Member Bishop and Ranking Member Hoeven:

As Congress moves forward to develop a Fiscal Year (FY) 2025 spending package, we encourage you to increase investments to advance food and agricultural research at the U.S. Department of Agriculture (USDA) through the Research, Education, and Economics Mission Area.

Food and agriculture are the third largest direct contributor to the U.S. Gross Domestic Product (GDP) after healthcare and housing.¹ Yet, federal funding for food and agricultural science has been essentially *flat for over two decades* despite much greater demonstrated needs and opportunities. Recent data from the U.S. Economic Research Service indicates that for every \$1 in public investment, U.S. food and agriculture R&D has returned \$20 to the American economy. However, "U.S. public agricultural R&D spending peaked in 2002, and by 2019 spending had declined to roughly where it was in 1970."²

Our nation's health and wellness, along with our competitiveness and stability in global markets is at risk, which impacts our national security and ability to support allies around the world. China surpassed the U.S. in public funding in 2009 and realized a 2-to-1 advantage in 2013. In 2015, the U.S. share of global investment in public agricultural research and development was 8.9%; China, India and Brazil together spent some \$3.16 for every dollar the U.S. invested in public agricultural research and development.³ U.S.

¹ Abbott, Chuck (March 2017) China Overtakes U.S. as Top Government Funder of Ag Research. Successful Farming. <u>https://www.agriculture.com/news/business/china-overtakes-us-as-top-government-funder-of-ag-research</u>.

² Public agricultural R&D spending in the United States has declined in recent years. USDA ERS. <u>https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=104030</u>.

³ <u>https://kansascityfed.org/documents/7107/the-drivers-of-us-agricultural-productivity-growth.pdf</u> and <u>https://www.cambridge.org/core/journals/journal-of-economic-history/article/unpacking-the-agricultural-black-box-the-rise-and-fall-of-american-farm-productivity-growth/6B12A75BB1FD611628A9FC9C08B90056</u> and <u>https://www.ers.usda.gov/amber-waves/2020/july/productivity-is-the-major-driver-of-us-farm-sector-s-economic-growth/</u>.

public sector funding in research and development is falling in absolute terms and relative to major competitors, including Brazil, India, and China.⁴

The food and agriculture enterprise faces unprecedented challenges from extreme weather exacerbated by climate change, supply chain disruptions and rising food costs resulting from natural and geopolitical events, and adverse health outcomes related to nutrition insecurity and inequality. The modern food and agriculture system is a science-based business, supported by the important goals of the farm bill research title. Research is already beginning to show that the nutritional quality of crops has declined with warming temperatures, while productivity has declined by about 21%.⁵ Fortunately, the key to addressing many of these challenges lies in strong federal investments in the broad suite of research, education, and extension programs within USDA.

We urge you to make the following investments in the FY 2025 spending agreement.

National Institute of Food and Agriculture Research (NIFA).

As USDA's extramural funding arm, NIFA programs integrate research, education, and Extension to ensure that groundbreaking scientific discoveries are brought out of the laboratory and into the hands of those who can put them to work.

Provide increased support for all the capacity programs, which are fundamental to the extramural research, education, and Cooperative Extension system.

NIFA's *capacity programs* provide an innovation network supporting our nation's Experiment Stations, research farms, and Cooperative Extension activities to keep the United States as the global leader of agricultural research.

- Requests \$300 million for the Hatch Act account which supports 1862 land-grant university federal-state partnerships that employ science experts across each state at Experiment Stations respond to critical issues that affect production, profitability, invasive plant/animal species, biosecurity, land and water use, climate resilience, economic analysis, and farm safety. The multistate component of Hatch ensures coordination on key projects that advance <u>agricultural production</u> and <u>processing</u>, <u>profitability</u>, and <u>sustainability</u>.
- Requests \$113 million for the Evans-Allen account to provide capacity funding for food and agricultural research at the 1890 Historically Black land-grant universities and Tuskegee University. The Evans-Allen Program enables research for small farmer challenges, food security and nutrition, rural prosperity and economic sustainability, natural resources and the environment and workforce development. Most Black students majoring in agriculture graduate from 1890s universities.
- Requests \$17.5 million for the Tribal College Research program for research funding that helps to protect reservation forests, woodlands, grasslands, and crops, and monitoring of the quality of soil, water, and other environmental factors.
- Requests \$46 million to support the McIntire-Stennis Cooperative Forestry research which investigates carbon sequestration, development of biobased products, prevention of forest fires, identification of biobased-energy sources, and training of forest and natural resource scientists.
- Requests \$420 million in Smith-Lever3(b) and 3(c) funds to support the Cooperative Extension System (CES), a unique network of on-farm researchers, specialists, agents, and educators who deliver vital, practical information to agricultural producers, small business owners, communities, youth, and families.

⁴ Clancy, Matthew (2017 September) Public sector spending on agricultural research declining in the United States and Western Europe, but rising in China, India, and Brazil. USDA ERS. <u>https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=85038</u>.

⁵ Ortiz-Bobea, A., Ault, T.R., Carrillo, C.M. *et al.* Anthropogenic climate change has slowed global agricultural productivity growth. *Nat. Clim. Chang.* 11, 306–312 (2021). <u>https://doi.org/10.1038/s41558-021-01000-1</u>.

- Requests \$92 million for the Extension Services of 1890s land-grant universities which supports adoption of new farm production and management approaches through informal education via on-site demonstrations.
- Requests \$17.5 million for Tribal Colleges Extension which supports community-based learning on topics such as farmer education, youth development, diet and nutrition, and rural entrepreneurship.
- **Requests \$25 million for the IR-4 Project** aiding specialty crop agriculture by developing data needed to facilitate the registration of crop protection products for fruits, vegetables, herbs, spices, ornamental plants and other horticultural crops.

Provide \$500 million in funding for the Agriculture and Food Research Initiative (AFRI).

AFRI is USDA's premier competitive research program, supporting fundamental and applied research to address key problems of local, regional, national, and global importance in conventional, organic, and urban agricultural systems. This funding level for the program is needed to invest in crucial areas aimed at addressing our nation's most urgent and pressing food, agriculture, and public health challenges. AFRI-funded research supports COVID-19 recovery, climate change adaptation and mitigation, equity across the food system, food safety and traceability, supply chain resiliency, bioenergy, nutrition and wellness, agricultural technology, rural economic prosperity, and a diverse research workforce. At its current funding level, AFRI can support fewer than a third of the projects recommended for funding. AFRI research programs support the development of new technologies and a workforce that will advance our national security, agricultural productivity, and the health of Americans.

Provide \$500 million in funding for the Research Facilities Act (RFA).

Agricultural and food research solves global issues including preventing the next pandemic, addressing energy sustainability, limiting forest fires, and feeding global populations. Yet, the U.S. is at a hazardous crossroads and is rapidly losing ground as the global leader in agricultural science. 70 percent of the research facilities at U.S. public colleges of agriculture are at the end of their useful life. RFA funding will allow land-grant universities and non-land-grant colleges of agriculture to construct and modernize their research infrastructure to meet the needs of 21st century agricultural challenges.

A 2021 report determined 70% of research facilities at U.S. public colleges of agriculture are at the end of their useful life with \$11.5 billion in deferred maintenance. RFA allows for construction of modern facilities at colleges of agriculture that support agricultural research, that will increase pest and disease preparedness and use of advanced technologies, nation-wide.

Provide \$1.95 billion for the Agricultural Research Service (ARS).

As USDA's principal in-house research agency, ARS advances scientific knowledge through its four national program areas: nutrition, food safety and quality; animal production and protection; natural resources and sustainable agricultural systems; and crop production and protection. As one of the only funding sources available for long-term agricultural research, the ARS labs and research sites foster synergistic research collaborations across scientific disciplines and geographic locations. This funding would also help to address ARS infrastructure improvements critical to carrying out its research responsibilities.

Provide \$50 million in funding for the Agriculture Advanced Research and Development Authority (AgARDA).

Modeled after successful advanced research programs like DARPA and ARPA-E, the Agriculture Advanced Research and Development Authority (AgARDA) can bring that transformative research power to address agricultural challenges. The power of an advanced research program lies in its unique selection process to identify innovative ideas and technologies, allowing significant achievements to occur more rapidly than in a conventional research setting. By fully funding AgARDA, Congress can respond to our most pressing challenges: threats from plant and animal pests and diseases, rising costs and limited availability of inputs, inefficiencies in planting, harvesting and processing, and vulnerabilities to increasingly extreme weather.

It is critical that AgARDA has the necessary funds to hire staff and support a sufficient number of projects to show that this research model can produce impactful results. Therefore we urge the Subcommittee to fund AgARDA at a minimum of \$10 million for FY2025 and strongly urge consideration of fully funding the pilot program. Even as a pilot program, AgARDA must be funded at an appropriate level to support the kinds of high-impact research that can produce transformative results.

Provide \$98 million for the Economic Research Service (ERS).

U.S. agriculture benefits greatly from ERS and NASS data and modeling. This information not only helps the industry and academia but also guides sound policymaking.

Some of these datasets need to be developed from scratch and may lead to a better understanding of adaptation strategies to climatic change or improve our knowledge of mitigation strategies (e.g., the value of cover crops and why it is not widely adopted). These datasets can also help us better understand how to deal with disasters and reduce the cost of natural disasters. Data that can help understand the importance of capacity building in rural America. Finally, the datasets can also better inform us of the energy transition effect on underserved communities and the impact of climatic disasters on these communities.

Provide \$241 million for the National Agricultural Statistics Service (NASS).

The investments in USDA research, education, and extension programs made today will be responsible for developing the scientific outcomes and workforce urgently needed to meet identified and as-yet unknown challenges in the future. We urge you to do all you can to support a robust, diverse research, education, and extension portfolio within USDA.

We thank you for your continued support and look forward to working with you on this important effort.

Sincerely,

A. W. Zakija

Andrew W. LaVigne President, NCFAR