May 28, 2021-Submitted via email to ag.approp@mail.house.gov

Testimony submitted by (and point of contact): Laura Wood Peterson, Executive Director, National Coalition for Food and Agricultural Research (NCFAR), laura@lwpconsulting.com

RE: FY2022 Appropriations—Support for Funding for Food and Agricultural REE Mission

Dear Chairman Bishop and Ranking Member Fortenberry:

The National Coalition for Food and Agricultural Research (NCFAR) is a nonprofit, nonpartisan, consensus-based and customer-led coalition that brings food, agriculture, nutrition, conservation, and natural resource organizations together with the food and agricultural research and Cooperative Extension community, serving as a forum and unified voice in support of sustaining and increasing federal investment in food and agricultural research, extension, and education.

NCFAR strongly supports increased federal investment in food and agricultural research, extension, and education in the U.S. Department of Agriculture's (USDA) Research, Education, and Economics (REE) mission in fiscal year 2022 (FY22) through intramural and extramural programs, as follows:

- Agricultural Research Service (ARS), *at least* **$1,720 million**
- Economic Research Service (ERS), *at least* **$87 million**
- National Agricultural Statistics Service (NASS), *at least* **$180 million**
- National Institute of Food and Agriculture (NIFA), *at least* **$1,721 million**
- Agricultural Advanced Research and Development Authority (AGARDA) pilot **$2 million**

The requested increase for the NIFA budget should be provided to NIFA leadership, with suggested allocations of increases to specific programs, including:

- Hatch Act (Research and Education Programs), *at least* **$280 million**
- Smith-Lever (Extension Activities), *at least* **$341 million**
- Evans-Allen (Research and Education Programs), *at least* **$79 million**
- 1890 Extension (Extension Activities), *at least* **$67 million**
- 1890 Education Grants, *at least* **$28 million**
- McIntyre-Stennis (Research and Extension Programs), *at least* **$39 million**
- Agriculture and Food Research Initiative (AFRI), *at least* **$600 million**
- Research Grants for 1994 Institutions, *at least* **$6 million**
- Extension Services for 1994 Institutions, *at least* **$10 million**

NCFAR supports at least level funding from FY21 enacted for other NIFA programs and encourages proportionate increases where possible.

America's Competitiveness

NCFAR submits that **our nation is not investing enough in publicly funded research to permit the discoveries necessary to regain our place as the global leader in agricultural research – supporting our food and national security.** The unparalleled success story in the nation's food and agricultural system is in large part the product of *past* investments in food and agricultural research and extension. Federal funding for food and agricultural science has been essentially *flat for over two decades* despite much greater demonstrated needs and opportunities. Our nation's health and wellness, along with our competitiveness

in global markets is at risk, which impacts our national security. China surpassed the U.S. in public funding in 2009 and realized a 2-to-1 advantage in 2013.[i] 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.[ii] U.S. public sector funding in research and development is falling in absolute terms and relative to major competitors, including Brazil, India, and China.[iii]

Modern agriculture is a science-based business, supported by the important goals of the farm bill research title. Research underpins the critical advancements and tools that help those in the food and agricultural system do their jobs, on which consumers, rural communities, the nation's economy, and global stability rely.

Taxpayer Return on Investment

The returns on investment in agriculture research are significant, averaging $17 for every $1 invested.[iv] Public and private investments in U.S. agricultural research and practical application of results have paid huge dividends to the United States and the world, especially in the latter part of the 20th century. These returns include work on food quality and quantity; resource conservation; producer profitability; food safety and security; and improved human and animal health. **Societal expectations, climate impacts, and multifaceted food security and health challenges placed upon the food and agricultural system are ever-changing and growing, requiring in depth responsiveness by the research community**. The United Nations projects by 2050, a 70 percent increase in food production will be necessary. Meeting this increase will require much more research developing new technologies.[v]

While Congress has acknowledged this funding need in the America Grows Act of 2021, which authorizes a five percent increase for REE agencies, more federal funding is needed to ensure the nation's competitiveness and continued agricultural innovation.

Additional Background Information

NCFAR supports mandatory programs in the farm bill that provide funding for research, encompassing the *entire* REE mission area. This includes extramural programs in NIFA—such as AFRI, and capacity funds to support Experiment Stations and Cooperative Extension at the 1862 and 1890 land-grant universities and 1994 tribal colleges and universities—and intramural programs in ARS, ERS, and NASS, as well as the U.S. Forest Service research program.

"C*ustomers*" of the USDA REE enterprise include farmers, ranchers, and foresters across the nation; the agricultural input industry; food producers and processors; professionals in the fields of nutrition and health, natural resources, and environment; rural communities; and ultimately all consumers of food and natural fiber around the world. Indeed, this Subcommittee and other Members of Congress and policy makers at all levels of government are important "customers" of federally funded research, extension, and education.

Extramural Programs

NCFAR's strongly held position is that increases to any programs in the REE mission area should constitute a *net increase* in REE funding, and not come at the expense of other REE programs, as the various programs serve important and complementary roles.

NCFAR urges the Subcommittee to support AFRI at the authorized level of $700 million as soon as practicable. Absent a FY 2022 President's Budget Request, NCFAR commends USDA for including

$600 million for AFRI in its FY21 budget request, with $100 million targeted toward basic and applied research in AI.

Capacity funding through Smith-Lever 3(b)-(c), the Hatch Act, Evans-Allen Programs, and 1890 Extension, Research Grants for 1994 Institutions, and 1994 institution Extension program have not kept pace with inflation due to flat funding for food and agricultural science for over 20 years.

NCFAR supports Hatch Act, Evans-Allen Programs, and Research Grants for 1994 Institutions funding which is central to the function of agricultural, food, and forest research at our nation's public institutions. Research capacity programs in agriculture support high-priority food, feed, fuel, and fiber research needs including field-tested innovations on crop, forest, and animal health and disease prevention, as well as technologies, systems and interventions that enable access to safe and nutritious foods.

NCFAR encourages the Subcommittee to enhance funding for functions that assure the translation of science for practical application through Cooperative Extension education. Smith-Lever, 1890s Extension, and Extension Services at 1994 Institutions funds support the Cooperative Extension System, a unique network of local educators who deliver vital, practical information to agricultural producers, small business owners, communities, youth, and families. Researchers, agents, and educators work together to test new innovations and practices on the farm and share science-based best farm and food system information with communities. Extension programs avert the spread of agricultural pest and diseases, connect people with high-quality information during national emergencies[vi], and keep American farmers on the farm by providing information about new sources of on-farm income.[vii]

Intramural Programs

ARS intramural research is uniquely suited to conduct research that requires a long-term investment leading to high-impact payoff, while maintaining the capacity and readiness to respond to emerging and pressing problems. ARS also plays a critical role in partnering with the university community and industry to advance science-based solutions and address emerging issues.

The mission of ERS is to inform and enhance public and private decision making on economic and policy issues related to agriculture, food, the environment, and rural development. ERS manages a comprehensive program of economic research and analysis, including development of economic and statistical indicators that are coordinated with NASS efforts. Connecting with and working closely with researchers across the United States, ERS issues cooperative agreements and grant awards and works with land-grant partners on many projects.

NASS is committed to providing timely, accurate, and useful statistics to U.S. agriculture. The agency conducts hundreds of surveys every year and prepares reports and information to communicate the survey results. NASS reports the facts on American agriculture, facts needed by people working in, and depending upon, U.S. agriculture.

Agricultural Research Infrastructure

Additionally, we wish to state support for any investments that modernize our nation's aging food and agricultural science infrastructure. Modern agricultural research and education facilities serve as the backbone of our nation's cutting-edge agricultural and food research enterprise. The situation is dire, sixty-nine percent of the buildings at U.S. colleges and schools of agriculture are at the end of their useful life.[viii] Strategic federal investment in agricultural research infrastructure would create hundreds of thousands of new jobs nationwide.

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

[ii] https://kansascityfed.org/documents/7107/the-drivers-of-us-agricultural-productivity-growth.pdf and 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 and https://www.ers.usda.gov/amber-waves/2020/july/productivity-is-the-major-driver-of-us-farm-sector-s-economic-growth/.

[iii] 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. https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=85038.

[iv] Baldos, Uris Lantz, Frederi G. Viens, Thomas W. Hertel, and Keith O. Fuglie. R&D Spending, Knowledge Capital, and Agricultural Productivity Growth: A Bayesian Approach. American Journal of Agricultural Economics. 101(1): 291–310; https://doi.org/10.1093/ajae/aay039.

[v] How to Feed the World in 2050. UN Food and Agriculture Organization. http://www.fao.org/fileadmin/templates/wsfs/docs/expert_paper/How_to_Feed_the_World_in_2050.pdf.

[vi] https://nifa.usda.gov/announcement/nifa-supports-disaster-education-through-eden

[vii] https://onlinelibrary.wiley.com/doi/abs/10.1093/aepp/ppw007

[viii] How to Feed the World in 2050. UN Food and Agriculture Organization. http://www.fao.org/fileadmin/templates/wsfs/docs/expert_paper/How_to_Feed_the_World_in_2050.pdf.