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March 2, 2021

The Honorable Patrick Leahy, Chair
Committee on Appropriations
United States Senate

The Honorable Richard Shelby, Vice Chair
Committee on Appropriations
United States Senate

The Honorable Tammy Baldwin, Chair
Subcommittee on Agriculture, Rural Development,
Food and Drug Administration, and Related
Agencies

The Honorable John Hoeven, Ranking Member
Subcommittee on Agriculture, Rural
Development, Food and Drug Administration,
and Related Agencies

Dear Chairman Leahy, Ranking Member Shelby, Chair Baldwin, and Ranking Member Hoeven,

We write to thank you for the Appropriations Committee's commitment to plant protein research in FY20 and FY21 and ask that you support public funding for research on alternative proteins produced from plants, from cultivated cells, or via fermentation ("alternative proteins") in FY22.

Specifically, we request that you direct the U.S. Department of Agriculture (USDA) to spend \$50 million of existing funds on research that advances the development of alternative proteins for human consumption. The proposed report language builds on the Committee's strong support of USDA research in this area. It would allocate specific funds for these projects and prioritize 1890 land-grant institutions to accelerate the growth of the alternative protein industry and increase diversity in the science, technology, engineering, and agriculture professions.

The United States is home to the top plant-based, cultivated (also known as cell-based or cultured), and precision fermentation companies in the world, but we will fall behind if the U.S. government does not support these game-changing industries with funding for open-access research and development. Other countries are actively supporting the development of plant-based and cultivated meat and seafood. For example, the European Union includes alternative proteins as a key research area in Horizon Europe's \$12 billion research and innovation program¹, and Singapore is investing \$144 million into a variety of next-generation technologies intended to bolster their bioeconomies, including cultivated meat.² Canada, the Netherlands, India, Israel, and Japan are making similar investments.

¹ European Commission, *A Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system* (May 20, 2020), https://ec.europa.eu/info/sites/info/files/communication-annex-farm-fork-green-deal_en.pdf.

² Yoelim Lee & Joyce Koh, *Singapore Backs Lab-Grown Meat, Robots in \$535 Million Push*, Bloomberg (Mar. 27, 2019), <https://bloom.bg/2FI4PKu>.

Although private investment in alternative proteins is growing, open-access public research is crucial to accelerate growth. Public research will have a significantly broader impact on innovation and the economy by creating jobs and generating new opportunities to feed Americans and the world, rather than primarily benefiting specific companies. For example, USDA-funded research at the University of Missouri was the basis of the technology used in Beyond Meat's first products and helped form the foundation for the company's ongoing approach to innovation. Thanks to this foundational public research, Beyond Meat had the best-performing public offering by a major U.S. company in almost two decades in May 2019, and consumers in 80 countries across six continents can now buy Beyond Meat in restaurants and supermarkets.

In 2020, both NSF and USDA awarded alternative protein open-access research grants — \$3.55 million to fund cultivated meat research and training at the University of California Davis and nearly \$500,000 each to plant-based meat researchers at the University of Massachusetts Amherst and Purdue University. These grants represent the U.S. government's biggest investments in open-access alternative protein research. However, despite promising growth, alternative proteins currently represent only one percent of the retail meat market, are not available for the full range of proteins, and are typically not price competitive with their conventional counterparts. Significantly more research is necessary to make alternative proteins affordable and accessible to all Americans.

Alternative proteins can provide a market-based solution to several of the world's most pressing issues by meeting growing demand for meat and seafood with plant-based, cultivated, and fermentation-derived options. Alternative proteins significantly reduce greenhouse gas emissions and promise to alleviate pressure on land, forests, water availability, and fisheries.^{3,4} Alternative proteins provide additional public health benefits, including significantly decreasing the risks of foodborne illness, antibiotic resistance, and zoonotic diseases.⁵ Congress should fund research to fully realize these benefits.

Using science and markets to address big problems and help U.S. agriculture to continue to feed the world is a bipartisan endeavor, earning consistent support from both Republicans and Democrats. Secretary of Agriculture Tom Vilsack has explained why, noting that “studies have shown that every dollar invested in agricultural research creates \$20 in economic activity.”⁶ And former Secretary of Agriculture Sonny Perdue and former FDA Commissioner Scott Gottlieb both insisted that the United States would be an alternative protein leader, with Secretary Perdue specifically noting his desire to keep alternative protein companies in the United States.⁷

We urge you to make alternative protein research a priority in your FY22 appropriations reports. Thank you very much for your consideration.

Sincerely,

³ The Good Food Institute, *Growing Meat Sustainably: The Cultivated Meat Revolution* (Oct. 2019), <https://bit.ly/2XCITaQ>.

⁴ The Good Food Institute, *Plant-Based Meat for a Growing World* (2019), <https://www.gfi.org/files/pb-meat-sustainability.pdf>.

⁵ The Good Food Institute, *Open Access Research is Needed for Plant-Based and Cultivated Meat* (2020), <https://bit.ly/2My7exA>.

⁶ Press Release, *USDA Secretary Announces Creation of Foundation for Food and Agricultural Research*, USDA (July 23, 2014), <https://bit.ly/37u0Vkj>.

⁷ Secretary Sonny Perdue, *BIO Virtual Fireside Chat* (Sept. 22, 2020), <https://bit.ly/3toJOv3>.

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cc:
Members of the Senate Appropriations Committee
Senate Majority Leader Chuck Schumer
Senate Minority Leader Mitch McConnell

Report Requests from The Good Food Institute

NIFA Alternative Protein Research

Subcommittee: Agriculture, Rural Development, Food and Drug Administration, and Related Agencies

Department: U.S. Department of Agriculture

Agency: National Institute of Food and Agriculture (NIFA)

Account: Research and Education Activities

Program: Agriculture and Food Research Initiative (AFRI)

Brief description:

This language directs USDA to spend \$50 million out of existing funds to support research proposals that advance the development of alternative proteins (produced from plants, from cultivated animal cells, or via microbial fermentation) for human consumption.

This funding level would enhance the competitiveness of U.S. agriculture by enabling the establishment of a research center, potentially at a historically Black land grant institution, and expanding national protein crop production and processing capacity, which would make agricultural markets more resilient to processing disruptions and changing consumer preferences. As other countries invest in alternative protein research, this funding would ensure the United States' technological competitive advantage and spur innovation needed to maintain U.S. leadership and food security.

This report language also requests that USDA cooperate with the National Science Foundation.

Requested House and Senate report language:

Alternative Protein Research.—The Committee strongly supports the Agriculture and Food Research Initiative (AFRI). The Committee encourages USDA to support research focused on mimicking the characteristics of animal meat using plants, animal cell cultivation, or fermentation (together, “alternative proteins”) for competitive awards in the AFRI program. The Committee further directs USDA to spend \$50 million to support alternative protein research (encompassing all stages of the production process, including optimizing ingredient processing techniques and developing new manufacturing methods) and to encourage applications from 1890 Institutions. This research should be done in collaboration with other relevant programs, including but not limited to the Agricultural Research Service (ARS) and the National Science Foundation (NSF).

[FY21 House Agriculture Appropriations report, page 25](#)

Agriculture and Food Research Initiative (AFRI).—The Committee strongly supports the AFRI program. The Committee notes that projects that characterize protein functionality from crops to assess their sustainability for use as alternatives to conventional animal products are eligible for competitive awards in the AFRI program. In addition, the Committee also notes that research into plant-based protein-rich foods for human consumption is also eligible.

[FY21 Senate Agriculture Appropriations explanatory statement, page 36](#)

Protein Functionality.—The Committee encourages USDA to support research projects that characterize protein from crop plants such as chickpeas, sorghum, lentils, fava beans, lupin, rice, oats, mushrooms, and water lentils to assess their suitability for use in food products. The Committee is particularly interested in research projects involving plants that can be easily cultivated in the U.S. and that are sustainably grown and produced, such as water usage or fertilizer and pesticide requirements.