

July 30, 2020

SUBMITTED ELECTRONICALLY VIA REGULATIONS.GOV

RE: Docket No. USDA–2020–0003 Solicitation of Input from Stakeholders on Agricultural Innovations

Dear Deputy Secretary Stephen Censky:

Thank you for your [solicitation of input](#) on how to facilitate transformative breakthroughs in the sustainability of American agriculture. We write on behalf of the organizations below to urge you to prioritize breakthroughs that will diversify the food supply rather than solely increase agricultural output. Toward that end, we believe that open-access research focused on making meat, eggs, and dairy using plants, cellular agriculture, and fermentation should be a central component of your Agricultural Innovation Agenda.

Alternative proteins — including plant-based proteins, cultivated meat,<sup>1</sup> nutritional fungi proteins, and other foods produced through fermentation<sup>2</sup> — offer a promising way to help increase agricultural production while cutting the environmental footprint of U.S. agriculture.<sup>3</sup> They also satisfy growing consumer demand for more choices in the marketplace.

With global demand for meat expected to [increase by more than 50 percent by 2050](#) relative to 2012, feeding the world’s growing population with finite land and water resources will undoubtedly be one of the greatest challenges of the 21st century. We agree with [the National Academies of Sciences, Engineering, and Medicine](#) that ensuring agricultural productivity when natural systems are showing significant signs of stress exacerbated by climate change will “require a radically different approach to understand and uncover solutions that can only be found when explored beyond the traditional boundaries of food and agricultural disciplines.” Alternative proteins represent such an innovation and have been recognized by the National Academies as a “[new and exciting](#)” part of the bioeconomy with “[high growth potential](#).”

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<sup>1</sup> Sometimes called cell-based meat, cultured meat, or clean meat, cultivated meat is produced by starting with the basic building block of all life: the cell. Beginning with a small sample of animal cells, cells are grown into meat, poultry, and fish. A tank called a cultivator facilitates the same biological process that happens inside an animal by providing warmth and the basic elements needed to build muscle: water, proteins, carbohydrates, fats, vitamins, and minerals. The result is meat, identical to conventional meat at the cellular level. It looks, tastes, and cooks the same.

<sup>2</sup> Fermentation here refers to the process of using non-animal, single-celled organisms — like yeast — to produce proteins that may be consumed as whole products or used as ingredients in other foods. (For example, most hard cheeses produced in the United States use rennet produced by fermenting yeast cells.) Fermentation can be used to produce high-protein alternatives to conventional meat products and produce pure dairy and egg proteins that are indistinguishable from their counterparts from animals.

<sup>3</sup> The Good Food Institute has fact sheets on the environmental benefits of [plant-based meat](#) and [cultivated meat](#).

As you prepare for the future, we hope you will consider that consumers will not only require a greater volume of food by 2050, but will also demand a greater variety of food choices, including alternative proteins. Public interest and demand for alternative proteins is growing, providing a significant opportunity to improve the diversity and enhance the economic competitiveness of U.S. food production for the markets of the future. The United States must invest in these technologies to retain our status as a leader of sustainable agriculture and achieve USDA's mission to "do right and feed everyone."

Diversifying U.S. food production is not only important for the consumers of the future, but is also critically necessary for our farmers. U.S. agriculture is presently dominated by four crops — corn, soybeans, wheat, and cotton — creating significant fragility in the food supply, as a single adverse event threatens widespread effects. Because alternative proteins can be made from a wide variety of different, high-value crops, diversifying our food supply to embrace these methods of protein production would give more choices to farmers as to what to grow. Regardless of the benefits of any particular crop, having a greater variety of plants grown in American fields would provide insurance against circumstances that would devastate just one.

Pursuing breakthrough innovations to advance alternative proteins would help enable USDA to meet your Agricultural Innovation Agenda goal of 40 percent more agricultural output with 50 percent less environmental impact. We urge you to prioritize open-access research to accelerate these technologies' growth and reap their many benefits.

Thank you very much for your consideration.

Sincerely,

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Wild Type