

July 31, 2020

Mr. Stephen Censky
Deputy Secretary
United States Department of Agriculture
1400 Jefferson Dr. SW
Washington, DC 20250
Re: Docket Number USDA-2020-0003

Dear Deputy Secretary Censky:

On behalf of the American Society for Microbiology (ASM), thank you for the opportunity to comment on the Agriculture Innovation Agenda. As one of the oldest and largest life science societies with more than 30,000 members in the United States and around the globe, our mission is to promote and advance the microb

ability of these microbes to increase sustainable crop production and to develop dynamic crops that can turn certain functions on or off only when needed. Moreover, plant microbiome studies have broad relevance, including for sustainable crop production, environmental health, human health, and climate change mitigation.

The plant-soil-microbe interaction in the rhizosphere provides vast opportunities for enhance crop health. Development of a new generation of soil microbes is needed with improved water and nutrient management and disease resistance through enhancement of existing soil microbes and genetically-enhanced microbiomes. USDA has a unique opportunity to accelerate discoveries that will lead to new products by forming partnerships with burgeoning start-up companies in this area. Research is needed in the beneficial interactions that occur between aboveground plant parts and microbes that enhance disease resistance.

Applying Microbiome Science to Animal Health and Nutrition

The microbiome of animals is just beginning to be explored. As with humans, microbiome science has implications for nutrition and feeding

emissions could increase nitrogen use efficiency. Or increasing soil carbon sequestration through crop and soil management that enhances the soil microbiome and its processing of carbon.

Coordinating Microbiome Research

As we move toward greater consensus on and communication concerning policy changes in areas such as antimicrobial stewardship, microbiome science will be an integral part of a One Health approach to antimicrobial resistance. Microbiome research has experienced lagging federal investment, and the amount of federal funding for agricultural microbiomes collectively across all plant and animal species is much smaller than for human microbiomes. Successfully leveraging the scientific opportunities presented by the microbiome requires a robust and sustained federal investment in microbiome research and development—far beyond what has been envisioned to date. Transdisciplinary efforts focused on obtaining a better understanding of the various agriculturally relevant microbiomes and the complex interactions among them would create opportunities to modify and improve numerous aspects of the food and agricultural continuum.

We strongly encourage the USDA to recommit to the objectives of the Interagency Microbiome Strategic Plan released in April 2018. This plan, developed by the federal Microbiome Interagency Working Group, recognizes the need for better coordination of microbiome research among federal agencies, and between agencies and both non-federal domestic and international microbiome research efforts. We must move away from our current “siloed” approach to agency investments in this area and build a true interagency mechanism for research on the microbiome. Research agencies should be encouraged to share their results and make existing or needed microbiome data, analytics, technology platforms, and expertise publicly available across the federal government and among academic research institutions, national laboratories, and industry. An intragovernmental approach is essential.

Finally, ASM also strongly supports implementation of policies that will facilitate the translation of basic research findings to real world, scalable market-