Dr. Melissa R. Bailey
Agricultural Marketing Service
United States Department of Agriculture
Room 2055–S, STOP 0201, 1400
Independence Avenue SW
Washington, DC 20250–0201.

Re: Document Number AMS-TM-21-0034 "Supply Chains for the Production of Agricultural Commodities and Food Products"

June 21, 2021

Dear Dr. Bailey:

The farmers, agricultural retailers, cooperatives, researchers, scientists, seed producers, and technology developers represented by the organizations signed below appreciate the opportunity to provide input for the United States Department of Agriculture's (USDA) RFI on "*Supply Chains for the Production of Agricultural Commodities and Food Products.*" We recognize that this effort at collecting information from agriculture stakeholders originated from Executive Order 14017, America's Supply Chains, signed by President Biden on February 24, 2021. The Executive Order stated: "*The Secretary of Agriculture, in consultation with the heads of appropriate agencies, shall submit a report on supply chains for the production of agricultural commodities and food products.*" We appreciate USDA seeking stakeholder input on this complex issue and allowing us the opportunity to provide suggestions for ways to improve supply chain resiliency.

Our comments will be focused on how biotechnology can be used to address climate change as outlined in Section V (J): "*the risks posed by climate change to the availability, production, or transportation of critical goods and materials and other essential goods and materials, as identified in subsections (i) and (ii) of this section. Given the risks posed, USDA is particularly interested in the potential to retool, reengineer, or develop new capacity that would address the risks, improve efficiency, and have a climate benefit due to lower energy use, less food waste, or hasten capture of by-products and co-products (among other benefits).*" We will also provide feedback on how biotechnology can improve local and regional food systems, create new market opportunities (including for value-added agriculture and value-added products), transform the food system, support and promote consumers' nutrition security, reduce food waste, and help address other climate change issues which are referenced in various sections of the RFI. For trade issues, we believe that the United States should maintain its leadership position on developing new biotechnology tools for agriculture so that supply chain resiliency can be improved on a global scale. For this to be possible, regulatory consistency for biotechnology must be achieved so that American farmers can export their commodities.

Achievements Through Biotechnology: Americans today have access to one of the safest, most diverse, and most affordable food supplies in history, thanks in large part to the efficiency, productivity, and innovation of U.S. agriculture enabled by agricultural biotechnology, alongside the United States' robust science- and risk-based regulatory system. Existing genetic innovations have improved yield, resiliency, and soil health. For example, biotechnology decreased greenhouse gas (GHG) emissions by enabling improved tillage practices and limiting the number of passes required through the field, reducing energy use. Enzyme and microbial additives to animal feed have increased the nutritional value of feed and reduced emissions from livestock. Nitrogen-fixing bacteria and other soil microbiome innovations

improve crop efficiency, reduce conventional inputs, and promote soil carbon sequestration. To quantify these benefits, a 2020 study found that biotechnology-derived crop varieties globally reduced GHG emissions by the equivalent of 15.27 million cars in 2018.[1] Newer innovations, such as biostimulants and microbial technologies, can also increase root growth, thus binding greater amounts of carbon to the soil. Improved animal genetics and advanced feed products can help livestock adapt to a changing climate and contribute to reduced GHG emissions. As organizations that embrace the use of biotechnology in plant, animal and microbial applications and recognize the many benefits biotechnology has enabled American agriculture to achieve, we want to emphasize those benefits and underscore that the development and deployment of agricultural biotechnology must be included in supply chain strategies.

We are proud of the accomplishments achieved to date by our nation's farmers and ranchers and remain excited about the potential climate adaptation and supply-chain resiliency that could be possible through innovative genetic techniques. Gene editing is an efficacious tool for producing crops and livestock that thrive in a variety of environments and to continue to produce more with less — less water, less land, less inputs, less emissions. Producing more with less reduces waste and permits conversion of existing agricultural wastes to valuable products for new or existing markets. This further reduces wasted resources and engenders a more resilient agriculture and food supply-chain.

Utilizing biotechnology can bolster the food supply chain and benefit producers and consumers alike. Biotechnology enables crops to maintain yields in the face of drought and less water, which has a direct bearing on the food supply chain. This technology can also be used to boost the nutrient levels of fruits and vegetables. Increased production from biotechnology crops can help combat global hunger and malnutrition by increasing the vitamin and mineral contents of plants; improving food security and poverty alleviation. Biotechnology advancements allow for fewer blemishes, such as bruises, that lead to more sellable crops for farmers requiring less acreage. These technologies can also extend the shelf life of produce, cutting down on food waste, which creates eight percent of all global carbon emissions. Utilizing biotechnology in manufacturing can support the development of bioplastics from sustainable chemicals that can be recyclable, biodegradable, or compostable to divert food packaging waste from landfills, making the food supply chain more sustainable.

There is a significant, diverse, and largely untapped pool of genetic material in the wild relatives of crops and livestock that are of great value in increasing efficiency and resiliency, especially as developers consider the unique challenges and constraints of different regions. Wild relatives, if protected, and biotechnology, if appropriately regulated from a science- and risk-based perspective, will together enable the development of region-specific varieties, resulting in a more local supply chain that is buffered from national or international disruptions and products that are resilient to challenging conditions unique to that area.

The Coordinated Framework: With the publication of USDA's final SECURE Rule in May of 2020, the regulatory framework for biotechnology approval at USDA is set, however we believe that there are other areas where USDA can assist with furthering the adoption of biotechnology and its corresponding supply-chain benefits. For one, as part of its responsibility under the Coordinated Framework, USDA can continue to be proactive in encouraging the Environmental Protection Agency (EPA) and the Food and Drug Administration (FDA) to publish risk and science-based biotechnology regulations and guidance

[1] https://www.tandfonline.com/doi/full/10.1080/21645698.2020.1773198

that foster innovation, facilitate commercialization, and increase the overall adoption of new products produced using biotechnology.

The United States government has maintained a consistent goal to create a biotechnology regulatory environment that fosters innovation. In July 2015, President Obama's Executive Office of the President (EOP) issued a memo raising concerns that the current biotechnology regulatory framework was, in some cases, imposing unnecessary costs and burdens that were preventing small and mid-sized businesses from participating in the marketplace, limiting public understanding of the regulatory process, and in essence stifling innovation.[2] The memo created an interagency working group to develop a "*National Strategy for Modernizing the Regulatory System for Biotechnology Products*" (*National Strategy*), which was published in September 2016. The *National Strategy* reaffirms that, "*the policy of the United States Government is to seek regulatory approaches that protect health and the environment while reducing regulatory burdens and avoiding unjustifiably inhibiting innovation, stigmatizing new technologies, or creating trade barriers.*"[3] These same concerns and the need for modernization were reaffirmed by the Trump Administration, which issued its own, "*Executive Order on Modernizing the Regulatory Framework for Agricultural Biotechnology Products*," (E.O.) in June 2019. As noted above, the vision, goals, and objectives aimed at modernizing the U.S. biotechnology regulatory framework are bipartisan and transcend administrations. We encourage USDA to continue the dialogue with its regulatory partners at EPA and FDA to advance achievement and continual improvement upon these goals. It remains critically important for the U.S. regulatory framework to continue to evolve and adjust to experiences gained and the best available science.

Public and Private Research: We support the ongoing public and private investment in the research and development of new technologies that have the potential to enhance the sustainability of agriculture and protect the environment and our global food system. For U.S. farmers and ranchers to lead in the future, they must have access to every tool available to address pressing challenges caused by climate change, such as severe weather events and rapidly evolving pests and diseases. We must do this while simultaneously meeting the global sustainability needs of reducing the use of inputs and increasing new varieties of healthy and affordable food, feed, biofuel, and fiber options. Access to and the development of technology is essential for confronting these challenges, and we believe that biotechnology has demonstrated a unique ability to meet these needs.

Biotechnology is a critical tool in breeding that enables producers to quickly and easily adapt to obstacles posed by a changing climate, and improvements in genetics is one key way American agriculture will maintain its position as the world leader in efficiency and sustainability. Producers need access to improved varieties to keep pace with the future growing challenges posed by an evolving climate, but access depends upon public acceptance. Public acceptance of biotechnology could be improved if all the Coordinated Framework agencies (USDA, EPA and FDA) commit to research, document, and communicate the environmental benefits that biotechnology enables agriculture to deliver, in addition to the existing, traditional research and communications regarding the safety of biotechnology.

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[2] https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/modernizing_the_reg_system_for_biotech_products_memo_final.pdf

[3] https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/biotech_national_strategy_final.pdf

Our associations strongly support a science- and risk-based regulatory system which fosters innovation, values the environmental benefits that biotechnology enables agriculture to achieve, and recognizes the long and safe track record of plant and animal breeding and the overwhelming evidence of the safe use of genetic engineered plants and animals. USDA should continue to communicate how policy decisions related to new plant and animal varieties enable agriculture and forestry to further contribute to climate solutions. In 2020, the United States Department of Agriculture called for public input on the Agriculture Innovation Agenda to help "*stimulate innovation so that American agriculture can achieve the goal of increasing U.S. agricultural production by 40 percent while cutting the environmental footprint of U.S. agriculture in half by 2050.*"[4] In a summary of the findings from all of the feedback received, USDA published the "*Agriculture Innovation Agenda: Scorecard Report*." A key finding of that report was that a primary driver of productivity growth is "improvements in animal and crop genetics."[5]

International Trade: Finally, to truly enable agriculture to be a solution to climate change and limit supply chain disruptions, innovation is essential and trade policy must be incorporated into a comprehensive climate strategy and prioritized to address barriers to innovation. Unfortunately, some trading partners have maintained policies that inhibit innovation. A 2020 report by the European Academies Science Advisory Council stated: "*Given the escalating, shared, problems associated for example, with climate change, it is vital that EU actions take account of our responsibilities in the global context and that we do not repeat our past mistakes in failing to capitalise on advances in the biosciences*[6]." We agree with this perspective and urge USDA to fully engage with our trading partners to pursue a robust climate change agenda, which reduces barriers to innovation and levels the playing field so that innovation can be leveraged globally to address climate challenges. Greater adoption of climate-smart biotechnology innovations globally can improve environmental outcomes and play a vital role in making crops and livestock more resilient to pests, disease and extreme weather variabilities caused by climate change. Deploying technologies to enable producer resiliency to climate change will be critical to the agricultural supply chain. As such, it is important that international markets have consistent, science-based rules for biotechnology products that do not impede access to innovation and disrupt supply chains to new technologies.

Access to new biotechnology varieties, facilitated by predictable markets, is not only important for the economic viability of U.S. agriculture, but it also allows producers to maintain and improve upon the environmental gains and GHG reductions these tools have already brought. USDA has worked tirelessly with the United States Trade Representative (USTR) to resolve these trade and innovation impediments under both the Obama and Trump Administrations. We strongly urge maintaining these trade normalization efforts, both for existing technologies, as well as continuing to develop predictable, consistent international regulatory approaches for new innovations, such as gene editing.

The individuals represented by our associations believe in the vital contributions that our agriculture community can make to mitigate climate change and build toward a more sustainable food system. We believe in science and evidence-based solutions. We must acknowledge that scientific innovations, such as agricultural biotechnology, have resulted in environmental and societal benefits; and must continue to be a part of the comprehensive strategy on improving the supply chain.

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[4] https://www.usda.gov/aia

[5] Agriculture Innovation Agenda: Scorecard Report, https://www.usda.gov/sites/default/files/documents/aia-scoreboard-report.pdf, page 4.

[6] https://easac.eu/fileadmin/PDF_s/reports_statements/Genome_Editing/EASAC_Genome-Edited_Plants_Web.pdf

Thank you again for the opportunity to provide our perspective.

Sincerely,

Agricultural Retailers Association
American Seed Trade Association
American Society of Agronomy
American Soybean Association
American Sugarbeet Growers Association
Biotechnology Innovation Organization
Crop Science Society of America
National Corn Growers Association
National Cotton Council
National Council of Farmer Cooperatives
Soil Science Society of America
U.S. Canola Association