

**House Committee on Agriculture
Subcommittee on Biotechnology, Horticulture, and Research
March 29, 2022 Hearing: A 2022 Review of the Farm Bill: Horticulture
and Urban Ag Committee
Testimony of Marc Oshima, Co-Founder and Chief Marketing Officer,
AeroFarms**

Introduction

Chair Plaskett and Ranking Member Baird, thank you for the opportunity to speak to you today about the significant role of both Urban Agriculture and Controlled Environment Agriculture also known as CEA in the upcoming 2023 Farm Bill.

Biography

I am Marc Oshima, Co-Founder and Chief Marketing Officer for AeroFarms, the leader in indoor vertical farming. During my career, I have headed marketing for leading food retailers like *The Food Emporium* and *Citarella Gourmet Markets* and am passionate about improving our food systems and making them more sustainable and equitable. I am also the Board Chair for the *CEA Food Safety Coalition* and a member of the *FDA Romaine Advisory Task Force* and the International Fresh Produce Association's *Grower/Shipper Council*. I am honored to be here today.

Controlled Environment Agriculture

The macro pressures of a growing population, drought, loss of arable land, food safety and recalls, overuse of pesticides, farmer welfare, and food waste are challenging traditional agriculture more than ever. The United States imports 1/3 of its vegetables and nearly 2/3 of its fruit¹, and COVID-19 and now the War in Ukraine have put an even bigger spotlight on how interdependent and fragile our food system is. We need new paradigms to help us build a more resilient and secure food ecosystem here at home and around the world.

CEA is one of these new paradigms and includes high-tech greenhouses and indoor vertical farms like AeroFarms, growing key nutritious crops like leafy greens, herbs, microgreens, tomatoes, cucumbers, peppers, and berries. CEA farms can be placed where the consumers are, helping cut out a complex supply chain and ensuring a steady source of produce all year round. Other key positive advantages can include better quality, use of less water and land, no pesticides, year-round local job creation, addressing food deserts, and minimizing food waste. For indoor vertical farming specifically, we unlock plant science even further through having a totally controlled environment.

¹ <https://www.ers.usda.gov/data-products/foreign-agricultural-trade-of-the-united-states-fat/us-agricultural-trade-data-update/>

AeroFarms - Technology and Innovation

Since 2004, AeroFarms has been leading the way for indoor vertical farming with a mission to grow the best plants possible for the betterment of humanity. Our proprietary technology and innovation platform allows us to grow plants layer upon layer indoors, without sun or soil, and without any seasonal climate restriction. We can grow with up to 95% less water and 99% less land compared to traditional farms, while using zero pesticides, fungicides, herbicides, or insecticides ever. As a result, we are able to set higher standards for environmental stewardship and food safety. We also decrease the distance between food production and consumption, by building farms right where the people are in both urban and rural environments. We do all this by integrating a deep understanding of plant biology, mechanical design, environment controls, data analytics, operations, and plant genetics. We use our knowledge of plants to be great farmers and then apply these capabilities to solve broader challenges in agriculture.

Our global headquarters are proudly in Newark, New Jersey, with additional farms underway in Danville, Virginia, the St. Louis region, and overseas in Abu Dhabi, UAE. We have an extensive pipeline of farm development nationally and globally, and we are scaling to meet demand. Today, our award-winning produce is found throughout the country at top retailers and food service companies, and shoppers prize our high quality because it is more nutritious and flavorful. Our breakthrough work has been recognized with over sixty awards since 2011, including TIME *Best Inventions* and Fast Company's *World's Most Innovative Companies*. AeroFarms was also the inaugural winner of the *Global Sustainable Development Goals Awards* in the category of *Zero Hunger*.

AeroFarms - Social Impact

While leading with technology, we are also leading with a strong commitment to our communities. AeroFarms is a Certified B Corporation with a transparent scorecard on environmental and societal factors like creating year-round jobs with fair wages and benefits. We have partnered with the New Jersey Reentry Program where we were recognized in 2020 for our work providing jobs to those previously incarcerated and offering second chance opportunities for not just a job, but for dignity and well-being. We are extremely proud of this program and have hired over one hundred team members over the years.

We also create impact through our Community Farms program where we install small indoor vertical farms in schools and community centers. We have had one of our first Community Farms for over 10 years at the Philip's Academy Charter School in downtown Newark, NJ, where we collaborated with teachers to educate students about food literacy and agriculture and were able to actually change behavior to eat more healthy greens. Building on this success, we also launched the first ever municipal indoor vertical farming program with the City of Jersey City and the World Economic Forum's Healthy Cities and Communities initiative where we are placing ten farms throughout the community to provide access to healthy produce and help alleviate the

stresses of food deserts.

Industry Leadership

AeroFarms has also helped lead the broader industry by partnering closely with USDA, including with the National Institute of Food and Agriculture (NIFA), the Agriculture Research Services (ARS), and the Small Business Innovation Research (SBIR) program where we have been the recipient of both Phase 1 and Phase 2, grants given our positive results. Over the last six years, we have had the opportunity to speak at three *USDA Annual Outlook Forums*, including the last two, to share what is next in AgTech technology and innovation. We have worked closely with the Foundation for Food and Agriculture (FFAR) specifically on our ability to optimize leafy greens for nutrition and flavor. We were also one of the founding companies for their *Precision Indoor Plants (PIP) Consortium* where we work on next-generation crops and are the Principal Investigator for optimizing lettuces for indoor growing. AeroFarms was also one of the founding members of the CEA Food Safety Coalition that has developed a third-party certification standard and worked closely with the FDA and CDC to educate how indoor growing can provide a safer environment for growing food, with fewer food safety issues, compared to the field.

Urban Agriculture and Federal Farm Programs

The United States is at the forefront of leadership in agriculture innovation around the world. We encourage our lawmakers to promote competitive research and development programs domestically, so we can maintain a technological edge that favors innovation and partnership here, rather than abroad. Given the tremendous growth and need for CEA, support would include providing greater attention to these modern methods like CEA in federal agriculture programs.

Federal policy and regulation have historically placed an emphasis on “rural” requirements for beneficiaries, for example, discounting the benefits that CEA can have in both rural and urban areas. Current guidelines also generally appear to support family ownership structures, carrying provisions such as personal guaranties of owners. We are supportive of more forward-looking provisions that can benefit modern approaches to agriculture with further potential for investment and job creation in our local communities.

Recommendations for the 2023 Farm Bill

The upcoming 2023 Farm Bill reauthorization offers an enormous opportunity to ensure that the entire agriculture industry is represented and provide innovative pathways for the future of farming in this country. We have studied the Farm Bill and believe there are opportunities to do this in nearly every title, including the sections on nutrition, credit, rural development, and energy. For today’s hearing, we will focus on the following suggestions to two specific areas.

- First, within the Horticulture Title, we see opportunity to expand the Local Agriculture Market Program (LAMP) and Farmers Market Promotion Program (FMPP) to include Urban, Controlled Environment Agriculture and Indoor Vertical Farming practices
- Second, within the Research Title, we support increasing overall funding for the Urban, Indoor, and Emerging Agricultural Production, Research, Education, and Extension Initiative.

These expansions would help encourage competition, while promoting the technology and innovation that forms the bedrock of our national ethos and is necessary to feed the growing population.

Other Opportunity Areas

The 2023 Farm Bill is an opportunity to incentivize innovation and create a level playing field. We can no longer afford to think of agriculture as exclusively rural or business as usual, but we need to create the fair market conditions that enable true progress and innovation. We live in a time with fewer available resources. We should factor these considerations into our true cost of food and use policy to drive positive behavior, establishing incentives for things like water conservation and land protection and creating taxes to disincentivize the overuse of pesticides and fertilizers that create runoff and land degradation. Fair competition also extends to labor and enforcing federal minimum wage and benefits so that workers can earn a fair income and agricultural employers are no longer put at a disadvantage because of farmers who may pay below the minimum wage. A final area of reform concerns consumer welfare. We support all food producers, including small hyperlocal growers, to be held to the same food safety standards as larger scale growers with no exemptions, to help protect the health of American consumers and ensure a level playing field. The Farm Bill has the opportunity to raise performance standards and incentivize the right behavior that will be good for the industry, the environment, society, and the economy.

Closing

At AeroFarms, we are proud to be leading through innovation to help elevate agriculture in the United States and around the world. Urban farming, CEA, and vertical farming are about creating local jobs and increasing access to healthy produce all year round, but the impact that we can have on the broader agriculture industry is so much more. We are grateful for American leadership here and know how much more we can achieve if the 2023 Farm Bill is made to work for the entire industry. We owe it to ourselves and the generations to come.

Thank you for your time and consideration.

Additional Content for Written Submission

AeroFarms is led by Co-Founder and CEO David Rosenberg, a clean-tech champion, who won the 2021 *3BL Responsible CEO of the Year Award*. As a member of the World Economic Forum, David co-founded and co-chaired the *Young Global Leaders Circular Economy Taskforce* and was a member of the World Economic Forum *Global IoT Council*. David was also a member of the U.S. delegation to the *B20 Sustainable Food System Taskforce*, which advises the G20. David was also honored to co-chair New Jersey Governor Phil Murphy's *Agriculture Transition Committee*.

Exhibits

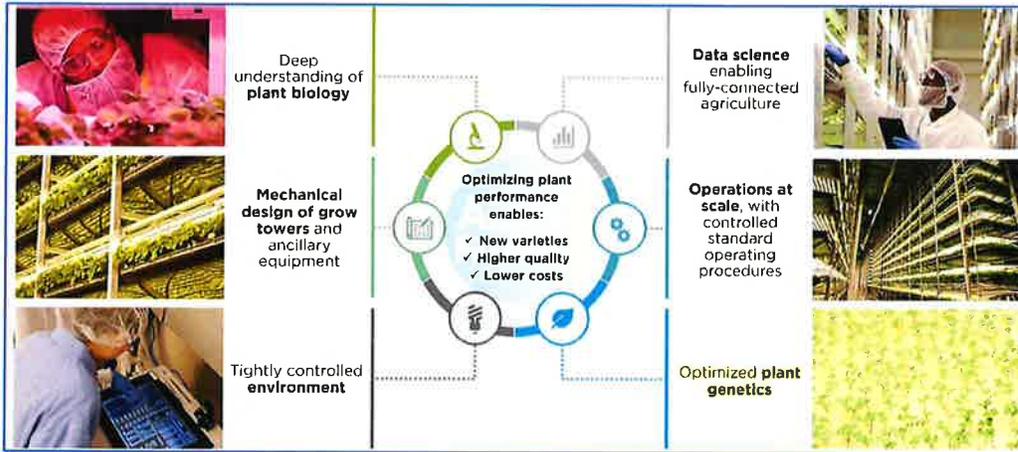
AeroFarms Indoor Vertical Farming Global Headquarters, Newark New Jersey



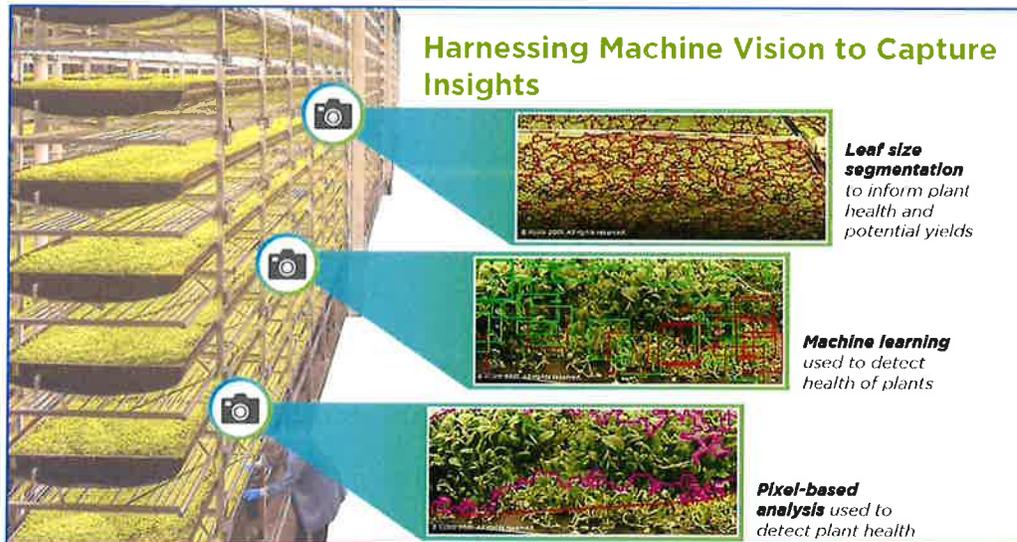
AeroFarms Commercial Indoor Vertical Farm, Danville Virginia



AeroFarms Vertically Integrated Across All Disciplines of Controlled Environment Agriculture



AeroFarms Leading with Latest in Machine Vision and Machine Learning



AeroFarms Community Farm at Philips Academy Charter School in Newark, NJ



AeroFarms Community Farms in Jersey City New Jersey

