



MOVERS AND SHAKERS



Educational Initiatives, Sustainable Innovations

with Dr. Ed Harwood and Jessica Bloomgarden



Ed Harwood, AeroFarms CEO and founder.

IN BUSINESS, it often feels as though monetary objectives and sustainable practices are at odds with one another. One company has dedicated itself to developing a technology that enables profitable and sustainable agriculture. That company is AeroFarms™, manufacturers of controlled environment aeroponic systems.

Prior to launching AeroFarms, CEO and founder Dr. Ed Harwood owned a business that grew and sold leafy greens for salads to local restaurants and grocers. This post made him acutely aware of the sad state of salads in the lives of North Americans. He envisioned a diet rich in greens other than

the standard butter lettuce, a lively salad bowl of peppery arugula, sweet spinach, mild collard greens and fresh herbs, and the technology that would make it happen.

In 2003, Ed Harwood designed the first prototype for the AeroFarms system, a controlled growing environment best suited for old or vacant warehouses and buildings. This was followed by a commercial prototype system in 2005, from which he grew and sold thousands of pounds of leafy greens through 2007. In late spring 2009, Jessica Bloomgarden, a principal at 21 Ventures, found Ed online in a search for sustainable agricultural technologies. 21 Ventures made an investment in AeroFarms



Arugula, a leafy green herb of the mustard family, is a huge hit with local chefs who say it's the freshest they've ever used when grown with the AeroSys™.

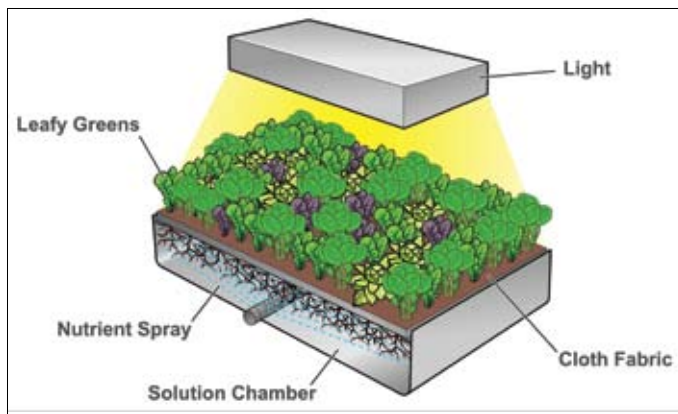
in the summer of 2009, and Jessica joined the company as the chief marketing officer shortly thereafter.

From there, a blended vision of a new and extraordinary way of growing erupted. Today, produce growers face a number of challenges including rising transportation and labor costs, seasonality and weather vulnerability, pest and disease threats and land and water scarcity. Despite all

SUSTAINABILITY, HEALTH AND EDUCATION TAKE PRECEDENCE AT THE AEROFARMS' HEADQUARTERS."

of these challenges, the industry continues to employ the same centuries-old, soil-based growing techniques. AeroFarms has developed technology to usher this industry into the 21st Century.

The redesigned AeroFarms system features a cloth conveyor, a unique and proprietary growing medium that makes the labor, management and technical aspect far simpler. It



This drawing depicts the AeroSys™ in its most basic form, featuring LED lighting and a cloth fabric conveyor that lasts from three to five years.

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is a cost-savvy addition and an environmental one, as one piece of cloth can last up to five years. AeroFarms has also incorporated LEDs into its system's design. The system enables local growing all year round in any location, reducing transportation costs and emissions and improving product shelf life, simply because the produce is grown locally. The end product is pesticide-free and clean upon harvest, with no dirt and no pests. Because there's no need to wash the greens, the grower does not run the risk of a moistened product, which encourages contamination and disease. The level of control over the end product is truly remarkable.

THE EDUCATION PROVIDED [ON AEROFARMSYSTEMS.COM] WILL BE USED AS AN INCENTIVE, ENCOURAGING ENTREPRENEURS, FOODSERVICE AND GROCER PERSONNEL AND CONSUMERS ALIKE TO LISTEN AND LEARN."

An integral component of the Company's business plan is education. Construction of their web presence is approximately two-thirds through the design stage. This will be AeroFarm's main vehicle for introducing people to this technology and educating them on the power behind it. According to Ed, there is a bevy of misinformation about aeroponics and LEDs; the education provided will be used as an incentive, encouraging entrepreneurs, foodservice and grocer personnel and consumers alike to listen and learn.

In addition to offering an education-packed website, Ed has invested in and tested a number of the current LED products as part of his research approach to the business. His studies have shown that the reason LEDs haven't lived up to the hype is a lack of understanding of the technology by the user. Lighting researchers and collaborators from Cornell's Department of Horticulture are assisting in the incorporation of LEDs that best match the needs of leafy greens.

Because the AeroFarms system can be located inside urban buildings, it doesn't take up unnecessary land. Abandoned warehouses and other unused urban structures are the perfect technological match in the prevention of urban sprawl. A greenhouse has to be heated and cooled depending on the season. An insulated building, like a warehouse, is far less taxing on energy consumption. The AeroFarms system is vertically stackable, turning 10,000 square feet of facility floor space into nearly 30,000 square feet of growing space. Learn more about the system's yields at www.aerofarms.com

AeroFarms has been collaborating with universities for grants, testing purposes and assistance with materials. The College of Textiles at the North Carolina State University is helping refine the



Jessica Bloomgarden, AeroFarms' chief marketing officer.

cloth medium. They are working with Cornell University's Department of Horticulture and Rensselaer Polytechnic Institute's Lighting Research Center on its LED research.

AeroFarms will be an integral part of the urban agricultural movement. "In a sense we might be the pioneers in that movement throughout North America." Ed believes his approach to business will serve as a solution to the health crisis facing North Americans and with the USDA encouraging fewer calories and more nutrient-rich vegetables, the time for the AeroFarms system is now. **IN**



Salad greens fresh for the picking from the AeroSys™.