The Future of Vertical Farming

February 2021
We Are the World Leader in Fully-Controlled Agriculture

A farming company
We are farmers, having grown over 800 different varieties of fruits and vegetables. Our fully-controlled growing technology provides a sustainable answer to the problems facing traditional agriculture.

A technology company
We constantly improve our mechanical, operating, environmental, and biological systems.

A data science company
Our sensor network provides data, allowing us to understand and continuously improve our already exceptional ability to grow plants.

A strategic partner
We solve problems for the broader agriculture community.
A Closer Look at Our Farms

Click here for video or search: “AeroFarms x Dell: A harvest full of insights”
AeroFarms Track Record and Benefits of CEA*

**Vertical Farming**
- Aeroponic growing indoors
- No pesticides, herbicides, and insecticides
- Less water used than field farming
- More than twice as many crop turns as field farming (for leafy greens)
- Contribute to 12 UN SDGs, including SDG 2 Zero Hunger

**R&D**
- Grown >800 varieties in our system, including
  - Root crops to micro maturity
  - Herbs such as basil and mint
  - Tall, bushy plants to ~ two feet high
- Tested >150 growing media
- Building state-of-the-art R&D facility in Abu Dhabi

**Farms**
- Nine farms built to date; 10th farm announced
- USDA certified leafy greens commercial farm supplies foodservice and retail with flavorful and nutritious products
- Fully climate-controlled farms can be located anywhere around the world

*CEA – Controlled Environment Agriculture*
We Have Capabilities In Six Integrated Areas of Expertise

- Mechanical Design
- Plant Biology
- Plant Genetics
- Operations
- Environment
- Fully-Connected Agriculture
How Vertical Farming Contributes

- Year-round Availability
- Inconsistent Quality
- Pesticide Residue
- Land Degradation
- Food Waste
- Lack of Freshness
- Feed a Growing Population
- Severe Weather
- Trade Regulations
- Water Usage
Improving Standards of Performance

- Grown with up to 95% Less Water
- Zero Pesticides
- Up to 390x More Productive
- Superior Flavor and Quality
- New Standard for Food Safety
Enhancing Flavor in Food

**Challenge**

Improve expression of phytochemicals, particularly those compounds with potential to improve human health, in leafy greens

**Actions taken**

Established growing conditions (e.g. temperature, relative humidity, plant nutrients, lighting) for leafy greens species that diverge significantly from typical growing conditions

Directed Rutgers University laboratory analysis of impact of environmental conditions on:
- Phytochemical content
- Sensory evaluation

**Results**

Identified growing conditions that create statistically significant changes in two flavors

Horseradish and sulfur flavors improved on a statistically significant basis

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Industry Collaborating through PIP Consortium
Building new capabilities and creating opportunities with leading institutions

Accessing knowledge and technologies

PIP brings together leading AgTech and seed development organizations from industry, government, and academia

Focusing on key crops

Five PIP projects have at least $15 MM in funding, sourced from FFAR (up to $7.5 MM) and project-specific collaborators

lettuce tomato strawberry cilantro blueberry

(now Green Venus)