



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

Ability to apply certain growing conditions (e.g. temperature, humidity, light intensity and spectrum, fertilizer) to affect how plants grow

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

Proven track record in R&D; increased understanding of plant biology and growing conditions are applied to future R&D projects

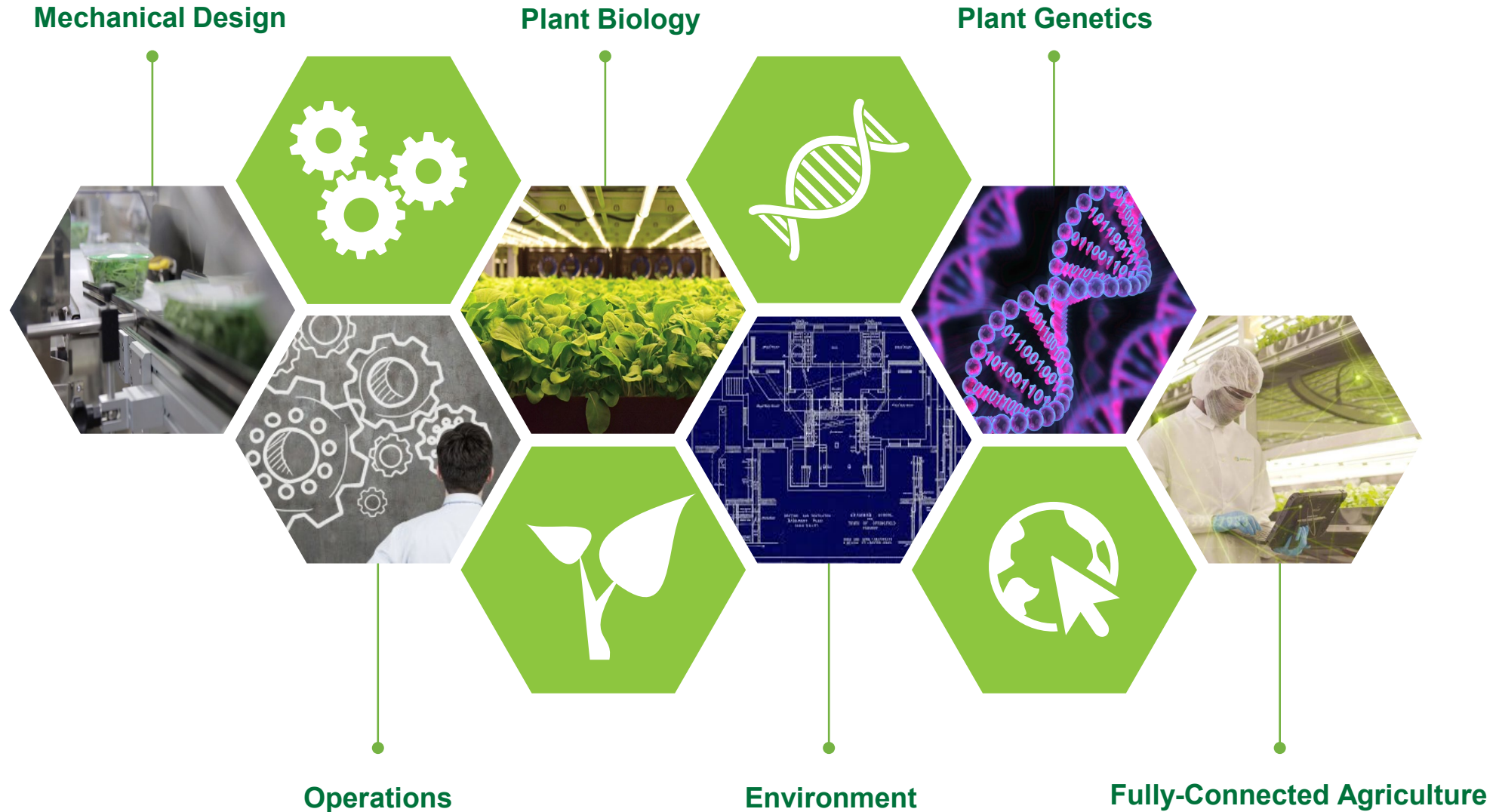
Farms

- 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

Opportunity to couple commercial growing and processing facilities in desirable locations (e.g. abundant water, affordable energy) and secure future supply of crops

*CEA – Controlled Environment Agriculture

We Have Capabilities In Six Integrated Areas of Expertise



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

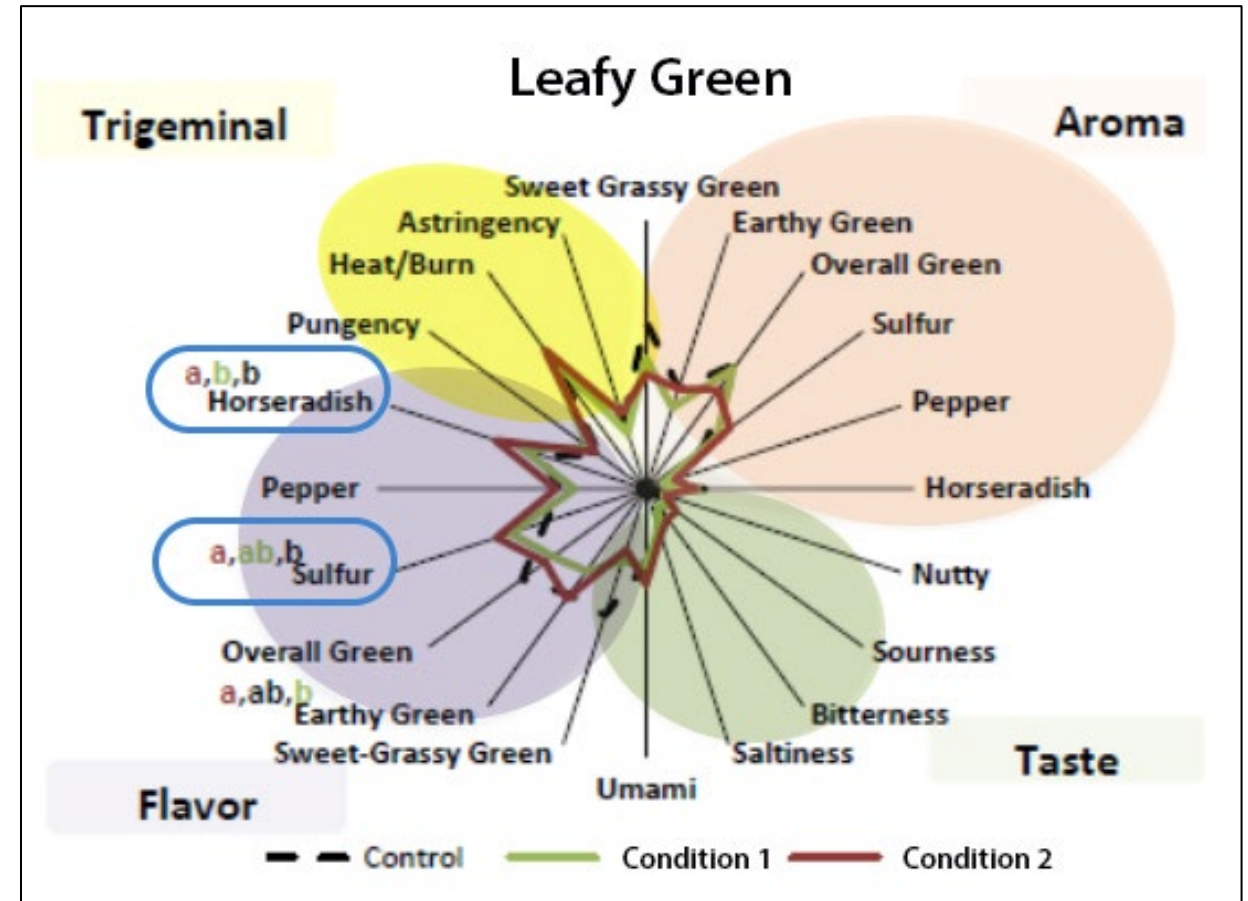
Established growing conditions (e.g. temperature, relative humidity, plant nutrients, lighting) for leafy greens species that diverge significantly from typical growing conditions

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