

AeroFarms Investor Presentation May 23, 2022

AeroFarms Commercial Farm Newark, New Jersey

**AEROFARMS** 

AeroFarms is bringing agriculture to new heights through technology and innovation

## **Leading the Vertical Farming Industry**



AeroFarms **sells differentiated and award-winning branded leafy green products** to key retailers and food service providers. AeroFarms products win on quality, flavor, taste and texture.



AeroFarms builds and operates **vertical farms around the world**. The company has **grown over 550 different varieties** of fruits and vegetables to date. With **over 330 invention disclosures**, AeroFarms is constantly developing and improving its proprietary mechanical, operating, environmental and biological systems.

TECHNOLOGY

PLATFORM



The AeroFarms sensor network feeds a **vast library of data, collected over 15 years of operations**, allowing the company to understand plants at unprecedented levels. World DelLTechnologies/World STRATEGIC PARTNERSHIPS

AeroFarms partners with leading companies and government agencies,

using its growing platform and experience to further provide solutions in agriculture.





## **Growing Branded Products to Transform the Food System**



## **LEAFY GREENS** baby and microgreens



## STRAWBERRIES

co-developing with strategic partner







**COCOA** partnering with



HOPS partnering with ABInBev **BLUEBERRIES** partnering with



## **Champion for Plants, People and the Planet**

AeroFarms believes for-profit business is the most effective tool for creating social and environmental change.



## Stewarding Sustainability

AeroFarms was the first and only agriculture company honored by the **Ellen MacArthur Foundation** as one of the **Circular Economy 100** 





## Proud to be a B Corporation

AeroFarms has been a **B** Corporation since 2017,

certified by the nonprofit B Lab for meeting rigorous standards of social and environmental performance, accountability, and transparency



#### **Serving the Community**

AeroFarms serves local communities through its for-profit small farms program, including a Newark charter school visited by former **First Lady Michelle Obama** and Jersey City, host of the first-in-the-nation municipal vertical farming program, with the **World Economic Forum** 



### **Providing Second Chance Opportunities**

Since 2016 AeroFarms has been providing employment to those formerly incarcerated and was one of five companies recognized by the **New Jersey Reentry Corporation** for this work in 2020

## Helping Solve the Global Sustainability and Food Crisis



**POPULATION GROWTH** 

Food production will need to

increase by 69% by 2035<sup>1</sup> to

feed the growing population

and expanding middle class



WATER SCARCITY Global water demand is set to increase by 55% from 2000 to 2050<sup>2</sup>



ARABLE LAND LOSS The world has lost 1/3 of its arable land in the last 40 years<sup>3</sup> due to soil erosion and contamination by toxic metals<sup>4</sup>



SOCIAL AWARENESS With pesticide residues on 70% of washed produce in the US, people are concerned with sustainability and chemicals on their food<sup>5</sup>



SUPPLY CHAIN -\$1.2 trillion worth of food is lost or wasted each year,<sup>6</sup> exacerbated by risks of disease and climate change

Macrotrend

## Up to **390x as productive** as a field farm<sup>7</sup>

Uses up to ive 95% less water than regular field farmers

Uses as little as 0.3% of the land

of a field farmer  $^{7}$ 

Grows using **zero pesticides** 

Locally produced for fresher food and less waste

Solutions are enabled by AeroFarms' rapid innovation in mechanical design, biological science and data analytics and controls



rld Resources Group: The Future of Fresh Water; <sup>2</sup> Environmental Outlook to 2050: The consequences of Inaction; <sup>3</sup> The Guardian: Earth has lost a third of arable land in past 40 years; <sup>4</sup> US FDA: Metals and Your Food; <sup>5</sup> The Guardian: Pesticide residues found % of produce sold in US even after washing; <sup>6</sup> USDA for Romaine and Leaf Lettuce; <sup>7</sup> Calculation is based on AeroFarms' annual crop turns, levels of vertical growing and output per square foot versus values for a conventional field farm in a region like New w with one crop turn per year

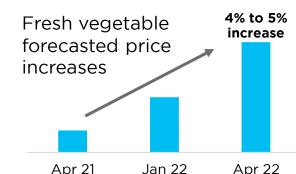
## **Recent World Events Fuel Global Food Insecurity**

## SUPPLY CHAIN CHALLENGES

The COVID-19 pandemic, recent weather events, and the War in Ukraine, which is a major agriculture exporter, put tremendous stress on the global food supply chain.

#### The New York Times

Ukraine War Threatens to Cause a Global Food Crisis



RISING FOOD PRICES

According to the USDA, average food prices are forecasted to increase by **5% to 6% in 2022**.<sup>1</sup> The FAO reported the highest ever global food prices for March 2022.<sup>2</sup>

## INCREASED COSTS FOR FERTILIZER

The US Department of Agriculture predicts a 12% increase in fertilizer costs in 2022 due to the War in Ukraine. Higher costs may result in lower production and crop yields in 2022.<sup>3</sup>

## HIGHER GROCERY BILLS

US grocery prices in February 2022 were **8.6% higher** than the same time in 2021, representing the highest increase in four decades.<sup>4</sup>

**8.6%** YoY hike in US grocery prices

"Ukraine has only compounded a catastrophe on top of a catastrophe. There is **no precedent even close to this** since World War II." – *David M. Beasley, Executive Director of the World Food Program*<sup>3</sup>

## **Proven Business Model Driven by Differentiated Technology**



AeroFarms has proven its leafy greens business, **partnering with major retailers** to sell branded products and **achieving farm key performance indicators** at scale



Working with strategic partners, AeroFarms is applying its technology platform today to **grow high-quality products** and **expand into new markets** 



Through financial partnerships, AeroFarms is building **additional farms** throughout the world in a capital efficient manner

## PROPRIETARY TECHNOLOGY PLATFORM

The AeroFarms **data science driven and fully-controlled proprietary technology platform** has high utility across many plant varieties and commercialization opportunities

## **Growing Market for High-Quality Products**

Market trends are rapidly changing, with shoppers more interested in high-quality products. AeroFarms grows plants throughout the agriculture supply chain that meet this demand and helps address sustainability challenges as the Company moves down the cost curve.

### LOCAL

93% of shoppers say they would buy more local food if it was available and 58% of shoppers prefer to buy local produce<sup>1</sup>

#### FLAVORFUL

Taste and flavor is the most important factor for 88% of shoppers when making food purchases<sup>2</sup>

## SUSTAINABLE

72% of contemporary shoppers consider sustainability values when making their purchases  $^{\rm 3}$ 

### FRESH

75% of contemporary shoppers are willing to buy fresh food at a premium and 64% said brand mattered when purchasing fresh food<sup>3</sup>

### **GROWING PRODUCT CATEGORIES**

AeroFarms has penetrated certain leafy green categories, as evidenced by growing customer sales



The craft beer and microbrewery industry has exploded over the last decade

**\$89B** craft beer market<sup>5</sup>

Urbanization and "café culture" has let to a surge in the specialized coffee market

**\$102B** coffee market<sup>6</sup>

Demand for high-quality cocoa products is growing

\$138B chocolate market<sup>7</sup>

Shoppers are paying for sweeter berries available year-round



**\$168B** berries market<sup>8</sup>



CStoreDecisions Consumers Increasingly Value Local Food article; <sup>2</sup> International Food Information Council Foundation: The Importance of Taste in Product Development; <sup>3</sup> Deloitte Insights The Future of Fresh: Patterns from he Pandemic; <sup>4</sup> BMI 2019 leafy greens market data defined as leaf and stem vegetables; <sup>5</sup> Fortune Business Insights Craft Beer Market, 2020 – 2027; <sup>6</sup> ResearchAndMarkets.com Coffee Market Report 2021; <sup>7</sup> Fior Markets Global Chocolate Market, 2021 to 2028; <sup>8</sup> 2019 Technavio Global Berries Market

## **Innovating Vertical Farming at Scale for 15 Years**

Understanding how innovation in vertical farming scales is important. Since its founding in 2004, AeroFarms has differentiated from the industry, proving its technology, testing innovation and evolving its design through five generations of farm models.



2013

#### Large-scale farming

Builds world's largest vertical farm in Newark (including automated components) and begins large-scale farming

2016



#### New projects

Achieves major KPIs at scale and announces new projects in Abu Dhabi and Jersey City

2020



Groundbreaking for commercial farm in Danville, Virginia, sales in 3Q22

2022 and beyond



2004

Model 1

with first leafy

greens sales

Model 1 farm launches

### Technology update

Refines and optimizes technology for commercial use



### Improvements

2019

Improves grow towers and innovates in numerous ancillary equipment around the farm to reduce costs and improve major KPIs



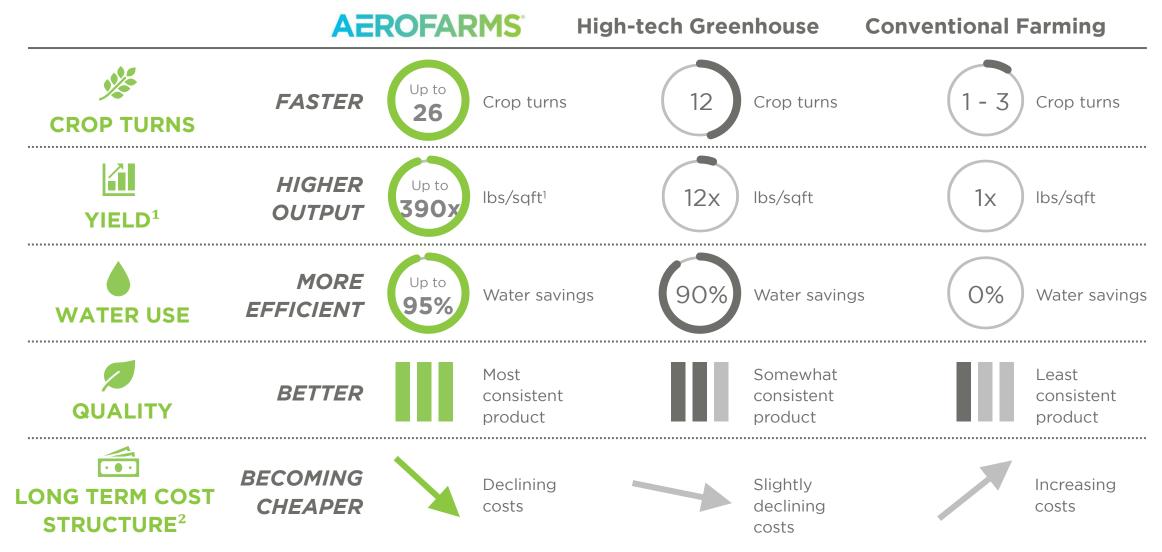
Development of AgX R&D facility in Abu Dhabi, operations in mid-2022

### Scale and development

Construct **additional** facilities around the world, introducing **Model** 5 and future generations of the farm model to expand scale and improve farm-level unit economics

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## **Performing with Unrivaled Sustainability and Productivity**



Vertical farming is expected to be a ~\$12.7 billion market by 2026 with a 22.3% CAGR from 2021 to 2026<sup>3</sup>

AEROFARMS

<sup>1</sup> Calculation is based on AeroFarms' annual crop turns, levels of vertical growing and output per square foot versus values for a conventional field farm in a region like New Jersey with one crop turn per year; <sup>2</sup> Farmland Prices In The United States according to the USDA; <sup>3</sup> Allied Market Research Vertical Farming Market Global Opportunity Analysis

## **World Class Team with Decades of Experience**

#### **MANAGEMENT TEAM**



**PaineWebber** 

**Mark Boyland** 

General Counsel



Chief Executive Officer and Co-Founder

- Successful serial entrepreneur, 14+ years leading Silicon Valley VC backed companies
- Member of World Economic Forum (WEF) and WEF Global Internet of Things Council
- Co-founded and co-chaired WEF YGL Circular Economy Taskforce
- 3 Team U.S. Gold Medal National Championships in Fencing and 2 Individual Silver Medals
- MBA from Columbia Business School

**Roger Buelow** 

General Electric



**Guy Blanchard** Chief Financial Officer AMONIX FORTRESS



**MarvAlice Feinstein** Chief People Officer Google



VP of R&D Campbells

#### **BOARD OF DIRECTORS**



**David Rosenberg** Hycrete PaineWebber



Non-Executive Chairman

GROSVENOR



**Jim Borel** 







**Omar Karim** DUBÁI HOLDING



Marc Oshima Chief Marketing Officer and Co-Founder Citarella L'ORÉAL

**AEROFARMS** 



**Andreas Sokollek** Chief Operating Officer **SCHWEID & SONS** CHOBANI<sup>®</sup> Kraft



Chief Technology Officer Chief Revenue Officer

**Dane Almassv** VP of Sales Farthbound PEPSICO

**Garv Cohen** 

BD





**Nikolaus Bormann** McKinsey aceq & Company

McKinsey

& Company



#### **INVESTOR BASE**





## The Strongest Brand in the Industry



#### **TOP TIER EARNED MEDIA**

AeroFarms innovation and expertise has been featured in leading international media outlets and publications

Ehe New York Eines bon appétit FORTUNE TIME NEW YORKER FAST COMPANY Inc. Forbes NATIONAL BUSINESS WSJ



#### PARTNERSHIPS WITH TOP TASTEMAKERS

AeroFarms has a flavor halo with some of the top chefs and culinary brands in the world, having partnered with **Chef David Chang** and **Chef Marcus Samuelsson** 



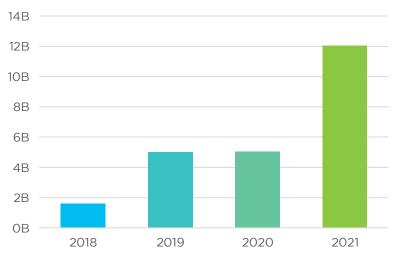
#### **CENTER STAGE FOR THE INDUSTRY**

Representatives from AeroFarms are continuously **recognized as speakers at headline industry events** organized by the World Economic Forum, Milken Institute, US Department of Agriculture, Future Investment Initiative Institute and The Culinary Institute of America

### 2018 - 2021 MEDIA REACH<sup>1</sup>

AeroFarms has been the thought leader for the controlled environment agriculture (CEA) industry with over 23 billion media impressions from 2018 to 2021

#### AeroFarms Media Impressions



100% Increase from 2020 to 2021





## Leafy Greens are the Ideal Initial Category for Disruption

## **INDUSTRY** opportunity for leafy greens



**AEROFARMS** 

- Less spoilage
- Reduced risk of food contamination
- Less variability in quality
- No supply seasonality
- Fewer risks due to centralized production
- Zero pesticides
- Lower supply chain / transportation costs

### **AEROFARMS** provides leafy greens with:

- Superior flavor, quality and nutritional claims
- Production closer to the consumer
- New standard for food safety
- ✓ Consistency
- ✓ Year-round growing
- ✓ Democratized production
- ✓ Zero pesticides
- ✓ Strong unit economics
- ✓ Up to 95% less water



The short leafy greens growth cycle allows for rapid experimentation and innovation, providing AeroFarms with data insights to enhance performance and expand to other product areas

## Winning at Retail with Great Tasting Leafy Green Products



AeroFarms received a best-in-class Net Promoter Score of **57**, higher than averages for the controlled environment agriculture, organic, and conventional growing segments<sup>1</sup>



AeroFarms product is currently available throughout the Northeast and Mid-Atlantic regions and has experienced over 220% growth in revenue from Q1 2021 to Q1 2022



AeroFarms locally grown produce wins on **quality**, **flavor**, taste and texture with products that are priced competitively with organic players and other local farmers



AeroFarms is uniquely positioned to address various **niches** with high margin products in high growth segments such as microgreens







## **Achieving Growth with Recent Account Expansions**



Expanded to **350+ Stop & Shop stores** with 3 SKUs of microgreens in October 2021



Launched food service for key corporate partners including **Goldman Sachs, Johnson & Johnson, Google, Audible** (Amazon), Amex, Citi, and Jane **St.** through partners like Compass Group





Experiencing **+78% YoY growth** from 2020 to 2021 for Northeast region (compared to +24% for other CEA and +22% for overall packaged salad category)

Weee!

Achieving sales targets after launching with Weee!, the largest Asian and Hispanic grocery in North America, and **in discussions for expansion** in 2022



**Expanding to 270 stores** in 2022 after achieving target sales velocities with 44-store trial launched in 2021



Launched pilots with multiple SKUs at Harris Teeter and The Fresh Market with opportunity for further expansion in Southeast US



## **Top Tastemakers Applaud AeroFarms Branded Products**

#### "An exquisite culinary experience"

Edmund LaMacchia, VP of Procurement – Perishables, Whole Foods Market (former)

"This is what I love about AeroFarms – that it's technology that's allowing people to farm better and smarter – and it makes really delicious food."

David Chang, Celebrity Chef and Founder of the Momofuku restaurant group 🔴 momofuku

"I had the distinct pleasure of sampling AeroFarms product – right out of the growing trays, then took a bag of greens home. Not only was the **flavor density stunning and delicious**, but the **large bag of greens lasted a week**. It likely would have lasted longer, but I ate them all. What a **remarkable and timely approach to leveraging urban assets for nutrient dense food production**."

Michel Nischan, renowned chef / leader in the sustainable food movement and President/ CEO Wholesome Wave



## Strong Track Record Partnering to Develop Hard-to-Source and **High-Quality Offerings**





Scan to tour indo AEROFA

#### **High-Quality Hops**



**ABInBev** 

#### Hops grown for Session IPA developed with **AB InBev** and recently sold as a limited release Goose Island UK beer

#### **Sweet Strawberries**



Co-developing high-performing berry products with partner and consistently achieving Brix<sup>1</sup> 1.5x higher than industry average of 6 - 8

#### **Better Blueberries**





Partnered with Hortifrut, the largest blueberry grower, to research and develop Indoor blueberry production

## **Controlled Cocoa**



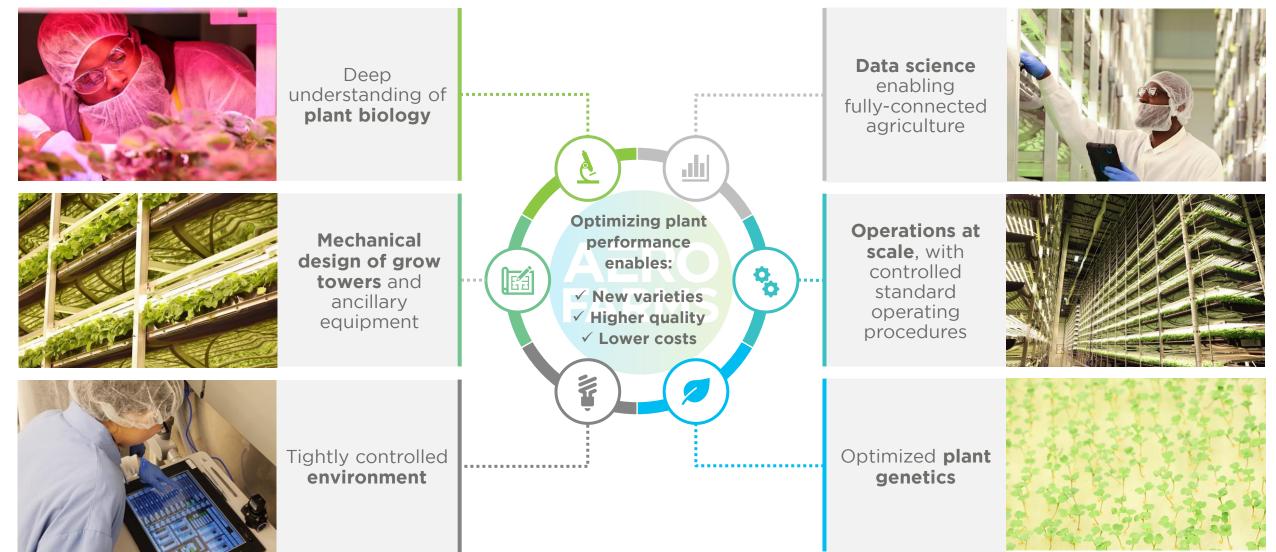
Partnered with **Cargill** to improve yields and climate resiliency for cocoa tree production in controlled indoor environments







## Vertical Integration Across All Disciplines of Controlled Environment Agriculture



## **Components of the AeroFarms Technology Platform**

Over the last 15 years, AeroFarms has systematically evolved its farm design through multiple generations of technology, de-risking key components of operations, reducing costs, and proving its ability to grow at scale.

#### Advanced grow towers

#### **GEN. 4**

Aeroponic technology
allows plant roots to
receive optimal
amounts of nutrients,
water, and oxygen

#### **GEN. 4**

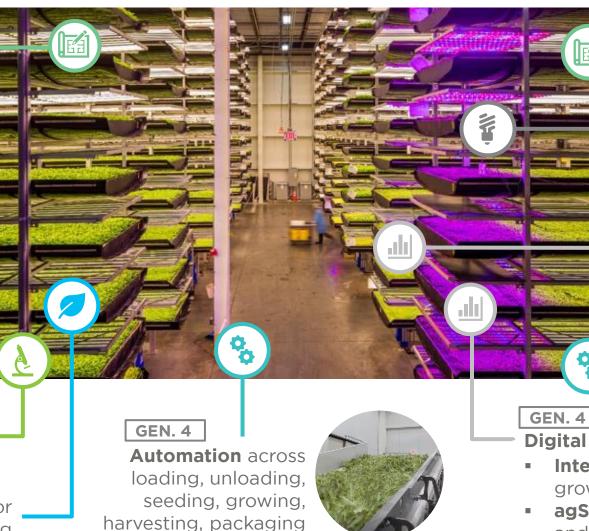
 Proprietary cloth grow medium is typically reusable and/or recyclable

#### **GEN. 4**

Automated **nutrient** delivery system

**GEN. 6** 

Plant genetics, optimal for , indoor plant growing



GEN. 5 Expertise in HVAC and building design

#### GEN. 5

Unique **horticulture luminaire** and LED technology

#### GEN. 3

Machine vision capabilities and Alenabled drones codeveloped with Nokia Bell Labs



GEN. 4

Traceability and extensive library of 200+ standard operating procedures

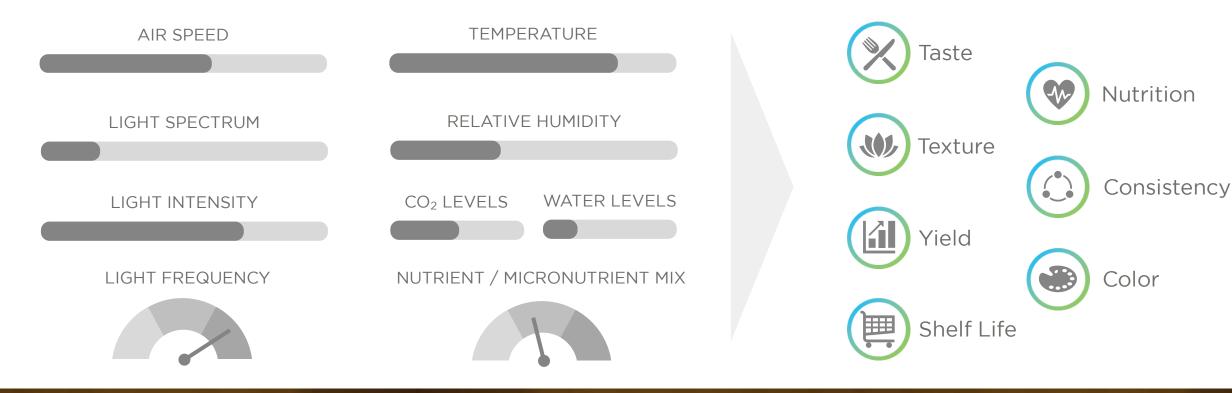
Digital controls, including:

- Integrated algorithm for every stage of grow cycle (including custom lighting)
- agSTACK software with integrated PLC and SCADA systems

## **Precision Control Enables Unparalleled Performance for Plants**

Influencing Genetics and Their Expression through Environmental Inputs...

...Improves Plant Outputs and Farm Economics





## agSTACK System Powers a Fully-Connected Farm

agSTACK powers integration, traceability, data insights and machine learning and utilizes over 15 years of data to improve key metrics like yield and quality while reducing cost and strengthening the AeroFarms brand.



**RESULTS IN:** Improved yield, higher quality, reduced costs, and new varieties

#### SAMPLE TECHNOLOGY PARTNERSHIPS



Partnered to **unearth data** and **drive greater plant insights** 



Partnered to co-develop **drone-based and Alenabled machine vision capabilities** to monitor plant health and detect growing anomalies

## Harnessing Machine Vision to Capture Plant Insights



*Leaf size segmentation to inform plant health and potential yields* 



## Machine learning

used to detect health of plants



*Pixel-based analysis* used to detect plant health

75

75

75

NOKIA

Bell Labs

## **Data and Innovation Drive Improvements Across the Farm**





YIELD IMPROVEMENT AeroFarms achieved a 23% increase in yield<sup>1</sup> over 3 years through 2021



IMPROVED GENETICS Improving plant genetics by isolating variables and continually testing assumptions



**QUALITY** Tight control of light, water, nutrients, oxygen, CO<sub>2</sub> and temperature results in **high-quality**, **flavorful plants** 



GROW CYCLE AeroFarms has improved the grow cycle for baby leafy greens from 20 to 14 days

AEROFARMS COST

LIGHTING COST

AeroFarms economics are competitive, selling at parity today and headed lower for future potential product offerings

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# Dedication to Investment in Technology and IP



## STATE-OF-THE-ART R&D IN THE MIDDLE EAST REGION

- AeroFarms broke ground on Abu Dhabi Research Center (AgX) in June 2021
- AgX is expected to enable new business lines, technologies and further expansion in the region
- Project is backed by the Abu Dhabi Investment Office

### **R&D CAPABILITIES AT AGX**



Organoleptic research and phenotyping



Machine vision and learning



Speed breeding



Robotics and automation

## A ROBUST AND GROWING IP PORTFOLIO<sup>1</sup>

**334** invention disclosures

84 active invention disclosures in the pipeline

PATENTS

**24** active patent families

**19** granted (issued) patents

**56** pending patent applications

TRADE SECRETS

**53** designated trade secrets



## O3 GROWTH OPPORTUNITIES AND FINANCIAL PROJECTIONS



## **Opportunities for Growth through Proven Revenue Streams**



## FARM DEVELOPMENT

Includes **owned farms** (on the AeroFarms balance sheet and primarily based in North America) and **partner farms** (capital efficient expansion to co-invest with partners primarily in international markets)

> مكتب أبوظبي للاستثمار ABU DHABI INVESTMENT OFFICE



### **STRATEGIC PARTNERSHIPS**

Working with partners to address challenges in the agriculture supply chain by developing **high-quality and difficult-to-source products and plant-based ingredients** 





### **EQUIPMENT SALES**

Selling **equipment and technology components such as small farm units** to schools, cities, and corporate entities with large pipeline of future customers

WØRLD ECØNOMIC FQRUM





**WWF** 

## **Farming Locally, Globally**

AeroFarms plans to establish a large footprint for distribution through a strategic rollout of owned and partner farms to new markets where it can grow high margin crops in the North America and abroad.

#### Primarily owned farms on the AeroFarms balance sheet **Potential** NEWARK, NJ markets for AERO FARMS future farms DANVILLE, VA **GREATER ST. LOUIS Potential** markets for future farms Being developed with Construction on new World Wildlife Fund Model 5, 48-tower farm

## INTERNATIONAL<sup>1</sup> Primarily partner farms for capital efficient expansion to co-invest with others MIDDLE EAST REGION AERO FARMS ABU DHABI, UAE Signed term sheet with key regional player to develop joint venture for expansion in MENA Construction on Abu Dhabi

**AEROFARMS** 

NORTH AMERICA<sup>1</sup>

R&D Center (AgX) to serve as

hub for Middle East expansion

## **Preparing for Launch of Next Farm in Danville**

AeroFarms began construction on its Danville, Virginia, farm in April 2021 with commercial operations planned to begin in mid-2022.

 Growing and selling scheduled to begin in Summer 2022 to service population of 50M+ people located within 1 day's drive<sup>1</sup>

- Key leadership positions have been filled, including plant manager
- Construction remains on budget with all core and shell construction complete



## **AeroFarms Company Highlights**

AeroFarms has a 15+ year track record of vertical farming at scale and an expert management team that is revolutionizing the farming industry

AeroFarms **sells leafy greens commercially** with a brand that is winning at retail and differentiated, high-margin products

Technology and data are a **competitive differentiator and moat** for AeroFarms

A substantial pipeline of farm projects and a total addressable market of \$1.8T represents an **enormous opportunity for expansion** 

AeroFarms has increasingly **attractive unit economics** across multiple new farm models









## AGRICULTURE, ELEVATED.











## **Thank You**