

ELEMENT  FARMS

florence, nj

&

PUREspinach
LOCALLY GROWN

We are a **technology-enabled** produce company.

We grow and sell the **best spinach** in the world

A better tasting spinach

same seed,
more nutritious

Locally-grown, everywhere we go

constant yield year-round,
in all locations and climates

Pesticide-free and ultra-fresh

harvest to shelf in
under 24 hours

There is a **big gap for spinach** in the market



Farmers' Market



Sold in bulk

Unbranded
Inconsistent Quality
Exposed to Contaminants



Supermarket



Packaged

Imported / Not Fresh
Bland Taste
Chlorine Washed

Year-round local spinach is the next big thing

Local produce market in US

9% growth | \$12 Billion (annual sales)**

Total US fresh spinach

\$1.1 Billion (annual sales)*

Total US fresh leafy greens

\$8 Billion (annual sales)*

* USDA data

** A.T. Kearney's "Firmly Rooted, the Local Food Market Expands"

Year-round local spinach is also impossibly tricky

Hydroponic farmers don't have the tools & know-how



“We are highly interested in
- spinach as a crop but do not have
a reliable way of producing it.”



- “We tried growing spinach in
multiple facilities but failed.”

Field-farmers are constrained by climate and disease issues

95% of spinach
sold in US comes from
California & Arizona

2006 E.Coli outbreak in
spinach has infected
199 individuals*

Field-farming of spinach
is regularly interrupted
by mildew outbreaks

* Centers for Disease Control and Prevention “Outbreak Summary” (2006)

We have a **solution**

Solving 3 key issues related to commercial scale greenhouse spinach production
creating a superior production method for all leafy greens



Higher Leaf Quality

dynamic spectrum LED fixtures
& unique controls algorithm
for exceptional taste and shelf-life



Safer Process

unique processes in irrigation
and crop handling
for prevention of pathogens



Efficient Production

custom designed seeding
and harvesting equipment
for consistency & cost-efficiency



Pending Process Patent

We use **cutting-edge technology**

Conventional Hydroponics for leafy greens



Manual Operations



**Low-capacity
Supplemental Lighting**



**Re-circulating
Water & Nutrients**

Element Farms Hydroponics



Automated Operations



**High-capacity
Intelligent Lighting**



**Carbon-Dioxide
Supplementation**



Multi-cycle Irrigation

Superior to conventional methods

Production advantages



resource efficient

20x yield
per sqft

90% less water
per lbs



time efficient

14 day vs 30 day
crop cycle

1 day vs 6 days
to shelves

Marketing advantages



local & sustainable

Zero agricultural
runoff

Local distribution
reduces carbon emissions



nutritionally superior

Higher in Iron, Zinc
& Magnesium*

Lower in Sodium
and heavy metals

* Cornell Nutrient Analysis Laboratory test results (February 9, 2017)

Superior tasting product



PureSpinach

Blind Taste Test N=100	"Spinach A" PureSpinach	"Spinach B" Field-grown
Preference (%)	62	38
"Flavorful"	18	5
"Juicy"	16	1
"Sweet"	7	4
"Earthy"	6	4
"Crispy"	5	4
"Negative after-taste"	0	6



Wegmans Organic

"This [PureSpinach] is *what spinach should taste like*... but this [field-grown] is what I am used to"

Conventional Produce Model

field-grown in CA/AZ, shipped nationally



Element Farms Model

greenhouse-grown locally, shipped less than 100 miles



We are getting traction – fast



R&D production and **scale up**

Rutgers EcoComplex Research & Demonstration Greenhouses

Florence, NJ



We have a national **expansion** plan

10 greenhouses servicing 14 metro areas



Team



Serdar Mizrakci

CEO

B.S Industrial Eng [Sabanci '11]
MBA [Cornell '17]
2x Entrepreneur

Formerly founded robotics company,
managed product at HP, Inc.

Expertise in manufacturing and
business development



Danny Janeczko

CTO / Head Grower

B.S Biological Eng [Cornell '17]
M.S Biological Eng [Cornell '17]
Lester B. Knight Scholar

Worked in pharmaceutical
process development and
horticultural research

Expertise in hydroponics and
process design



Maya Kutz

Food Safety Manager

B.S Engineering Sci [Smith' '15]
Postbac Greenhouse Practices
[NY Botanical Gardens '17]

Former Hydroponic/Aquaponic
Science & Technology Program
Assistant at Cornell University

5 years of professional growing
experience



Nazlican Goksu

Branding/Marketing

B.A Product Design [CSM '12]
Postbac Anthropology [Columbia '14]
2x Entrepreneur

Formerly founded design studio,
+37 Studio for design
Works at IDEO as Design Researcher

Expertise in product design and
brand management

Main Advisors



Neil S. Mattson

CEA Industry Expert

Associate Prof. and Greenhouse
Extension Specialist at Cornell
University

GPN Magazine 40 Under 40 '15

Expertise in hydroponic leafy
greens and environmental
control systems



David Specca

Crop Production Expert

Assistant Director for Controlled
Environment Agriculture and
Bioenergy at the Rutgers
University EcoComplex

+20 years of experience
growing hydroponic crops

Advisor to +10 CEA businesses
Owner, Specca Farms



Manoj Thomas

Marketing Guru

Director, Business Simulation Lab
Associate Prof. of Marketing at
Cornell University

Co-author of the book 'Why
People (Don't) Buy'

Expertise in purchasing patterns
and product positioning

We are **redefining fresh.**



LOCALLY GROWN
PUREspinach

Tender & Sweet
**BABY SPINACH WITH
MICRO SPINACH**
Rich in Iron, Zinc and Omega-3
**PESTICIDE FREE
NON-GMO**



Grown with care at our greenhouse farm in the town of Florence, New Jersey. This produce was grown using renewable energy without any use of pesticides and harvested a single time when the leaves are sweet and tender. Unwashed for maximum shelf life and freshness. Please keep refrigerated.

purespinach.com
net 4.5 oz (127 gr)

BEST BY:



LOCALLY GROWN
PUREspinach

Sweet & Peppery
**BABY ARUGULA AND
SPINACH MIX**
Rich in Iron, Potassium and Omega-3
**PESTICIDE FREE
NON-GMO**



Grown with care at our greenhouse farm in the town of Florence, New Jersey. This produce was grown using renewable energy without any use of pesticides and harvested a single time when the leaves are sweet and tender. Unwashed for maximum shelf life and freshness. Please keep refrigerated.

purespinach.com
net 4.5 oz (127 gr)

BEST BY:



LOCALLY GROWN
PUREspinach

Sweet & Tender
**BABY KALE AND
SPINACH MIX**
Rich in Iron, Potassium and Omega-3
**PESTICIDE FREE
NON-GMO**



Grown with care at our greenhouse farm in the town of Florence, New Jersey. This produce was grown using renewable energy without any use of pesticides and harvested a single time when the leaves are sweet and tender. Unwashed for maximum shelf life and freshness. Please keep refrigerated.

purespinach.com
net 4.5 oz (127 gr)

BEST BY:



LOCALLY GROWN
PUREspinach

Sweet & Spicy
**MUSTARD GREENS AND
BABY SPINACH MIX**
Rich in Iron, Potassium and Vitamin K
**PESTICIDE FREE
NON-GMO**



Grown with care at our greenhouse farm in the town of Florence, New Jersey. This produce was grown using renewable energy without any use of pesticides and harvested a single time when the leaves are sweet and tender. Unwashed for maximum shelf life and freshness. Please keep refrigerated.

purespinach.com
net 4.5 oz (127 gr)

BEST BY:



Appendix

The most resource efficient model in **indoor farming** landscape



In Home Systems

Small standardized growing unit for use by consumers in home settings.



Container Farm

Standardized, self-contained growing unit that employs vertical farming systems with artificial lighting



Soil-Based Greenhouse

Translucent, climate controllable structure where plant are grown in soil



Indoor Vertical Farm

Fully enclosed and opaque room with a vertical hydroponic, aeroponic, and/or aquaponic system. Artificial lights are used.



Aquaponic Greenhouse

Translucent, climate controllable structure where plant are grown in water that has been used to cultivate aquatic organisms (i.e. fish)



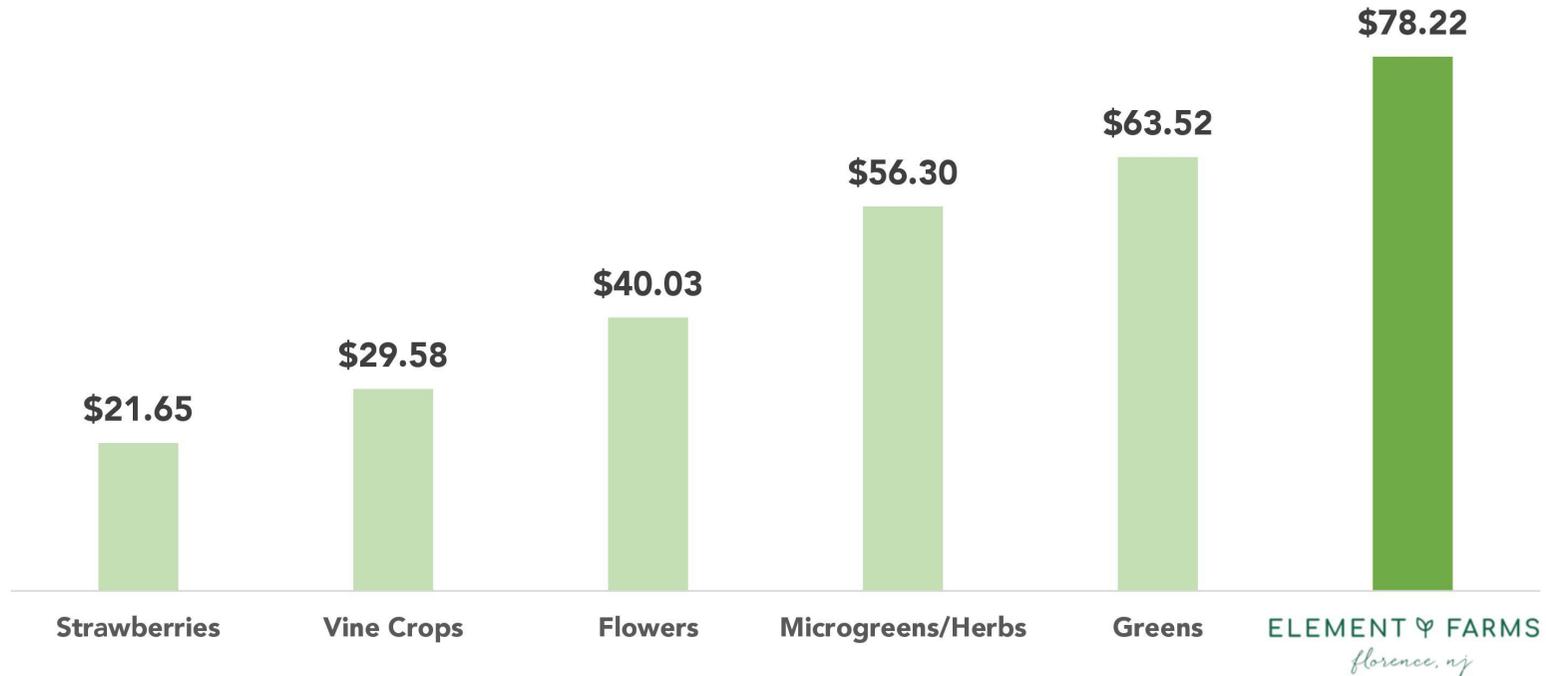
Hydroponic Greenhouse

Translucent, climate controllable structure where plant are grown in water as opposed to soil benefiting from natural sun light

Resource efficiency from least efficient to most efficient

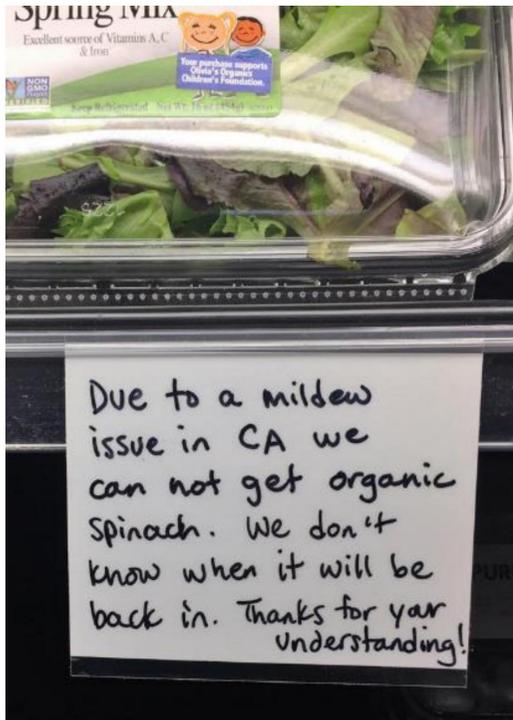
Element Farms has the **highest revenue** per square foot compared to other crops*

Average Annual Revenue (\$/sqft)



* Agrilyst's September 2016 report: *State of Indoor Farming*

Industry problem: supply is **unreliable**



Sign at GreenStar Coop
in Ithaca, NY

tesco.com | My Orders | My Account | Sign in | Register | website feedback | Help

Search

114 results

LEAF LOW Spinach is like 'gold dust' in supermarkets after heavy rain in Spain damages crops

Sainsbury's, Tesco and Waitrose have a shortage of spinach in store and online

Refine by

- Popular
- New Products
- Special Offers
- Area
- Spinach, Greens & Kale (17)
- Healthy Ready (1)
- Frozen Meat Free & Vegetarian (6)
- Prepared Salads & Accomps (6)

Redmere Farms Spinach 200G	Tesco Baby Spinach 240G	Tesco Organic Spinach 200G	Fresh And Naked Spinach 125G	Tesco Leaf Spinach 900G
Sorry, this product is currently not available.	£1.40 (€1.55/kg)			
				Quantity: - 1 + Add

"Apologies, for the next three weeks we will experience a shortage of spinach, due to torrential rain in Southern Spain... We are working closely with growers to maximize availability whilst ensuring that our quality standards are met..."

Consumers value **local, fresh, and healthy**



Mother of two

Shops at Whole Foods

Prepares food at home

Lives in NYC

Reads **nutrition** facts

Uses **greens** in every meal

Consumers **can not** find a spinach product worthy of brand loyalty

Awards

**Cornell Entrepreneurship
Kickoff Event**
September 2016

Finalists

**Entrepreneurship
Summit NYC**
November 2016

First Place

**Bangkok Business
Challenge**
February 2017

**Best Business Plan
& Presentation**

**Hemmeter Entrepreneurship
Award**
May 2017

**Best Business
Plan**

