FOCUS

FOODS


Julia Kurnik
Geoff Becker
FOCUS Foods
The Environmental Problem

• Agriculture today is unsustainable...
  – 14% of US greenhouse gas emissions
  – $2 billion lost annually from cropland erosion
  – >5 billion lbs pesticides used annually
  – >80% of potable water use
• ...even as we need to feed more and more people
  – Global population >9 billion by 2040
  – Need to produce 60% more food

Source: EPA, USDA, Cornell University, UN
The Solution: Aquaponics

1. Fish produce waste
2. Worms & bacteria convert waste to fertilizer
3. Plants eat fertilizer and grow
4. Clean water goes back to fish
The Solution: Our System
The Solution: FOCUS Foods
Business Model

Build Farm

Grow Food

Harvest Crop

Sell Product
Business Model

FOCUS Foods

Grocery Stores & Restaurants

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Value Chain

- Vastly simplified
- 5 steps removed
- Our value chain:
  - Plant seeds
  - Harvest
  - Already at retailer
## Cost Advantage

Our Operating Margin: 25%
Conventional Farm Operating Margin: 10%

<table>
<thead>
<tr>
<th>Cost Benefit</th>
<th>% Improvement</th>
<th>5 year Cumulative Cost Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faster Growth (year-round aquaponics)</td>
<td>300%</td>
<td>$11,139,350</td>
</tr>
<tr>
<td>Cuts in Transportation Costs</td>
<td>99.76%</td>
<td>$7,977,508</td>
</tr>
<tr>
<td>Low-run Costs (water, fertilizer, pesticide decreases)</td>
<td>95%, 100%, 100%</td>
<td>$2,177,102</td>
</tr>
<tr>
<td>Reduced Weather Variability</td>
<td>7%</td>
<td>$1,039,670</td>
</tr>
<tr>
<td>Decreased Spoilage</td>
<td>10%</td>
<td>$983,261</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>$23,316,894</strong></td>
</tr>
</tbody>
</table>
Everyone Benefits

Environment
- Hyper-local year-round
- No transportation
- No pesticides
- Few inputs

Community
- Greater nutrient quality & quantity
- Tastier produce
- Local jobs and paid internships
- Neighborhood blight addressed

Customers
- Lower cost
- Organic
- Tastier produce
- Year-round local produce
- Increase sales through demo systems
## Product

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2010</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fish</strong></td>
<td>Tilapia</td>
<td>Shrimp</td>
<td>Perch, Catfish</td>
<td>Barramundi</td>
<td>Paco, Bass</td>
</tr>
<tr>
<td><strong>Vegetables</strong></td>
<td>Tomato, Arugula, Spinach, Kale, Lettuce, Collard Greens</td>
<td>Watercress, Swiss Chard, Okra, Cucumber, Asparagus, Garlic</td>
<td>Bok Choy, Brussels Sprouts, Zucchini, Pepper, Microgreens</td>
<td>Cabbage, Broccoli, Green Onion, Summer Squash</td>
<td>Beets, Snap Peas, Green Beans, Leek</td>
</tr>
<tr>
<td><strong>Herbs</strong></td>
<td>Basil</td>
<td>Cilantro, Rosemary, Oregano</td>
<td>Thyme, Mint</td>
<td>Chives</td>
<td>Dill</td>
</tr>
<tr>
<td><strong>Fruit</strong></td>
<td>--</td>
<td>Strawberries</td>
<td>Watermelon, Papaya</td>
<td>Honeydew</td>
<td>Cantaloupe</td>
</tr>
</tbody>
</table>
Roadmap

2015
- 275 gallon MVP
- Located in Shop Rite (grocery store)
- Raise $400K in start-up funding

2016-2017
- Greenhouse: 60,000 sq ft roof-top system
- Stand-alone system
- 3 systems
- Raise $2.4M to expand

2018-2019
- Expand to other cities
- 12 systems
- Positive cash flow and break-even point

2020+
- 17 systems in 2020
- Continue expansion across country
- Additional strategic partnerships

We are here now...

... Harvard would help get us here
## Our Environmental Impact

<table>
<thead>
<tr>
<th>We Save... (Cumulative 5 years)</th>
<th>Amount</th>
<th>Equivalent to...*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greenhouse gases from traditional farming (metric tons)</td>
<td>2,022</td>
<td>725 tons of landfill waste</td>
</tr>
<tr>
<td>Greenhouse gases from transporting food (metric tons)</td>
<td>610</td>
<td>655,209 lbs of coal burned</td>
</tr>
<tr>
<td>Pesticides used (lbs)</td>
<td>5,226</td>
<td>3,556 acres</td>
</tr>
<tr>
<td>Topsoil erosion (tons)</td>
<td>10,309</td>
<td>687 full dumpster trucks</td>
</tr>
<tr>
<td>Water (million gallons)</td>
<td>264</td>
<td>1,808 US households/yr</td>
</tr>
</tbody>
</table>

*Sources: EPA, USDA
“Modern agriculture and food processing techniques lead to a relative reduction in the micronutrient content of common foods... [AND]...associations exist between micronutrient deficiencies and obesity in different populations “

- NIH
Our Team

Julia Kurnik, Co-Founder and CEO
MIT SB, Wharton MBA, Harvard Kennedy School MPA
Start up experience
- Re-invigorated National Women’s Business Council in the Small Business Administration
- Developed successful new product at educational software start-up
- Served as consultant at social enterprise incubator
Successful political field organizing skills
- Grew Obama field office from 0 to 15 employees, exceeding 220,000 vote goal by 5%

Geoff Becker, Co-Founder and CFO
MIT SB
Invented innovative product
- Designed and patented a unique cold backpack technology to transport vaccines in developing countries
Financial Expertise
- CFO of resulting backpack company
- Nine years trading at Susquehanna International Group
Vision

To combat climate change and reverse the obesity epidemic through the production of fresh, organic, hyper-local, affordable, and sustainable food in urban areas.