Female Funding Gaps in Agri-FoodTech

A first-ever review and roadmap to solutions
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INTRODUCTION
Money Where Our Mouths Are (MWOMA) is the first-ever investigation into the funding disparities between female and male founders in the Agri-FoodTech industry. This report raises important questions, highlights the gaps through data and testimonials, and establishes a framework for next steps.

Agri-FoodTech is a rapidly growing sector. Since 2012, $56 billion has been invested in Agri-FoodTech startups, in 6,787 deals across 14 categories. And 2018 was a record-breaking year, with $16.9 billion invested in Agri-FoodTech, a 43% year-over-year increase, the same rate of growth as between 2016 and 2017.3

Yet in 2018, just 16% of Agri-FoodTech deals closed went to start-ups with at least one female founder. Female-only founding teams again fared worse, taking just 7% of deal activity and 3% of dollar funding.4

MWOMA's qualitative research backs up the numbers, revealing a structural bias that exists which prevents female founders and CEOs from accessing capital to start and grow their Agri-FoodTech enterprises. This does not make sense, given that women innovators and leaders are on the front lines of consumer purchases, creating solutions to the most pressing environmental and health challenges of our times.

MWOMA is advocating for change, for putting our money where our mouths are. Our title acknowledges the goals that firms have set for gender equity. The content of our report should create an urgency to meet them.

3 https://agfunder.com/research/Agri-FoodTech-tech-investing-report-2018/
MONEY WHERE OUR MOUTHS ARE: FEMALE FUNDING GAPS IN AGRI-FOODTECH

OVERALL THEMES:

**Less female representation when there are large deal and dollar volumes present**

This is apparent when comparing by location and by category.

**Volatility in early stage startup funding**

Fluctuations in funding from year to year are apparent in seed deal volume, dollar volume and median values.

Support and mentorships for founders at this stage could be helpful, but this may be the nature of the startup trajectory and something that we may need to accept.

**Difficulty in securing sizable funding for startups with female-only founders**

Given that this project examines the state of startup funding by gender, this is quite a worrying trend. The median deal size for startups with female-only founders fluctuates greatly from year to year and between streams, which makes it difficult to pinpoint a possible cause of the phenomenon.

INTRODUCTION

Data Highlights & Key Insights

7%

Agri-FoodTech deals closed in 2018 went to female-only founding teams

16%

Agri-FoodTech deals closed in 2018 went to startups with at least one female founder

3%

of total dollars raised in 2018 went to female-only founding teams

5%

of investment dollars went to startups with at least one female founder
THE DATA

In these pages you will find a quantitative analysis of AgFunder’s database of deals made to women across Agri-FoodTech. Where available, we compare information for Agri-FoodTech deals to deals across all sectors made to female founders and CEOs.
THE DATA

Deal Volume by Founder Gender

This chart shows the percentage of deal activity that went to startups with different founding teams. There’s no discernible trend for female-founded businesses, perhaps partly due to gaps in the dataset.

Startups will at least one female founder have higher deal volume but lower dollar volume percentages in Agri-FoodTech tech compared to all industries in 2018.

Deal volume remains relatively stagnant (1% compound annual growth rate, or CAGR) but there is a growth in dollar volume (13% CAGR). However, both CAGR rates are notably lower than all industries (11%/48%).

**Comparing Agri-FoodTech startups with at least one female founder to deals across all industries**

<table>
<thead>
<tr>
<th></th>
<th>2018 Total</th>
<th>2018 Volume %</th>
<th>2017 Volume %</th>
<th>2017-18 % change in volume</th>
<th>2014-18 % change in volume</th>
<th>2014-18 CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agri-Food-Tech</td>
<td>89</td>
<td>16%</td>
<td>17%</td>
<td>-3%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>All Industries</td>
<td>1106</td>
<td>14%</td>
<td>15%</td>
<td>-4%</td>
<td>53%</td>
<td>11%</td>
</tr>
</tbody>
</table>

Number of deals in our sample:

<table>
<thead>
<tr>
<th>Year</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deals</td>
<td>256</td>
<td>501</td>
<td>631</td>
<td>617</td>
<td>545</td>
<td>559</td>
</tr>
</tbody>
</table>
This chart shows the share of dollars invested in Agri-FoodTech that went to teams of different genders. It’s worth bearing in mind that the dollar amounts listed are likely much higher due to our limited sample size.

What’s clear is the gap between the share in deal activity and dollar funding. Startups with at least one female founder took at least 15% of deal volume since 2013, but their representation in dollar volume has been consistently less and the gap compared to all industries was striking in 2018.

### Dollar Funding Levels by Founder Gender

<table>
<thead>
<tr>
<th>Year</th>
<th>Male</th>
<th>Both</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>1%</td>
<td>9%</td>
<td>2%</td>
</tr>
<tr>
<td>2014</td>
<td>98%</td>
<td>2%</td>
<td>6%</td>
</tr>
<tr>
<td>2015</td>
<td>91%</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>2016</td>
<td>91%</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td>2017</td>
<td>86%</td>
<td>8%</td>
<td>5%</td>
</tr>
<tr>
<td>2018</td>
<td>92%</td>
<td>5%</td>
<td>3%</td>
</tr>
</tbody>
</table>

### The Data

**Dollar Funding Levels by Founder Gender**

<table>
<thead>
<tr>
<th>Year</th>
<th>2018 Total</th>
<th>2018 Volume %</th>
<th>2017 Volume %</th>
<th>2017-18 % change in volume</th>
<th>2014-18 % change in volume</th>
<th>2014-18 CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agri-FoodTech</td>
<td>$0.54B</td>
<td>8%</td>
<td>14%</td>
<td>-37%</td>
<td>64%</td>
<td>13%</td>
</tr>
<tr>
<td>All Industries</td>
<td>$38.9B</td>
<td>17%</td>
<td>14%</td>
<td>97%</td>
<td>380%</td>
<td>48%</td>
</tr>
</tbody>
</table>

Comparing Agri-FoodTech startups with at least one female founder to deals across all industries.

Dollar funding for startups in our sample with at least one female founder dropped 37% from 2017 to 2018.
Deal activity for female-founded companies at the seed stage is more proportional compared to activity across all industries, where companies with at least one female founder closed 22% of deals in 2018. At Series A, where things appear to improve for mixed-gender founding teams, female-only startups account for fewer deals, backing up what we’ve heard anecdotally.
Again, female-founders at the seed stage appear to fare better in terms of dollar funding amounts. And in both 2018 and 2017, levels were comparable to all industries, where companies with at least one female founder raised 19% and 17% of dollars respectively. At Series A, female-only startups raised less, while mixed teams appeared to fare better than at seed stage in 2018.
THE DATA

Seed & Series-A Stage Deals by Median Deal Size

All categories saw an increase in median deal size from 2013, although there's clear volatility, particularly for female-founded companies as seed stage. A key takeaway from this chart is where the median levels landed in 2018, showing female-founded startups actually raised larger deals at seed stage. But at Series A, it’s a very different picture.
Categories that have higher deal volume tend to have less representation of female founders. This opens up the question of whether there’s less interest from female entrepreneurs in tackling the problem spaces in those categories, or whether female entrepreneurs are shying away from categories that may already have stiff competition.

<table>
<thead>
<tr>
<th>Category</th>
<th>Male</th>
<th>Both</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Restaurants &amp; Mealkits</td>
<td>72%</td>
<td>12%</td>
<td>16%</td>
</tr>
<tr>
<td>Home &amp; Cooking</td>
<td>76%</td>
<td>19%</td>
<td>5%</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>77%</td>
<td>11%</td>
<td>12%</td>
</tr>
<tr>
<td>Bioenergy &amp; Biomaterials</td>
<td>79%</td>
<td>9%</td>
<td>12%</td>
</tr>
<tr>
<td>Ag Biotechnology</td>
<td>82%</td>
<td>6%</td>
<td>12%</td>
</tr>
<tr>
<td>Agribusiness Marketplaces</td>
<td>82%</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td>Innovative Food</td>
<td>85%</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>eGrocer</td>
<td>85%</td>
<td>10%</td>
<td>5%</td>
</tr>
<tr>
<td>Novel Farming Systems</td>
<td>86%</td>
<td>10%</td>
<td>4%</td>
</tr>
<tr>
<td>Restaurant Marketplaces</td>
<td>88%</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Midstream Technologies</td>
<td>88%</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Farm Mgmt SW, Sensing &amp; IoT</td>
<td>89%</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>In-Store Retail &amp; Restaurant Tech</td>
<td>89%</td>
<td>8%</td>
<td>3%</td>
</tr>
<tr>
<td>Farm Robotics, Mechanization &amp; Other Farm Eq.</td>
<td>91%</td>
<td>8%</td>
<td>1%</td>
</tr>
</tbody>
</table>
### Top Series-A Deals for Female Founders 2013-2018

<table>
<thead>
<tr>
<th>Companies</th>
<th>Female Co-Founded</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thrive Market</td>
<td>$32.88M</td>
<td></td>
</tr>
<tr>
<td>Mammoth Biosciences</td>
<td>$24.5M</td>
<td></td>
</tr>
<tr>
<td>Acima</td>
<td>$24.0M</td>
<td></td>
</tr>
<tr>
<td>Nuritas</td>
<td>$18.99M</td>
<td></td>
</tr>
<tr>
<td>Innovafeed</td>
<td>$18.54M</td>
<td></td>
</tr>
<tr>
<td>Kolonial.north</td>
<td>$18.16M</td>
<td></td>
</tr>
<tr>
<td>Astro Digital</td>
<td>$16.65M</td>
<td></td>
</tr>
<tr>
<td>Arzeda</td>
<td>$15.2M</td>
<td></td>
</tr>
<tr>
<td>MealPal</td>
<td>$15.0M</td>
<td></td>
</tr>
<tr>
<td>Frichti</td>
<td>$13.4M</td>
<td></td>
</tr>
<tr>
<td>Trace Genomics</td>
<td>$13.0M</td>
<td></td>
</tr>
<tr>
<td>SALIDO</td>
<td>$12.0M</td>
<td></td>
</tr>
<tr>
<td>Caribou Biosciences</td>
<td>$11.55M</td>
<td></td>
</tr>
<tr>
<td>Haven</td>
<td>$11.0M</td>
<td></td>
</tr>
<tr>
<td>Gobble</td>
<td>$10.75M</td>
<td></td>
</tr>
<tr>
<td>Byte Foods</td>
<td>$10.4M</td>
<td></td>
</tr>
<tr>
<td>Marble</td>
<td>$10.0M</td>
<td></td>
</tr>
<tr>
<td>Goldbely</td>
<td>$10.0M</td>
<td></td>
</tr>
<tr>
<td>Tipa Corp</td>
<td>$10.0M</td>
<td></td>
</tr>
<tr>
<td>Nima Labs (was 6Sensor Labs)</td>
<td>$2.2M</td>
<td></td>
</tr>
</tbody>
</table>

[Just disclosed: Gro Intelligence’s (Farm Management Software) 2017 Series A raise was $17.4 million. Co-founders include CEO Sara Menker and COO Sweit Ahderom.]
While the data provides a clear set of facts, it can’t convey the human experience and personal perspectives of those on the ground and in the trenches of raising and investing money.

It was imperative to us, as part of this report, to interview stakeholders – including start-up founders, CEOs, investors, academics and thought leaders – to learn what they see as the opportunities and challenges in shifting the paradigm of funding for female founders and CEOs.
Trace Genomics integrates the latest advancements in genomics, machine learning, and agronomy to help farmers and their trusted partners harness the full potential of their living soil. Trace Genomics makes soil information more easily accessible by doing NPK\(^1\) testing and interpreting information.

- Category: Biology/Genomics & Data Science/Machine Learning
- Co-Founders: Diane Wu, Poornima Parameswaran, Ph.D.
- CEO: Diane Wu
- Year Founded: 2015
- Total Funding: $22.5 million
- Valuation: not disclosed
- Number of Employees: 11-50
- IPO Status: Private
- Headquarters: Burlingame, CA

“What worked for fundraising was pitching to investors who believed in technical founders being able to solve problems. Finding alignment between us and investors was key to raising capital.”

“Some characteristics that are shared by many women leaders/founders are openness and curiosity, and the ability to channel this from a standpoint of low ego. It’s empowering for a team to see leaders do that. I’m not saying it’s unique to female founders. I’ve certainly seen and been inspired by male leaders doing this. In general, I believe in reaching out and connecting with the team at an emotional level that transcends what the company needs at the corporate level.”

“I keep hearing that there is a much larger disparity in terms of male/female ratios at the executive and board levels. There still seems to be a glass ceiling. And I don’t know whether leadership and grooming programs are helping much. This is a pain point in the corporate world.”

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1 Nitrogen, phosphorus, and potassium
Mercaris

Mercaris is a market data service and trading platform for organic, non-GMO and other identity-preserved agricultural commodities. Products include organic and non-GMO corn, soybean, meal, and wheat markets across all regions of the United States and Canada. The company recently launched an organic dairy initiative.

- Category: Data Visualization, Marketing, On-Line Auction
- Co-founders: Chris Duesing, Kellee James
- CEO: Kellee James
- Year Founded: 2012
- First customers: early 2015 via a paid-for whitepaper
- First funding round: 2012, $800K Seed
- Series A: 2014, $2.5m
- Revenue: not disclosed
- Valuation: not disclosed
- Key investors: S2G Ventures, Pierre Omidyar
- Number of Employees: 13
- IPO Status: Private
- Headquarters: Silver Spring, MD

“Some of our male colleagues don’t get asked about revenue - they can be aspirational. When we pitch, we have to prove the numbers.”

“As we grow, we’ve seen how important it is to work with investors that share our vision, that are a fit with what we’re becoming.”

“Agriculture has a particular vulnerability to climate change. We want investors to be looking at businesses, products that are going to amend or mitigate the next crisis.”

On fundraising experience: “I don’t like fundraising but it’s a necessary thing. Due to my background or the fact that I’m an economist, we’ve been conservative about how much we’ve raised and the valuations we’ve sought. There are many different definitions to a successful business.”

On the value of investors: “Investors are excellent temperature takers; I used to be a well-rounded citizen, loading lots of other stuff, but I have lost touch on other things as I now only focus on commodities! S2G is great at providing us with information on the state of the capital markets and a bird’s-eye view to help us pick up on trends we should be aware of. They’ve also been very smart at creating a portfolio where the startups can play off one another; more than once we’ve turned to others on product development. It goes beyond just ‘you guys are doing cool stuff.’”
PastureMap’s mission is to help farmers and ranchers make profits building healthy grasslands. PastureMap is an easy grazing management and cattle record keeping software.

- Category: Data Collection/Analysis, Visualization, Communication
- Co-founders: Christine Su, George Lee
- CEO: Christine Su
- Year Founded: 2014
- First customers: 2015
- First funding round: 2016, $800K Angel
- Seed: 2017, $2.3m
- Grant: 2017
- Revenue: not disclosed
- Valuation: not disclosed
- Key investors: Ovo Fund, SV2, Ulu Ventures, Cienega Capital, TEC Ventures, Slow Money SOIL Network, Green Spark Capital, Impact Assets
- Number of Employees: 12
- IPO Status: Private
- Headquarters: San Mateo, CA

“Bias is hard to pin down. You never know why someone turns you down, although it’s disheartening when you see your peers from Stanford raising a $15m round when you know they had less traction than you.”

“Being a female founder of color, in ranching, and in tech, I had the credibility issue stacked against me in multiple ways. Even though I have a degree in sustainable agriculture and had worked on farms all over the world, I was told in early investor meetings, ‘you need to have more old white men on your slides. It’s hard to believe your team has the credibility to win over ranchers.’”

“I also recognize my privilege in having an elite education and professional background. With that Stanford pedigree I’m able to interrupt skepticism with those credentials.”

“If you’re getting into AgTech, you need to be prepared to invest at least the next 10 years of your career in it. If you’re looking for a quick five-year turnaround, and hockey-stick growth, this isn’t the vertical for you.”

“Evaluate investors for trust, partnership, and shared values in mind, not the money—it’s a long-term relationship. What matters to me the most is that one-third of our shareholders are ranchers, and that we are validated by the industry.”
Anuvia manufacturers enhanced efficiency fertilizers (EEF) for the turf and agricultural industries. Anuvia’s patented slow-release delivery system, Organic MaTRX™ mimics what happens with organic matter in the soil. Anuvia products and its process represent a model for the circular economy: efficiently using organic resources creating products of economic value.

- Founder: Jeffrey C. Burnham
- CEO: Amy Yoder
- Year Founded: 2014
- First funders: Private, founders
- Series A, 2016: $23m
- Second round: $23m
- First customers: Southern States, Nutrien, Meherrin, GHG
- Revenue: 2018
- Valuation: not disclosed
- Key investors: TPG ART fund (Circularis, Pontifax, Osceola Capital, Hegemon)
- Number of Employees: TBD
- IPO Status: Private
- Headquarters: Zellwood, FL

"Investors—men—will all be financially driven, but women understand the story, how the pieces work together, along with the financials. We need [that] diversity of thought."

"Raising money is tough – it requires knowing not only your story and your numbers but also being able to articulate your point and your vision to investors that may have minimal knowledge of your space. In a dynamic market such as agriculture that adds another level of complexity – women by nature, tend to downplay their strengths, their wins, and their success this can often translate to our pitches to investors and I believe can sometimes result in a pass rather than a ‘Let’s go do this!’"

"To fix the investment gap someone is going to have to be gutsy, to take a stand and take the lead."

"As a woman you can’t apologize, but you can’t be arrogant either—it’s a careful balance."
Atlantic Sea Farms (formerly Ocean Approved) started the first commercially viable seaweed farm in the United States in 2009, with the goal of diversifying how coastal waters are used. The mission of Atlantic Sea Farms is to work with Maine fishermen to diversify their income by starting seaweed aquaculture farms, while providing a domestic, fresh, healthy alternative to imported seaweed products.

- Category: Aquaculture (Agriculture)
- Founder(s): Paul Dobbins and Tollef Olsen
- CEO: Briana Warner
- Year Founded: 2009
- First customers: Food service
- First funding round: 2009
- Series A: 2018, Series A-1, $2M
- Key investors: True Wealth Ventures
- Number of Employees: 4FTE, 2PT
- IPO Status: Private
- Headquarters: Saco, Maine

“My current role as the CEO of Atlantic Sea Farms brings together mission and food in a way that builds on my past experience [in international and domestic economic development] and has helped me better understand the ways to appeal to people’s palate, as well as their sense of social justice. We are helping to build a new sector that could help diversify Maine’s fragile coastal economy.”

“The most important approach [when raising money] is to be open, honest, and confident. Investors don’t want to hear just the great parts of a business, they want to understand the risks and opportunities. The second-best lesson I’ve learned is to seek investors that you want to work with to build a business - not just people who can write a check. With partnership comes success.”

“We were very fortunate to find an incredibly dynamic and involved group of investors who acted quickly to help us finish our round so we could get back to running the business.”

“There needs to be more of the right investors that have significant ties to the value-added food space and are also interested in Agri-FoodTech-Tech.”

“Women bring to the table, in my opinion, a more honest assessment of challenges and opportunities in a business. I’ve also seen that women tend to focus on building a strong team that can make companies more focused on long-term success.”
Brightseed partners with food and beverage companies to bring to market products that are scientifically proven to support better metabolic health. Brightseed’s patented technology, Forager™ is a computational intelligence that understands nature more profoundly than humans can and is fueled by Brightseed’s growing proprietary data on the world’s plant life and deep knowledge of human biology. Their first discovery is a powerful plant compound that helps balance human metabolism, which works by restoring the activity of a central metabolic regulator and providing better nutritional absorption of foods.

- Category: Computational biology, food-as-medicine, bioactive discovery
- Co-founders: Sofia Elizondo, Jim Flatt, Lee Chae
- CEO: Jim Flatt
- Year Founded: 2017
- First funding round: 2018, Seed
- Key investors: Horizons Ventures, Fifty Years, S2G Ventures, Germin8, AgFunder, Continental Grain Company
- Headquarters: San Francisco, CA

“I would say that the impact of having a female - or even a recent parent - on the leadership team is that output becomes the most important thing. Output instead of face time is what matters. But the reason I hesitate to say that is that some may read this and conclude that women want flexibility. That is not the point.”

“Flexibility may sometimes be the means, but the actual result is quality of output. You just focus better. Things that should rise to the top, rise to the top more clearly.”

“Bottom line, my experience fundraising and running a company while pregnant was really great and I think that has 100% to do with the type of people that you choose to work with. My co-founders are two amazing dads who were immensely supportive.”

“Our partners were great. Our investors were fantastic. Board members were saying congrats and moving right along. I was visibly very pregnant when we closed on additional capital and I realized that my pregnancy invited them to share their family stories or parenting advice - some had just become dads! It made us all a bit more open and allowed us to connect on a more personal level. I had a great experience because of the people I had the privilege to associate with. Not everyone is so lucky.”
Artemis provides a world-class Cultivation Management Platform that enables owners and managers of enterprise horticulture operations to drive efficiency, profits, and growth while ensuring security and regulatory compliance.

- Category: Agriculture Technology, Cultivation Management Software
- Founder & CEO: Allison Kopf
- Year founded: 2015
- First customers: 2015, launched enterprise model in 2019
- First funding round: 2016, $1.5 million Seed
- Series A: 2019, $8 million
- Total funding: $12m
- Revenue: not disclosed
- Valuation: not disclosed
- Key Investors: Astanor Ventures, Talis Capital, Brooklyn Bridge Ventures, Horizons Lab, iSelect Fund, and New York State’s Empire State Development Fund
- Number of employees: 35
- IPO Status: Private
- Headquarters: Brooklyn, NY

“It’s incredibly important to choose your investors. Often when I meet with entrepreneurs, they talk about challenges raising capital and taking money from wherever it’s offered. Let’s flip the script. Choose your investors. Take capital with intention. Make sure that your investors are your partners, are aligned with your mission and are the right people to help grow your business exponentially.”

“Investing isn’t just about money; it’s about growth. I think of fundraising as an opportunity to constantly recommit to our company’s vision. We want to create a more efficient, traceable, and compliant agricultural economy. Put your vision at the center of the process.”

“Technological innovation is rapidly transforming the agriculture sector. I’ve seen the excitement buzzing around the new possibilities in agriculture and that continue driving more investment in the industry. Together, capital and innovation are making a more efficient and safer agriculture supply chain.”

“I have both sought investment, and as a partner with Xfactor ventures, invested in others. My experiences have shown me that we need to continue investing in women and we need to level the playing field when it comes to evaluating business opportunities. Women are building hugely valuable companies and receiving only 2% of venture capital. That has to change.”
Dr. Blake-Beard teaches Organizational Behavior. She is also Faculty Affiliate at the Center for Gender in Organizations at Simmons and Visiting Faculty at the Indian School of Business in Hyderabad, India. She holds a BS in Psychology from the University of Maryland at College Park and an MA and Ph.D. in Organizational Psychology from the University of Michigan. Dr. Blake-Beard’s research focuses on the challenges and opportunities offered by mentoring relationships, with a focus on how these relationships may be changing as a result of increasing workforce diversity. She is particularly interested in the issues women face as they develop mentoring relationships.

• Category: Research/Education
• Homebase: Boston, MA

“Developing male allies requires that senior leadership be committed to the effort. And it requires them to be able to understand the business case for why male allies makes sense. We’re not just doing this to feel good, sit in a circle and sing Kumbaya and wow, we feel great. There are real business reasons why developing and utilizing male allies needs to happen. And organizational leaders need to be able to see that validity and transmit that to the senior men whom they will ask to partner with them.”

“When people get to a certain level, either they are generative or they stagnate. So, people oftentimes think, ‘Oh, women are the only people benefiting from this.’ But that’s not the case. There’s a substantive amount of research that suggests that senior men also benefit.... Acting as allies gives them a chance to use their influence, to strategize and problem solve, and to feel generative as opposed to stagnated.”

“It’s really exciting to think about how to enable powerful supporters to leverage their influence. And I don’t know that people understand that. It’s not only that male allies are helping women; it’s that they also benefit from a developmental perspective.”

THE STORIES
Stacy Blake-Beard, Ph.D.

Simmons UNIVERSITY
BOSTON MASSACHUSETTS | EST 1899

Stacy Blake-Beard, Ph.D.
Professor of Management at the Simmons School of Business

“Developing male allies requires that senior leadership be committed to the effort. And it requires them to be able to understand the business case for why male allies makes sense. We’re not just doing this to feel good, sit in a circle and sing Kumbaya and wow, we feel great. There are real business reasons why developing and utilizing male allies needs to happen. And organizational leaders need to be able to see that validity and transmit that to the senior men whom they will ask to partner with them.”

“When people get to a certain level, either they are generative or they stagnate. So, people oftentimes think, ‘Oh, women are the only people benefiting from this.’ But that’s not the case. There’s a substantive amount of research that suggests that senior men also benefit.... Acting as allies gives them a chance to use their influence, to strategize and problem solve, and to feel generative as opposed to stagnated.”

“It’s really exciting to think about how to enable powerful supporters to leverage their influence. And I don’t know that people understand that. It’s not only that male allies are helping women; it’s that they also benefit from a developmental perspective.”

THE STORIES
Stacy Blake-Beard, Ph.D.

Simmons UNIVERSITY
BOSTON MASSACHUSETTS | EST 1899

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GreenLight Biosciences is dedicated to bringing their proprietary, cell-free bioprocessing method to market and to producing low-cost, high-quality RNA\(^1\) in a safe and environmentally friendly manner. The company’s goal is to commercialize products to improve plant and human health, and to support their partners’ research for creation of natural RNA-based products.

- Co-Founders: Andrey Zarur, Marta Ortega-Valle and James Swartz
- CEO: Andrey Zarur
- Year Founded: 2009
- Total Funding: $96 million
- Revenue 2018: ~$6 million
- Valuation: Not disclosed
- Key investors: S2G Ventures, Baird Capital, Fall Line Capital, Kodiak Venture Partners, Syngenta Ventures, Lewis and Clark Ventures, Tao Capital, Continental Grain Company, MLS Capital, Prelude Ventures, Grantham Neglected Climate Opportunities, Alexandria Real Estate
- Number of Employees: 100-150
- IPO Status: Private
- Headquarters: Medford, MA

\(^1\) ribonucleic acid

“At GreenLight, we have, as part of our company policy, to really commit to having a very equal and diverse workforce. What that means in real terms is we strive to have 50% female employees at every level of the organization, including our C-suite. It’s a balance that we’ve taken very significant steps to maintain. We believe that ignoring incredibly talented candidates because of their gender would put us at a significant competitive disadvantage, while embracing diversity and equality gives us an edge over everyone else.”

“At GreenLight we believe in an equal and diverse workforce, in bringing people from all walks of life, regardless of their race, national origin, religion, gender, or sexual orientation. When you’re trying to change the world—and Greenlight is trying to change the world—who would you rather have in charge? People who have never faced adversity, or people who have had to face adversity their entire life….?”

“We’re no longer tribal. We no longer live in isolated communities. We are part of a global community. We must embrace diversity and equality in our society and reflect this fact in each of our companies…. I believe gender equality is no longer a nice-to-have. For me, [they] are must-haves….“
S2G Ventures (Seed 2 Growth) is a multi-stage food and agriculture venture fund investing in entrepreneurs whose products and services meet the shifting demands for healthy and sustainable food. S2G looks for companies that can take leadership positions in emerging and fast-growing markets and make investments from “soil to shelf”—where innovation and capital can align the food system to meet changing consumer demands.

- Category: VC Investor
- Founder: Multiple, undisclosed
- Year Founded: 2014
- Type of Investment: Multistage (seed, venture, growth)
- Criteria: S2G looks for companies that can take leadership positions in emerging and fast-growing markets across the food and agriculture sector. Invests across the food system.
- Size of fund(s): $400M
- Typical Investment Size: $1-10M
- First Agri-FoodTech Investment: Beyond Meat (2014)
- Number of female-founded portfolio companies: 8
- Number of Employees: 13
- Headquarters: Chicago, IL

“[As a funder] you are just very vulnerable to your biases. Some you know, and some you don’t know. And the way that I think about this is to ask myself, if a male entrepreneur said the same set of things or had those same perspectives would they get funded?”

“The stories

Sanjeev Krishnan
Chief Investment Officer and Managing Director

“We need to consciously work to improve the gender gap and get more women into positions of leadership. This includes supporting men in leadership positions who value inclusion, as they play a key role in driving improvement across the industry. From executive teams to board members, current leaders must prioritize finding or investing in qualified women.”

Jessica Murphy
Business Development Manager
True Wealth Ventures focuses on large, high-growth, acquisitive markets where women are the primary customer – and where women are especially interested in making a positive impact through environmental and human health, both in the role of the consumer and in the role of the business owner.

- Category: VC Investors
- Founder: Sara T. Brand, PhD
- Year Founded: 2015
- Type of Investment: Seed
- Criteria: Women-led companies where founder seeks acquisition exit within 5 years at $100 million or more.
- Typical Investment: $250-500k
- First Agri-FoodTech Investment: 2018
- Number of Employees 11-50
- Headquarters: Austin, TX

“Women innovators and leaders who are on the front lines of consumer purchases and healthcare decisions. They are seeing the problems and creating the solutions to some of the most pressing environmental and human health challenges of our times.”

“Venture is a very broken, insular system. Investment decisions are not rational. Who you know, are familiar with—that guides most investment decisions. It’s human nature to invest in people you’re comfortable with.”

“It wasn’t until I realized I had literally never met another woman in venture capital that all the stars aligned for me. I did my homework and saw that companies with more women in senior leadership positions saw significant financial out-performance. Women pay back their loans at a much higher rate than men, but when women come into increased wealth, they reinvest 80% of that wealth back into their communities, families, health and education.”

“People are really surprised that there is such a blind spot in our economy. 80% of the investors in our venture-capital fund are women, or it is the woman from a couple, family office or foundation that led the investment decision. This is unprecedented from any other venture capital firm we have heard of. We are investing in the types of leadership teams they would like to see more of in the markets.”
CONCLUSION
The problem is fixable.

Crunchbase has published a list of 24 funds that focus on making investments to businesses founded by women. None of the top U.S. VC firms or partners are on that list.\(^4\) While many organizations now exist to address challenges that female founders and underrepresented minorities face, setting up a parallel system is not the long-term solution.

We have learned through this effort that both men and women, knowingly and unknowingly, perpetuate stereotypes about which gender takes more risks, or proffer metaphors like “glass ceilings,” that need to be broken through to create equality. To be sure, we want women to have greater access to resources, capital, networks and platforms to grow their businesses.

But we are not advocating for sameness. Real change will happen by simultaneously increasing the diversity of players on both sides of the pitch deck, which can only happen where there is willingness to actually see the person on the other side of the table for who she is, to assume she is there because she has authority in her field, and can ably detail every facet of how her business operates, while providing a realistic financial forecast for growth. Investors must evaluate women’s business plans for what they are, including how the projections for growth and profit were calculated. Investors must make an effort to understand her way of seeing and describing the future success of her company.

There is more private capital than ever\(^5\), yet we are nowhere near parity in terms of how women can access that capital. With the growth of women-owned businesses far outpacing those of men, it’s bad business not to invest in women.\(^6\)

We need scale-able solutions to the funding gap immediately.

CONCLUSION

The Business Case for Change

Agriculture and food are both causes of and solutions for the most pressing global issues of our time: climate change, soil fertility, health and nutrition, food access and distribution, clean water.

Through qualitative and quantitative research, the data consistently proves that women are strong, resourceful, and enduring founders and business leaders. Their companies are profitable sooner and better managed. Growing startups with female founders almost universally outperform their male-only counterparts and the fastest-growing companies, with 200%+ growth, are 75% more likely to have a female founder.\(^1\)

As a consumer force, women make buying decisions 85% of the time\(^2\) and are constantly looking for solutions to problems they want or need to solve in the household. Women are experts and leaders in fields focused on improving livelihoods—there is no shortage of proposed methods and philosophies.

We believe in the power of entrepreneurs to act nimbly, smartly, and to continually adapt. And now we have the hard data that show female founders and CEOs are not given the same chance to launch and scale their businesses as men are. We now know this is due to structural biases and lack of opportunity in a sector that favors investment in male-run businesses.

The problem is structural.

When it comes to seeking and providing investment, it’s about access and power. As author Mary Beard wrote, “You can’t easily fit women into a structure [of power, access] that is already coded as male.”\(^3\)

Today more than 82% of investment decision-makers are men. Intentional or not, bias exists because, as one (male) investor told us, “Investment is risky business. The numbers are the numbers, but I will much more easily take a risk on someone who looks, acts and speaks like me.”


\(^2\) [https://truewealthvc.com/introduction/](https://truewealthvc.com/introduction/)

\(^3\) [https://www.lrb.co.uk/v39/n06/mary-beard/women-in-power](https://www.lrb.co.uk/v39/n06/mary-beard/women-in-power)


Agri-FoodTech is a young sector, with natural growing pains. We want this sector to thrive and, thus, to take advantage of what we’ve learned to advance opportunities for women founders and CEOs. Everyone can and must play a role in closing the gap, and here are our recommendations:

**Funders (including Angels, VCs, Family Offices and Foundations):**
- Hold your organizations accountable to diversity goals; create these if you don’t already have them and add women and minorities to investment committees
- Provide education and training across teams to understand where biases exist across functions and in the decision-making processes, and to build skills to advance from these
- Promote more women to C-suite roles
- Recruit more female board members
- Invite more women founders and CEOs to the pitch table

**Female Founders/CEOs:**
- Lead on core business strength (rather than “softer” goals or benefits such as impact)
- Claim the results brought by your policies and operating procedures
- Assert command over the story of your business and the deep knowledge you have of how all the pieces fit together
- Develop male allies
- Be fearless in connecting with people at an emotional level, beyond what the company needs at a corporate level

**Agri-FoodTech Accelerators:**
- Set policies for and recruit more women entrepreneurs to your cohorts
- Provide education and training for directors as well as for accelerator participants to understand where bias exists, and build skills to advance from status quo

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**Food and Agriculture Companies:**
- Interrogate your existing paradigms
- Decide you want data or prioritize data gathering on women-led enterprise in your sector
- Populate your boards/C-suite with female leaders
- Be transparent about your challenges and efforts
- Report publicly on progress

**What’s next for MWOMA (and how you can get involved)**

The MWOMA team will continue to catalogue, educate and advocate for access to capital for female-founders and CEOs in Agri-FoodTech.

If you are...

An investor looking for diversified deal flow,  
A female founder or CEO looking for the right investor,  
A philanthropist or impact investor looking to support our work, or  
Looking for training or facilitation of your next event

...contact us at info@MWOMA.org
AgFunder

AgFunder is a global Venture Capital platform that invests in bold, exceptional entrepreneurs transforming the food and agriculture system. AgFunder’s in-house technology enables the organization to invest globally and at scale and helps make smarter investment decisions. Through AgFunder’s media and research platform, they have built a community of over 60,000 members and subscribers, giving them the largest and most powerful network in the industry to help support their portfolio companies and to get them in front of decision-makers.

Louisa Burwood-Taylor, Head of Media and Research

Louisa is Head of Media & Research for AgFunder and chief editor of AgFunderNews, bringing over 10 years of financial journalism experience to the team. She has covered a range of financial products and markets during her career, from equity capital markets in Asia to structured bonds in Europe, before turning her attention to food and agriculture over five years ago. She’s also been responsible for launching two publications: an institutional investment intelligence service for the Financial Times and the first-ever title focused on agriculture investment, Agri Investor, for PEI Media.
The MWOMA Project Team

The New Food Economy

The New Food Economy is an award-winning non-profit newsroom using independent, deep, and unbiased reporting to investigate the forces shaping how and what we eat. We are the home of a new kind of food journalism that goes beyond the gustatory to tell the urgent, under-reported stories of a changing system no one can opt out of.

Kate Cox, Editor

Kate joined The New Food Economy after several years reporting on the American age boom for radio and text as a freelance health reporter. She has written extensively about end-of-life issues, elder incarceration, and the plight of living organ donors. In 2014, she reported and produced The Hidden Crisis, a three-part radio documentary about the nation’s first emergency shelter for victims of elder abuse. Kate has been a contributor to The Nation, The Guardian, and Huffington Post and co-created and produced Off the Radar, a travel TV show about two women on a mission to see the world on $1k.
The MWOMA Project Team

Karen Karp & Partners

Founded in 1990, Karen Karp & Partners (KK&P) is a nationally recognized food systems consultancy. Focus areas include healthy food access, regional food and agriculture economies, corporate sustainability and sourcing strategies, executive engagement, and higher education curriculum and program development. KK&P applies a combination of analytic, strategic, and tactical approaches to every problem. Based in New York City and working nationally (with an emerging practice in Portugal), KK&P works with clients from the government, philanthropic, business and non-profit sectors to plan, execute and evaluate comprehensive agriculture and food system strategies. Clients include corporations, government agencies, small businesses, non-profits, and educational organizations.

Karen Karp, Founder & President

Karen Karp is an enlightened entrepreneur and respected consultant with over 30 years of experience. She has led KK&P to become the nation’s leading problem-solver for agriculture and food-related enterprises, programs and policies. Karen holds a BFA (Sculpture) from Parsons School of Design and received honors for her University of Bath School of Management Masters thesis, “How Does Food Sustain Us?” which explored how leaders convey and impart their personal food values within their organizations, and how these communities are then transformed through food. Karen’s home is on the North Fork of Long Island where she farms oysters.
APPENDICES
What is Agri-FoodTech?

Agri-FoodTech tech is the small but growing segment of the startup and venture capital universe that’s aiming to improve or disrupt the global food and agriculture industry.

As with all industries, technology plays a key role in the operation of the Agri-FoodTech sector, a $7.8 trillion industry, responsible for feeding the planet and employing well over 40% of the global population. The pace of innovation has not kept up with other industries and today agriculture remains the least digitized of all major industries, according to McKinsey.

The industrial Agri-FoodTech sector of today is also largely inefficient compared to other industries, with an increasing number of demands and constraints being placed on it. These pressures include a growing global population set to reach 9 billion by 2050; climate change and global warming; environmental degradation; changing consumer demands; limited natural resources; food waste; consumer health issues and chronic disease.

The need for Agri-FoodTech tech innovation is greater than ever. This creates many opportunities for entrepreneurs and technologists to disrupt the industry and create new efficiencies at various points in the supply chain. Broadly speaking, Agri-FoodTech tech startups are primarily aiming to solve the following challenges: food waste, Co2 emissions, chemical residues and run-off, drought, labor shortages, health and sugar consumption, opaque supply chains and distribution inefficiencies, food safety and traceability, farm efficiency and profitability, and unsustainable meat production.

There are many ways to categorize Agri-FoodTech tech startups, highlighting the complexity of the industry. See page 5 for our categorization system, which we developed in consultation with venture capitalists, entrepreneurs, and other industry experts.
# Agri-FoodTech Startup Category Definitions

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Innovative Food</strong></td>
<td>Cultured meat, novel ingredients, plant-based proteins</td>
</tr>
<tr>
<td><strong>Midstream Technologies</strong></td>
<td>Food safety &amp; traceability tech, logistics &amp; transport, processing tech</td>
</tr>
<tr>
<td><strong>Ag Biotechnology</strong></td>
<td>On-farm inputs for crop &amp; animal ag including genetics, microbiome, breeding, animal health</td>
</tr>
<tr>
<td><strong>Farm Management Software, Sensing &amp; IoT</strong></td>
<td>Ag data capturing devices, decision support software, big data analytics</td>
</tr>
<tr>
<td><strong>Farm Robotics, Mechanization &amp; Equipment</strong></td>
<td>On-farm machinery, automation, drone manufacturers, grow equipment</td>
</tr>
<tr>
<td><strong>Bioenergy &amp; Biomaterials</strong></td>
<td>Non-food extraction &amp; processing, feedstock technology, cannabis pharmaceuticals</td>
</tr>
<tr>
<td><strong>Novel Farming Systems</strong></td>
<td>Indoor farms, aquaculture, insect, &amp; algae production</td>
</tr>
<tr>
<td><strong>Agribusiness Marketplaces</strong></td>
<td>Commodities trading platforms, online input procurement, equipment leasing</td>
</tr>
<tr>
<td><strong>In-Store Retail &amp; Restaurant Tech</strong></td>
<td>Shelf-stacking robots, robotic cafes, POS systems, food waste monitoring IoT</td>
</tr>
<tr>
<td><strong>Restaurant Marketplaces</strong></td>
<td>Online tech platforms delivering food from a wide range of vendors</td>
</tr>
<tr>
<td><strong>eGrocery</strong></td>
<td>Online stores and marketplaces for sale &amp; delivery of food &amp; ag products to consumer</td>
</tr>
<tr>
<td><strong>Home &amp; Cooking Tech</strong></td>
<td>Smart kitchen appliances, nutrition technologies, food testing devices</td>
</tr>
<tr>
<td><strong>Online Restaurants and Meal Kits</strong></td>
<td>Startups offering culinary meals and sending pre-portioned ingredients to cook at home</td>
</tr>
<tr>
<td><strong>Premium Branded Foods &amp; Restaurants</strong></td>
<td>Premium food experiences - better product design, formulation, packaging &amp; thematic restaurants</td>
</tr>
</tbody>
</table>

*Upstream, Downstream, Upstream+Downstream*
Sources & Methodology

Data Sources & Curation

Utilizing new advanced machine-learning algorithms and artificial intelligence to help identify and categorize Agri-FoodTech startups, AgFunder’s knowledge base has grown to over 29,939 companies, with new startups and historical data being added each day.

The bulk of the raw data for our Agri-FoodTech Funding Reports comes from Crunchbase, which gathers publicly available information such as press releases and US Securities and Exchange Filings, as well as crowdsourcing directly from the industry. AgFunder contributes a significant portion of raw data through its own data collection methods that include private communications with investors and companies.

The raw data is then painstakingly curated by the AgFunder (usually taking several months) to ensure that it is relevant, accurate, up-to-date, complete, and categorized according to AgFunder’s proprietary tagging system for inclusion in our report.

For this report, we relied on Crunchbase’s gender dataset, which is based on reported data into their system. Crunchbase’s dataset is constantly expanding, but there are gaps. A company may not have founders listed on its Crunchbase profile. Or Crunchbase might not have a gender listed for founders that are attached to the person’s Crunchbase profile. (Note: In addition to “male” and “female,” Crunchbase has over two dozen other gender tags.)

Crunchbase, like all databases of private-market transactions, has a documented pattern of reporting delays. It can sometimes take weeks or months for some rounds to be announced publicly and subsequently get added to Crunchbase. This is especially the case for seed and early-stage deals, which are often raised by companies before the company launches a product or otherwise gets much outside media coverage, which surfaces information about the company’s funding history. More data will be added to Crunchbase over time and some of the numbers in this report may shift slightly.

Because non-US companies are not required to publicly file financings with their regulator, there may be many financings absent from our analysis.

In the Agri-FoodTech segment, 43.7% of companies had gender information, which provides a decent sample to draw some conclusions, but of course also means there will be some gaps.

Categorization

AgFunder’s categorization system is designed to capture broad themes in the Agri-FoodTech landscape (see page 5 for a list of categories). As the categories progress through the value chain, from farm inputs to the consumer, the mapping becomes complex. The Agri-FoodTech sector has a wide supply chain spanning industrials, farming, logistics, wholesale distribution, processing, retail distribution, and the consumer. In many cases, technologies such as marketplaces connect different links in the supply chain. So in this report we’ve chosen to focus on high-level themes.

To assist with the categorization and to avoid subjectivity, AgFunder first employs over 150 machine learning and artificial intelligence models to suggest category placement and to help tag the company according to the technology and its place in the supply chain. Finally, the AgFunder team manually reviews the suggestions for each company, often with significant research and debate among our team.
APPENDICES

About the Data Sample

We were able to extract gender data for 43.7% of all the deals across AgFunder’s complete data set, for the years 2013-2018. This closely parallels Crunchbase’s data set across all industries.
Acknowledgments

We would like to thank the following individuals and organizations for their invaluable contributions to this project to date:

Sanjeev Krishnan, Chief Investment Officer and Managing Director and Jessica Murphy, Business Development Manager, S2G Ventures, for financial support and deep engagement throughout the process.

Rohit Shukla, CEO, Larta Institute, for encouraging us to present this work at the 2019 Ag Innovation Showcase, and for his financial support.

Robin Chauhan, Head of Engineering, AgFunder, for optimizing the AgFunder database for gender analysis.

Nattie Chan, Data Operations Analyst, for data analysis and chart creation.

Ben Kerrick, Senior Consultant, KK&P, for report design (and indefatigable good spirits).

Laura Shulman, Principal, Food Future Strategies, for strategic guidance and public relations expertise.

Stefani Kostadinova, Project Intern, NYU Stern School of Business.

Journalist Amy Wu and her documentary film, “From Farms to Incubators: Telling the Stories of Women Entrepreneurs in Ag-Tech” for inspiring us to dig deeper.

A special thanks to Tim Li, Gené Teare, and the rest of the Crunchbase team for their support and assistance.

The dozens of women and men whom we’ve met along the way who candidly shared their stories. Your insights will pave the way for the next generation of entrepreneurs.
Are we missing your story?

info@MWOMA.org