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Agtech Sector Blooms As More Dollars and Startups Rush In

Christine Hall August 20, 2020



Farming has been around for thousands of years, but investments and startup activity in agricultural technology, commonly known as "agtech" or "agritech," have only exploded over the past five years.

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In fact, in each of the last two years, venture capitalists invested \$4 billion in startups in the agtech space, according to Crunchbase data. Based on the \$2.6 billion already given out as of Aug. 14 of this year, 2020 is poised to repeat or even exceed the previous years.

Better Food Ventures Partner Seana Day began tracking agtech startups more than five years ago. She said that farming is an area that isn't typically techenabled. In fact, COVID-19 reminded the world about the food supply chain, she added.

"There was a disconnect between demand signals and supply, which is why you saw empty grocery shelves," she said. "At the same time, the dairy farmers were dumping milk because they didn't have a process in place to massively produce small consumer packaging."

Day estimates that global food and agriculture fund managers have about \$130 billion in assets under management, which is driving a surge in investments as well as a shift in thinking.

Farmers have historically been resistant to change, Day said, but at the end of the day, they are rational business people. That means that if a startup can show a farmer a product or service that will boost the return on investment—increasing revenue or decreasing costs—the company will have a better chance of making the sale.

The challenge comes in for tech companies that offer apps meant to save time and increase job productivity, areas that aren't necessarily needed for farmers, she added.

There is also a shift in legacy food companies thinking digitally. Day points to Tyson Foods as an example. The meat producer earlier this month promoted Dean Banks to CEO. He joined Tyson as president last December from Alphabet's high-tech incubator X.

"That is a huge signal from a company making bold moves, saying 'we want to be a leader in this space," Day added.

New investments

This year has been particularly busy for the agtech innovation sector, as startups secured both big and small investments.

One of the largest went to Farmers Business Network, which raised \$250 million in Series F funding earlier this month. Day said the San Carlos, California-based company was one of the pioneers in e-commerce models, helping farmers optimize their financial performances by finding demand for supply.

Meanwhile, Berkeley-based Pivot Bio announced a \$100 million funding round in April, led by Breakthrough Energy Ventures and Temasek, to scale its microbial nitrogen technology. The company said the technology increases crop yields, and in turn, farmers' revenues. Biodesign startup Geltor brought in \$91.3 million in a Series B round in July, led by CPT Capital, to make proteins, such as collagen and elastin, but without animals. The startup's products are used in beauty, and food and beverage products.

One of the newest is **iFarm**, a Finland-based startup providing indoor farming technology for growing fresh greens, berries and vegetables. On Thursday, it announced that Gagarin Capital led its \$4 million investment with other investors including Matrix Capital, Impulse VC, IMI.VC and several angel investors.

iFarm, founded in 2017, has more than 50 ongoing projects with clients in Europe and the Middle East for 2020, Max Chizhov, co-founder and CEO, told Crunchbase News. The company will use the funding to develop its iFarm Growtune tech platform; expand into new regions in Eastern and Northern Europe and the Middle East; and will experiment with growing strawberries, cherry tomatoes, sweet peppers, radishes and other crops.

"We think this is an interesting time to be in agtech, and we think we are in the right time and right place, especially as there is more attention on food and agtech and a pipeline of investments," Chizhov said. "We are focusing on how to change the supply chain, and we believe we are one of the solutions to solve this problem."

Last week, we also reported on a new company, Unfold, which is focused on vertical farming. Bayer's investment arm, Leaps by Bayer, and Singapore-based investment firm Temasek infused \$30 million into the new company.

Unfold's President and CEO John Purcell said he is bullish on the farming sector, seeing a need for genetics in vertical farming. The company has an agreement for certain rights to germplasm from Bayer's vegetable portfolio that includes lettuce, spinach, tomatoes, peppers and cucumbers.

"Technology has to catch up with the promise," he said. "There has been an overall trend in produce moving toward vertical farming and greenhouse, but the hard part is you have to have the tech to make it feasible."

The "tech" in question is lighting, mechanics and a system in place. Then it has to be competitive with the other forms of production so potential customers will see its value, Purcell added.

Global Venture Funding for AgTech, 2015-2020

Private Equity rounds are excluded for non-venture backed companies. Data as of August 14, 2020.



New areas of agtech

Purcell sees three promising areas for the agtech industry:

- Major urban areas, where there is a desire for local, fresh food;
- Self-sufficiency, or helping places where there is limited arable land; and
- Produce supply chains, or getting food from the farm to fulfillment centers.

Ashley Tyrner, founder and CEO of Farmbox Direct, thinks there should be one more area: food as medicine. She is in the process of raising \$10 million for her East Coast-based organic and natural produce delivery service.

Tyrner said she saw her business grow more than 2,000 percent during COVID-19. In that time, Farmbox also began working with Medicare to provide box services to patients identified as those who need to eat healthier to manage chronic disease.

"The climate has changed in Silicon Valley, and VCs are welcoming because we are doing food as medicine," she added. "We were the first to find an insurance company to work with us to help patients change their eating patterns. We are creating a new space here."

In the area of crop protection is Canada-based MustGrow Biologics, an agricultural biotechnology company taking natural compounds from mustard seeds and turning them into pesticides that fortify the soil.

The pesticide industry is valued at \$65 billion, but most are synthetics, Corey Giasson, president and CEO of MustGrow, told Crunchbase News in an interview. The biologics side of the pesticide industry is growing, but is still worth only about one-sixth that amount, he said.

The slower growth is due to biologics in the past not being as effective as synthetic fertilizers, so MustGrow has been doing a lot of studies to show that its product works.

"Farmers want to use products that are healthy and safe, but need something effective to grow a crop that will suppress pests," he said. "We also have a growing population globally, and we need to feed people, doing it in a safe, environmentally sustainable way."

New opportunities

Crunchbase data, from investments made in the agriculture and farming group categories, shows that SVG Ventures is the most active agtech venture investor, having made 40 venture investments in the agtech space since it was founded 10 years ago. It was most recently involved in India-based Intello

Labs' \$5.9 million Series A round. The company uses image matching and machine learning to measure the quality of crops.

Top VC Firms by AgTech Portfolio Count, 2010-2020

Data as of August 14, 2020

Investment Firm	AgTech Portfolio Count	Founded	Country
SVG Ventures	40	2010	United States
Innova Memphis	17	2007	United States
Omnivore	16	2010	India
500 Startups	15	2010	United States
Monsanto Growth Ventures	14	2012	United States
SP Ventures	14	2007	Brazil
Middleland Capital	13	2011	United States
S2G Ventures	13	2014	United States
Syngenta Ventures	13	2000	Switzerland
Artesian VC	11	2004	Australia
crunchbase news	3		

A new player is FTW Ventures, led by Brian Frank, who on Thursday announced he is raising his first "problem-focused fund" aimed at early-stage food and agricultural startups.

Frank already raised the \$4 million fund, in which he will invest in 15 to 20 deals at about \$200,000 to \$250,000. He has already made five investments, the most recent in April as a part of Plantible Foods' \$4.6 million seed round. He was also an investor in Plantible's pre-seed round. The San Marcos, California-based B2B food technology company is developing plant-based protein.

Frank predicts some of the hotter areas will include hardware and automation, software and SaaS, novel products-such as Plantible-and personalized nutrition. He also said that consumers are driving the way food makes its way from the farm to the fork.

"I came into this sector from mobile technology, artificial intelligence and machine learning, with a deep-seated passion for food," he said in an interview. "There is a major shift in consumer trends as they look for more resilient and sustainable food. Climate change is both an effect of food and it impacts food. Plants can't just move to a new climate, so we need to help them."

Illustration: Dom Guzman

Editor's note: The story was updated on Aug. 24 to reflect that SVG Ventures made 40 investments in the agtech space and that the categories included in the datasets are agriculture and farming group.