



 EMERGING TECH RESEARCH

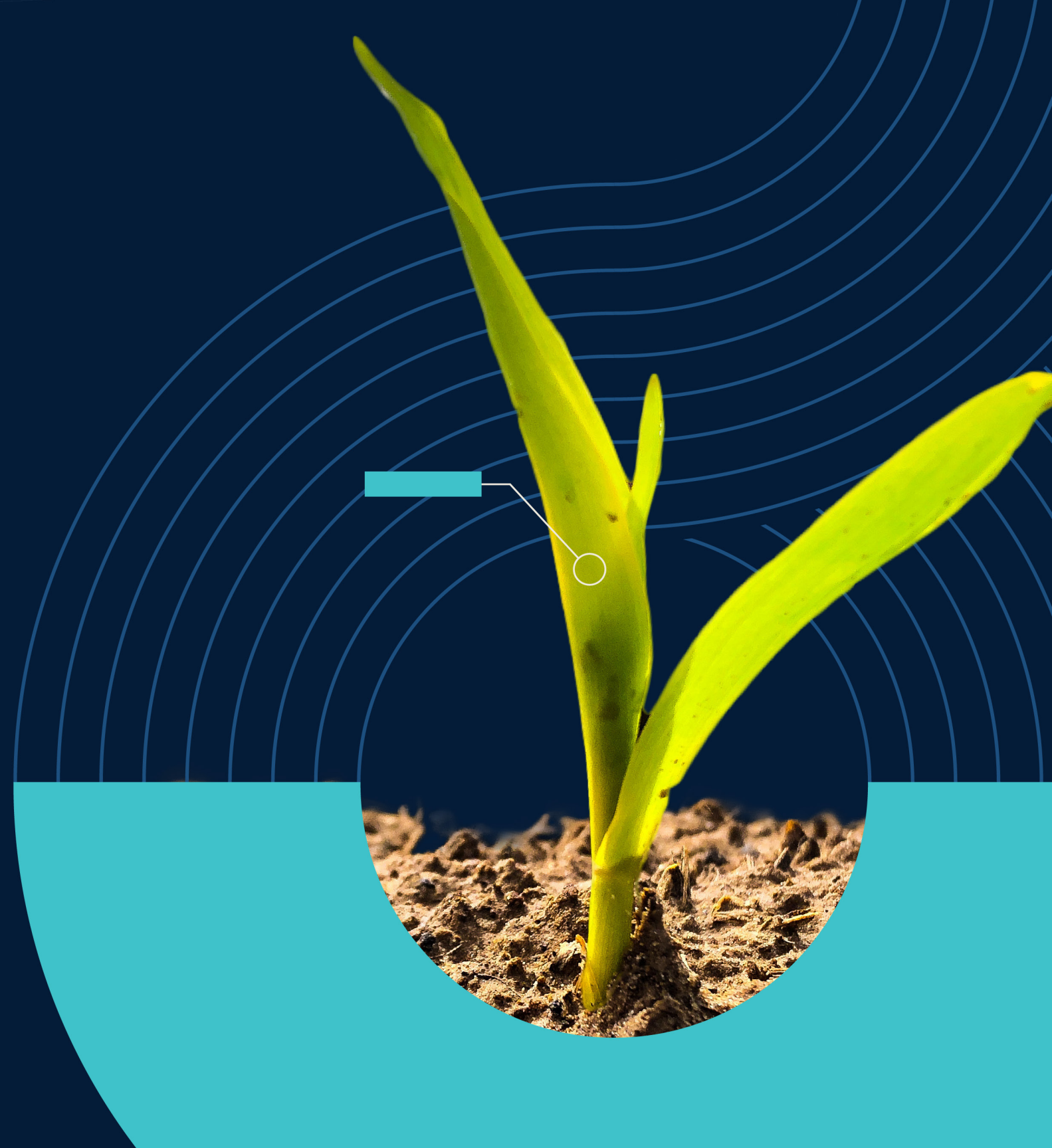
Agtech Report

VC trends and emerging opportunities

Q1
2022

REPORT PREVIEW

The full report is available through the PitchBook Platform.





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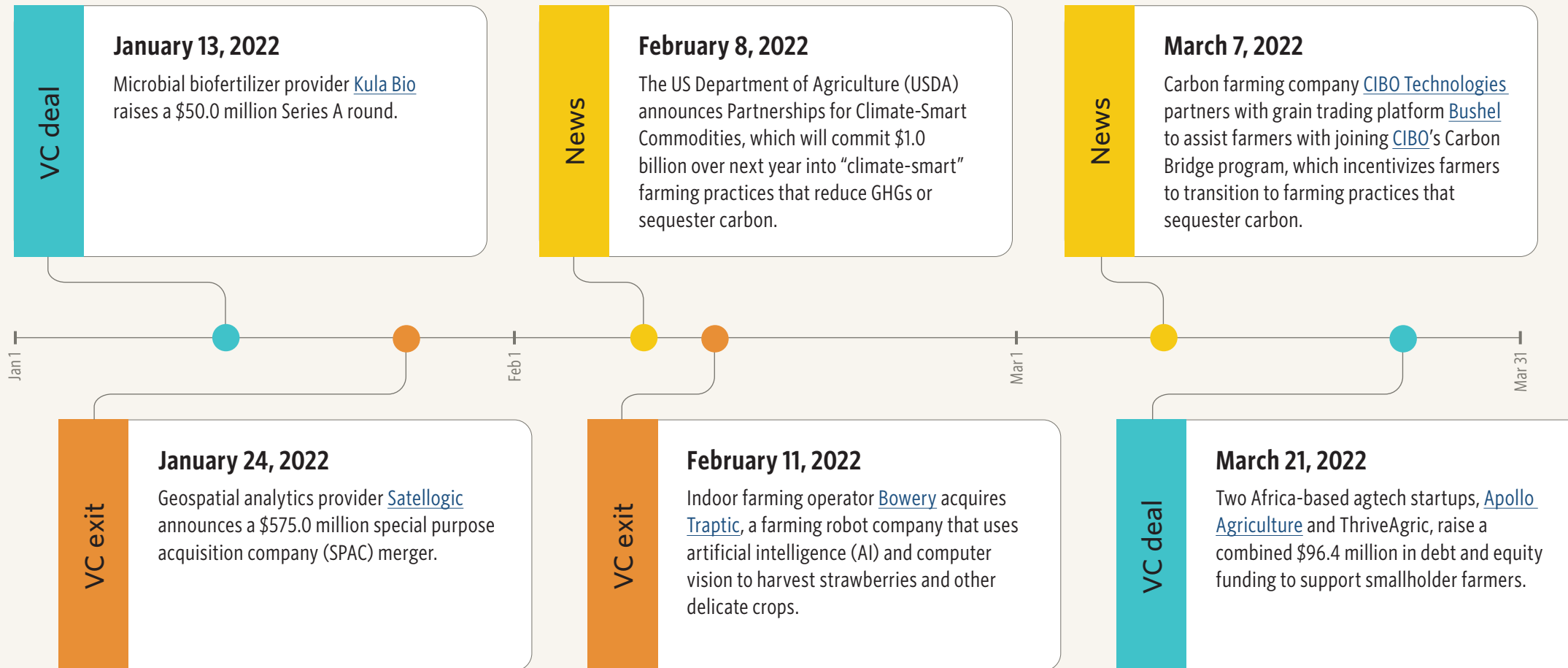
Publishing

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Q1 2022 timeline



Q1 VC activity

222
total deals

3.7%
QoQ deal count growth

\$3.3B
total VC raised

15.5%
QoQ fundraising growth

TTM summary (Q4 2020 - Q1 2022)

854
total deals

11.8%
YoY deal count growth

\$12.1B
total VC raised

45.9%
YoY fundraising growth



Agtech VC ecosystem market map

Market map is a representative overview of venture-backed or growth-stage providers in each segment. Companies listed have received venture capital or other notable private investments.



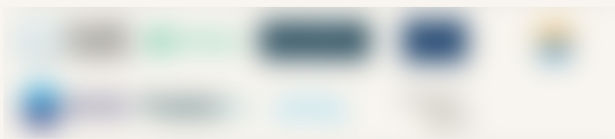


Agtech VC ecosystem market map

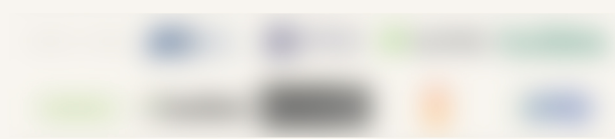
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Animal ag

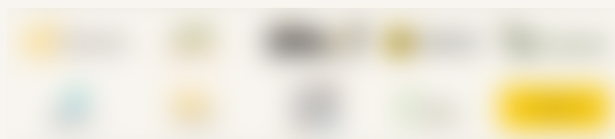
Aquaculture



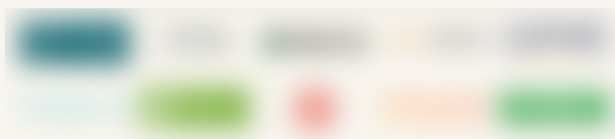
Livestock & land animal tech



Pollination tech

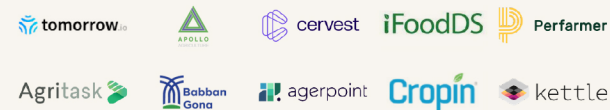


Insect farming



Precision ag

Farm management software



Robotics & smart field equipment



Field IoT



Drones & imagery analytics





VC activity

Funding activity continued its upward trajectory in Q1 2022, as agtech companies globally logged \$3.3 billion across 222 deals, with deal values up 15.5% QoQ. VC enthusiasm for agtech startups persisted in Q1 despite volatility in the public markets that has negatively affected major indexes as well as agtech stock prices.

The agrifinance & e-commerce segment garnered the majority of agtech's VC funding in Q1, logging \$921.8 million across 36 deals. Many of this segment's companies are developing solutions for emerging markets. The majority of food production is often done by smallholder farms characterized by antiquated, inefficient infrastructure and nascent markets. Implementing agribusiness marketplaces and e-commerce tools can improve supply and demand in emerging markets and unlock the economic potential of the agricultural land.

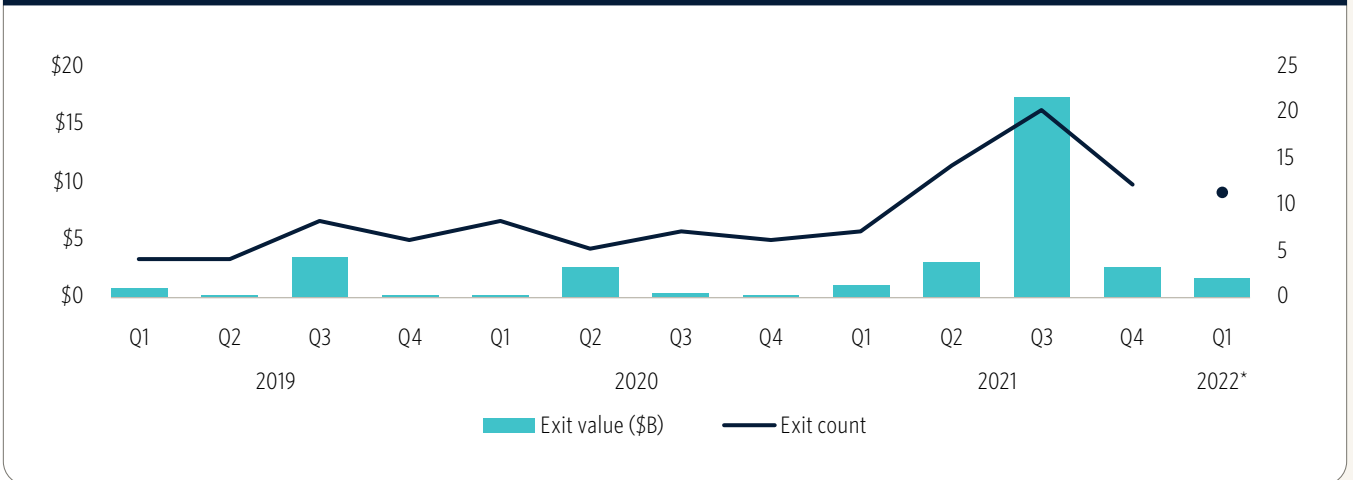
Strong agtech funding momentum has elevated median deal sizes and valuations across most stages. Most of the growth can be found at the early stage, wherein deal sizes climbed 59%, while pre-money valuations soared 67.0% YoY. In fact, median valuation step-ups—or the increase in value from pre-money to post-money—at the early stage were 2.7x, up 33.2% YoY. In other words, startups created a median of 33.2% more value at the early stage than the year prior. Despite investor enthusiasm at the early stage, we observed a softening of investor sentiment at the late stage. Median VC deal size growth plateaued at \$10.5 million for late-stage VC after climbing 45.3% in 2021. Median pre-money valuations declined 32.0% to \$37.3 million for late-stage VC, only \$3.9 million above the median early-stage valuation. Historically, the late stage has been subject to valuation volatility, so it may yet be too early to determine if investors are exercising unusual caution.

Figure 3. Quarterly agtech VC deal activity



Source: PitchBook | Geography: Global | *As of March 31, 2022

Figure 4. Quarterly agtech VC exit activity



Source: PitchBook | Geography: Global | *As of March 31, 2022



VC ACTIVITY

Figure 16. Key agtech early-stage VC deals*

Company	Close date (2022)	Subsegment	Stage	Deal size (\$M)	Lead investor(s)	Post-money valuation (\$M)
Reshamandi	February 9	Agribusiness marketplaces	Early-stage VC	\$100.0	N/A	\$700.0
Chari	January 20	Agribusiness marketplaces	Early-stage VC	\$100.0	N/A	N/A
Colossal	March 9	Animal biotech	Early-stage VC	\$75.0	N/A	N/A
AcreTrader	March 15	Finance & insurance	Series B	\$60.0	Anthemis Group	\$300.0
Kula Bio	January 13	Plant biotech	Series A	\$50.0	Lowercarbon Capital	\$210.0
Retailo Technologies	February 8	Agribusiness marketplaces	Series A	\$36.0	Graphene Ventures	N/A
Vertical Future	January 18	Indoor growers	Series A	\$29.7	N/A	\$111.3
Pixxel	March 28	Drones & imagery analytics	Series A2	\$25.2	Radical Ventures	\$95.0
Inventa	January 24	Agribusiness marketplaces	Series A	\$20.0	Andreessen Horowitz, Monashees	N/A
Bijak	January 20	Agribusiness marketplaces	Series B	\$19.3	Bertelsmann India Investments	\$163.5

Source: PitchBook | Geography: Global | *As of March 31, 2022



VC ACTIVITY

Figure 19. Key agtech incumbents

Company	Subsegment	Key products	EV/NTM revenue*	EV/NTM EBITDA*
Deere	Robotics & smart field equipment	Tractors, sprayers, planters	3.3x	14.9x
Yara International	Plant biotech	Fertilizer, fertigation, foliar	0.7x	3.8x
Corteva Agriscience	Plant biotech	Herbicide, fungicide, insecticide, disease control	2.7x	15.6x
Zoetis	Animal biotech	Vaccines, parasite control products and antibiotics	10.2x	23.5x
The Mosaic	Plant biotech	Fertilizer	1.2x	3.2x
New Hope Liuhe	Livestock & land animal tech	Animal feed products	1.0x	89.5x
Kubota	Robotics & smart field equipment	Tractors, balers, rakes, tedders	1.7x	11.3x
Merck Animal Health	Animal biotech	Vaccines, nutritionals, reproductions, therapeutics	4.5x	10.8x
Archer Daniels Midland	Livestock & land animal tech	Feed, feed additives, premix, macro-ingredients	0.7x	11.1x
Lindsay	Field IoT	Irrigation systems, management, scheduling	1.9x	14.9x

Source: PitchBook | Geography: Global | *As of March 31, 2022



SELECT COMPANY HIGHLIGHTS



Founded **2010**

278+ employees

Based in Berkeley, CA

Raised to date:
\$616.7M
over five deals

Most recent (disclosed) round:
\$430.0M of Series D venture
funding in a deal led by DCVC
and Temasek Holdings

Post-money valuation:
\$1.7B

First institutional round:
\$750.0M Seed round (October 2014)

Overview

[Pivot Bio](#) develops microbial biofertilizers as an alternative to synthetic chemical fertilizers. The company produces a liquid microbial nutrient product, which it sells directly to farmers. Biological inputs are made of living organisms, which tend to be less precise and effective when compared with synthetic inputs. However, biologicals can improve soil health and avoid environmental issues such as chemical runoff and GHG emissions commonly associated with synthetic inputs. The microbes in [Pivot Bio](#)'s biofertilizers can regulate the amount of nitrogen released to meet the requirements of the crops being treated. The company makes two biofertilizer products, which are applied in tandem with synthetic fertilizers. [Pivot Bio](#) has stated that its newest biofertilizer for corn crops is able to reduce synthetic fertilizer usage by 40 pounds per acre.

Leadership

CEO: Karsten Temme

Chief Technology Officer: Richard Broglie

Chief Information Officer: John Walls



SELECT COMPANY HIGHLIGHTS

Competitors

Recently, microbial fertilizers have garnered significant VC funding, in part due to increased focus on soil health and environmental implications of agriculture. Record-high fertilizer prices, partly due to the Russian insurgency into Ukraine, have created a new incentive to adopt biofertilizers. Key competitors include [Kula Bio](#), [Indigo Agriculture](#), and [Boost Biomes](#). [Kula Bio](#) has raised \$61.2 million in VC funding to develop a microbial biofertilizer that converts atmospheric nitrogen into a soil-stored crop nutrient. [Indigo Agriculture](#) produces a microbial seed coating that produces more resilient crops. [Boost Biomes](#) has a pipeline of microbial agricultural products in development that address crop diseases and boost resiliency.

Figure 31. Pivot Bio financing history

Grant	Grant	Seed	Series A	Series B	Series C	Debt (general)	Series D
October 1, 2011	September 11, 2012	October 3, 2014	March 22, 2016	September 13, 2018	April 30, 2020	March 19, 2021	July 19, 2021
Deal size: \$0.1M	Investors: Defense Advanced Research Projects Agency	Deal size: \$0.8M	Deal size: \$16.0M	Deal size: \$70.0M	Deal size: \$100.0M	Deal size: \$75.0M	Deal size: \$430.0M
Investors: Bill & Melinda Gates Foundation		Post-money valuation: \$7.6M	Post-money valuation: \$35.4M	Post-money valuation: \$200.0M	Post-money valuation: \$410.0M	Investor: Hercules Capital	Post-money valuation: \$1,700.0M
		Investors: Data Collective, Leaps by Bayer	Investors: Data Collective, Leaps by Bayer	Investors: Breakthrough Energy Ventures	Investors: Breakthrough Energy Ventures and Temasek Holdings		Investors: DCVC and Temasek Holdings

About PitchBook Emerging Tech Research

Independent, objective and timely market intel

As the private markets continue to grow in complexity and competition, it's essential for investors to understand the industries, sectors and companies driving the asset class.

Our Emerging Tech Research provides detailed analysis of nascent tech sectors so you can better navigate the changing markets you operate in—and pursue new opportunities with confidence.

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