

Pro/Briefings

Agritech

How to feed
exponential growth

\sifted/

backed by
FT
FINANCIAL
TIMES

Market 101

Dark clouds are gathering for farmers. To keep pace with a growing population, the world will need 70% more food by 2050. That would be great news for agribusiness — if the cost of generating those calories wasn't on the rise. Farmers are facing heavy weather on a number of fronts, from environmental (shrinking water supplies and dwindling arable land) and social (the push towards ethical, sustainable farming) to economic (the cost of catastrophic weather events).

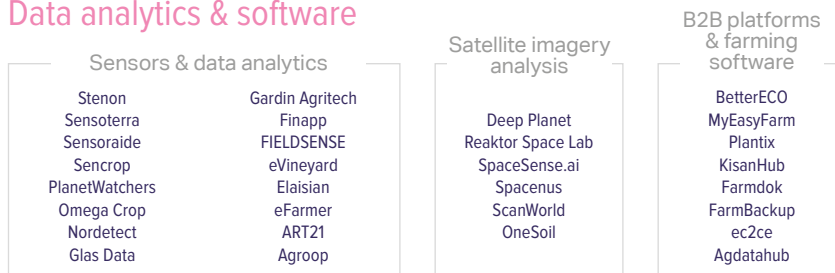
Startups are popping up to address each of these challenges. Whether looking to restore degraded soil or grow produce in the heart of cities, they're nailing down the science, developing the equipment and crunching the data that will help farmers improve or overhaul their growing practices — and maybe, just maybe, weather the looming food supply storm.

Early stage market map

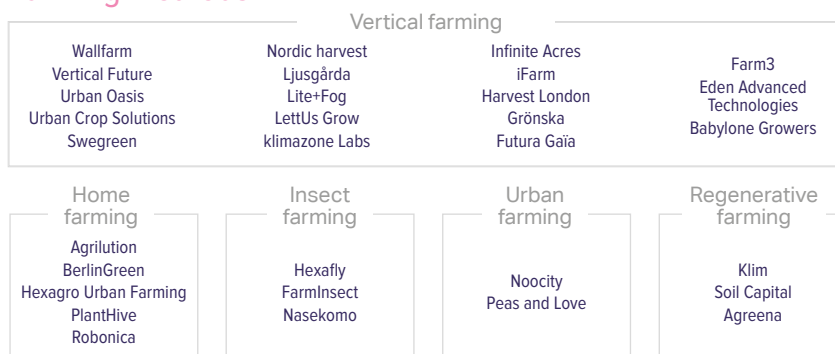


Startups tracked by Sifted, from pre-seed to Series A

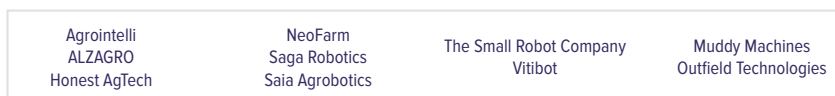
Data analytics & software



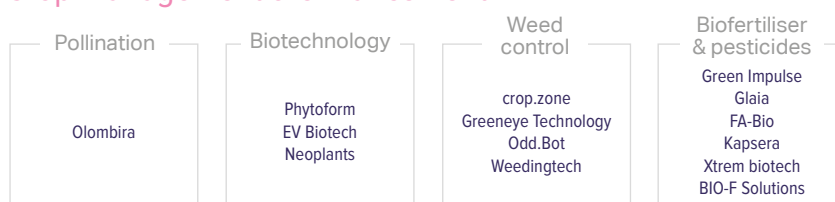
Farming methods



Robotics & drones



Crop management & enhancement



Key stats

\$9tn

size of the global agriculture market in 2020¹

20

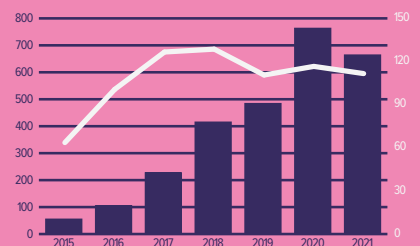
% of global greenhouse gas emissions linked to agriculture²

1/3

arable land already degraded due to climate change³

Agritech funding has increased by 12x since 2015

VC funding into European agritech startups (€m) and number of funding rounds

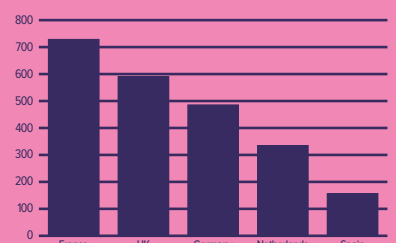


Source: Dealroom

sifted/FT

Leaders and laggards

Top countries for agritech funding (€m), 2015-2021



Source: Dealroom

sifted/FT

Trends to watch

1. Farms that rise to the occasion

- With vertical farms, crops can grow closer to consumers in a resource-efficient way, using less water and fertiliser than conventional farming as well as no pesticides.
- For all these benefits, startups still need to cut their high operating costs and figure out how to make money beyond selling specialty products like herbs.

2. Productivity vs. sustainability puzzle

- The EU wants to cut the use of pesticides by 50% and fertiliser by 20% by 2030, but it's unclear how farms will achieve those targets without a steep drop in yields.
- Startups are stepping in to improve crop growing, mostly concentrating on biofertilisers and pesticides rather than more controversial genetic modification.

3. Bet the farm on IoT

- Internet-connected devices can be used for precision irrigation, crop and livestock monitoring and, further down the line, autonomous machinery and drones.
- With the cost of devices and hardware on a steep decline, and connectivity infrastructure becoming more advanced, these solutions are becoming more attractive.

4. Save the soil

- Using practices like cover cropping and conservation tillage, "regenerative agriculture" offers the possibility to sequester carbon at scale.
- Startups are now acting as matchmakers between those switching to regenerative farming and businesses paying to offset their carbon emissions.

Sifted take

Agribusinesses around the world have bumped up their R&D spending during the past two decades — but this still hasn't translated into higher yield growth at farms. To really take off, agritech startups' solutions need to make a meaningful impact on bottom lines, which won't always favour the most high-tech solutions, but rather the ones tailored to real issues for specific grower segments.

87 startups tracked by Sifted

Subindustries

33/₈₇ Farming methods

30/₈₇ Data analytics & software

14/₈₇ Crop management & enhancement

10/₈₇ Robotics & drones

2017 Avg. launch year

1.9 years Avg. launch to seed

1.4 years Avg. seed to Series A

€2.3m Avg. seed funding

€5.7m Avg. seed valuation

€14m Avg. Series A funding

€51m Avg. Series A valuation

Investors by type

41% VC fund

15% Angel

14% Accelerator

13% Public funding

11% CVC

3% Private equity

2% Family office

1% Crowdfunding

Most active investors by deal count

6 EIT Climate-KIC PUBLIC

4 VF Venture (Vækstfonden) PUBLIC

3 Low Carbon Innovation Fund VC

3 Bpifrance PUBLIC

3 EIT Food PUBLIC

3 European Innovation Council PUBLIC

3 MassChallenge ACCELERATOR

3 Startupbootcamp ACCELERATOR

Early stage startups to watch

Europe's leading pre-series A startups (all published data verified)

We identify companies as 'rising stars' using a number of criteria including founder backgrounds, investor track record, funding and valuation, and growth signals

KisanHub

B2B platform Procurement

📍 Cambridge, United Kingdom 📅 2013

Supply chain management platform for the agrifood sector, which allows both growers and procurement staff to analyse data from crops, sensors, satellites, stores and shipments. Cofounder Sachin Shende was previously VP at BlackRock.

TOTAL FUNDING (€)
8.4m

LAST ROUND SIZE (€)
1.4m

LAST ROUND STAGE
Seed

VALUATION (€)
Undisclosed

RISING STAR

iFarm

Vertical farming

📍 Helsinki, Finland 📅 2017

Develops complete vertical farms, including hardware, components and a SaaS platform that automates crop care based on computer vision and machine learning. Cofounder Alexander Lyskovsky is a serial entrepreneur.

TOTAL FUNDING (€)
3.6m

LAST ROUND SIZE (€)
3.6m

LAST ROUND STAGE
Seed

VALUATION (€)
Undisclosed

RISING STAR

Gardin Agritech

Sensors & data analytics

📍 Oxfordshire, United Kingdom 📅 2020

Backed by the likes of Molten Ventures and Seedcamp, this startup offers technology to help seasonal crops and berries grow all year round. Using optical sensors, the company obtains data from plants, allowing farmers to analyse processes like photosynthesis and optimise controlled growing environments accordingly. Founder Sumanta Talukdar previously cofounded WaveOptics, an optical tech startup acquired for \$500m last year.

TOTAL FUNDING (€)
10.5m

LAST ROUND SIZE (€)
9.4m

LAST ROUND STAGE
Seed

VALUATION (€)
Undisclosed

RISING STAR

Harvest London

Vertical farming

📍 London, United Kingdom 📅 2017

TOTAL FUNDING (€)
1.2m

LAST ROUND SIZE (€)
600k

LAST ROUND STAGE
Seed

VALUATION (€)
3m

klimazone Labs

Vertical farming

📍 Berlin, Germany 📅 2019

TOTAL FUNDING (€)
N/A

LAST ROUND SIZE (€)
N/A

LAST ROUND STAGE
Bootstrapped

VALUATION (€)
N/A

Lite+Fog GmbH

Vertical farming

📍 Berlin, Deutschland 🚩 2019

TOTAL FUNDING (€)
580k

LAST ROUND SIZE (€)
300k

LAST ROUND STAGE
Pre-seed

VALUATION (€)
3m

BerlinGreen

Home farming

📍 Berlin, Germany 🚩 2019

TOTAL FUNDING (€)
800k

LAST ROUND SIZE (€)
500k

LAST ROUND STAGE
Pre-seed

VALUATION (€)
Undisclosed

Nasekomo

Insect farming

📍 Sofia, Bulgaria 🚩 2017

TOTAL FUNDING (€)
9m

LAST ROUND SIZE (€)
4m

LAST ROUND STAGE
Debt

VALUATION (€)
Undisclosed

Klim

Regenerative farming

📍 Berlin, Germany 🚩 2020

TOTAL FUNDING (€)
1m

LAST ROUND SIZE (€)
1m

LAST ROUND STAGE
Seed

VALUATION (€)
5m

eVineyard

Sensors & data analytics

📍 Gornja Radgona, Slovenia 🚩 2017

TOTAL FUNDING (€)
N/A

LAST ROUND SIZE (€)
N/A

LAST ROUND STAGE
Bootstrapped

VALUATION (€)
N/A

Hexagro Urban Farming

Home farming

📍 Milan, Italy 🚩 2016

TOTAL FUNDING (€)
1m

LAST ROUND SIZE (€)
100k

LAST ROUND STAGE
Seed

VALUATION (€)
3m

Robonica Srl

Home farming

📍 Milano, Italy 🚩 2014

TOTAL FUNDING (€)
1.2m

LAST ROUND SIZE (€)
800k

LAST ROUND STAGE
Seed

VALUATION (€)
4.5m

Hexafly

Insect farming

📍 Navan, Ireland 🚩 2017

TOTAL FUNDING (€)
4.9m

LAST ROUND SIZE (€)
250k

LAST ROUND STAGE
Debt

VALUATION (€)
16.5m

Soil Capital

Regenerative farming

📍 Perwez, Belgium 🚩 2013

TOTAL FUNDING (€)
2m

LAST ROUND SIZE (€)
1.6m

LAST ROUND STAGE
Seed

VALUATION (€)
Undisclosed

Agroop

Sensors & data analytics

📍 Lisbon, Portugal 🚩 2014

TOTAL FUNDING (€)
1.9m

LAST ROUND SIZE (€)
550k

LAST ROUND STAGE
Seed

VALUATION (€)
5m

Nordetect

Sensors & data analytics

📍 Copenhagen, Denmark 🚩 2016

TOTAL FUNDING (€)
1.9m

LAST ROUND SIZE (€)
1.3m

LAST ROUND STAGE
Seed

VALUATION (€)
6.6m

ScanWorld

Satellite imagery analysis

📍 Brussels, Belgium 🚩 2020

TOTAL FUNDING (€)
700k

LAST ROUND SIZE (€)
500k

LAST ROUND STAGE
Pre-seed

VALUATION (€)
2m

BetterECO

B2B platform Procurement & tracing

📍 Berlin, Germany 🚩 2017

TOTAL FUNDING (€)
1m

LAST ROUND SIZE (€)
700k

LAST ROUND STAGE
Angel

VALUATION (€)
Undisclosed

ec2ce

Software for farmers Predictive agriculture

📍 Seville, Spain 🚩 2014

TOTAL FUNDING (€)
1m

LAST ROUND SIZE (€)
500k

LAST ROUND STAGE
Seed

VALUATION (€)
2.9m

NeoFarm

Robotics & drones

📍 Saint-Nom-la-Bretèche, France 🚩 2018

TOTAL FUNDING (€)
3.5m

LAST ROUND SIZE (€)
2.5m

LAST ROUND STAGE
Seed

VALUATION (€)
Undisclosed

Spacenus

Satellite imagery analysis

📍 Darmstadt, Germany 🚩 2015

TOTAL FUNDING (€)
2m

LAST ROUND SIZE (€)
1.7m

LAST ROUND STAGE
Grant

VALUATION (€)
8.5m

Deep Planet

Satellite imagery analysis

📍 Oxford, United Kingdom 🚩 2018

TOTAL FUNDING (€)
500k

LAST ROUND SIZE (€)
500k

LAST ROUND STAGE
Pre-seed

VALUATION (€)
Undisclosed

MyEasyFarm

Software for farmers Precision agriculture

📍 Bezannes, France 🚩 2017

TOTAL FUNDING (€)
500k

LAST ROUND SIZE (€)
500k

LAST ROUND STAGE
Angel

VALUATION (€)
3m

ALZAGRO

Robotics & drones

📍 Szolnok, Hungary 🚩 2018

TOTAL FUNDING (€)
530k

LAST ROUND SIZE (€)
80k

LAST ROUND STAGE
Pre-seed

VALUATION (€)
514k

Muddy Machines

Robotics & drones

📍 London, United Kingdom 🚩 2020

TOTAL FUNDING (€)
1.2m

LAST ROUND SIZE (€)
600k

LAST ROUND STAGE
Angel

VALUATION (€)
5m

Phytoform

Crop management & enhancement Biotechnology

📍 Harpenden, United Kingdom 📅 2017

TOTAL FUNDING (€) 5m
LAST ROUND SIZE (€) 4m

LAST ROUND STAGE Seed
VALUATION (€) Undisclosed

EV Biotech

Crop management & enhancement Biotechnology

📍 Groningen, Netherlands 📅 2018

TOTAL FUNDING (€) 2.3m
LAST ROUND SIZE (€) 500k

LAST ROUND STAGE Angel
VALUATION (€) 20m

Glaia

Crop management & enhancement Fertiliser

📍 Bristol, England, UK 📅 2019

TOTAL FUNDING (€) 1.5m
LAST ROUND SIZE (€) 1.2m

LAST ROUND STAGE Seed
VALUATION (€) Undisclosed

FA-Bio (FungiAlert)

Crop management & enhancement Fertiliser

📍 Harpenden, United Kingdom 📅 2015

TOTAL FUNDING (€) 2.3m
LAST ROUND SIZE (€) 1.1m

LAST ROUND STAGE Seed
VALUATION (€) 5m

crop.zone GmbH

Crop management & enhancement Weed control

📍 Aachen, Germany 📅 2020

TOTAL FUNDING (€) 2m
LAST ROUND SIZE (€) 1.5m

LAST ROUND STAGE Pre-seed
VALUATION (€) 25m

Odd.Bot

Crop management & enhancement Weed control

📍 Almere, Netherlands 📅 2018

TOTAL FUNDING (€) 2m
LAST ROUND SIZE (€) 826k

LAST ROUND STAGE Angel
VALUATION (€) 6m

Europe's success stories

Who early stage startups are up against



Infarm

SERIES D

- The sector's first unicorn, providing vertical farms that grow herbs and mushrooms to supermarkets, grocery stores and even schools
- Runs 17 grow centres and over 1,400 in-store farms across 11 countries in Europe, Asia and the US as of 2021

Ÿnsect

SERIES C

- Builds vertical farms primarily for raising mealworms, which can be used as protein for fish food — and eventually for humans to eat too — or as a base for organic fertiliser

InnovaFeed

SERIES C

- Currently running the world's largest insect protein plant to produce organic fertiliser and feed for aquaculture and pets

Sources

Data sources

Sifted proprietary data

[Dealroom.co](https://dealroom.co)

Research reports

[Europe 2021 AgriFoodTech Investment Report](#) | AgFunder | 2021

¹ [Agriculture Global Market Report 2021](#) | The Business Research Company | December 2020

[Focusing on the Fundamentals in Agribusiness](#) | BCG | December 2019

News Articles

^{2,3} [Vertical Indoor Farming is Good for the Planet](#) | Accenture | June 2021

[Vertical farming startups, compared](#) | Sifted | May 2021

[Regenerative agriculture is the next great ally in fight against climate change](#) | TechCrunch | March 2021

[Can vertical farming grow beyond herbs and leaves?](#) | Sifted | October 2020

[Agriculture's technology future: How connectivity can yield new growth](#) | McKinsey | October 2020

[The Age of Agrochemicals is Ending: It's Time for Agricultural Biotech](#) | Labiotech | June 2020

[Signs of Rebound Forecast a New Era for Agriculture](#) | BCG | May 2020

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0	1	2	3	4	5	6	7	8	9	10	
bad											loved it

Cover image: Ivan Bandura

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