FINISTERE VENTURES, LLC

2018 Agtech Investment Review

Data provided by

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FINISTERE VENTURES

2018 Agtech Investment Review

Contents

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Foreword

The need for innovation in agriculture has never been greater. Agribusinesses across the value chain increasingly face pressures from rising costs of inputs such as seed, fertilizer, chemistry and labor; changing land use priorities; and consumer demands for transparency and sustainability. As commodity prices continue to stagnate with no signs of reprieve, there is intensifying recognition that new solutions are needed to provide relief for these pressures. With this knowledge in mind, Finistere and PitchBook have partnered with DLA Piper, Ernst and Young and Wells Fargo—leaders across the agtech ecosystem—to expand our 2018 Agtech Investment Review. As our sector continues to grow, we and the members of this year's editorial group recognize that collaboration, discussion and sharing of quality information will be essential to the future of our sector.

In the past, engines for agtech innovation were primarily housed within large corporations. As innovation within these companies has lagged in recent years, corporates have sought to add growth and innovation through mergers and acquisitions (M&A). The most dramatic examples of this phenomenon include the acquisitions of Monsanto by Bayer and Syngenta by ChemChina, as well as the bids to acquire Bunge, the mergers of Dow with DuPont (to form Corteva) and Agrium with PotashCorp (to form Nutrien). As companies at the top of the agricultural sector continue to seek efficiencies through M&A, we believe that they will pursue insource innovation through the acquisition of promising startups in our sector.

The last 10 years have seen remarkable growth in agtech investment, with $6.7 billion invested in the last five years and $1.9 billion in the last year alone, per the PitchBook Platform. This outpouring of investment and hunger for innovation can be attributed to a number of industry and technological tailwinds. Firstly, cost reductions across life sciences, imagery, computation and automation technologies have enabled previously cost-prohibitive toolsets to be applied to agricultural problems. Secondly, redundancies stemming from M&A at the top levels of the industry have improved access to experienced ag talent for startups. As financing activity has grown, so have the number of new companies in the ecosystem.

Through our work with PitchBook Data, Finistere has identified nearly 4,000+ opportunities within agtech. However, value chain needs and agtech financings are not necessarily aligned. Segments of agtech such as crop protection & inputs management, imagery, sensors & smart farm equipment and precision ag & analytics have received the lion's share of financings over recent years, while segments such as plant sciences and animal technologies (that have historically delivered the most value to both investors and farmers) have been underinvested. Alignment between market need and investment flow will be essential to providing the right tools to the industry and making the correct bets on technology investments. The key to ensuring this alignment will be providing good information on which to make solid investment decisions.

It was with this goal in mind that Finistere initiated our partnership with PitchBook Data and continues to grow this effort through a wider partnership comprised of investors, consulting and advisory partners and more, all with deep roots in the sector. As a collective, our organizations are committed to building the agtech ecosystem through sharing of knowledge. Agriculture has always by necessity been a highly collaborative sector. As we continue to build, improve and share this base of knowledge, we invite you to participate in our efforts, to read this report and continue to contribute to this dataset.

Arama Kukutai, Co-founder and Partner, Finistere Ventures

Introduction

Burgeoning ecosystems (especially one as broad as agtech) are by nature simultaneously diverse and nuanced, making it nearly impossible to capture it all in the scope of one report. Accordingly, this 2018 Agtech Investment Review is focused on providing insights and updates on key financing trends across agtech, leading investors and geographies, as well as updates on investment by subsector. Given the increasingly global nature of agtech investment, we felt it was also important to examine ecosystem activity outside of North America. Consequently, this report includes insights into financing activity and ecosystem drivers in Latin America, after our midyear report covered agtech trends in Australia, New Zealand, Canada and Israel.

This report also provides discussion and insight from industry experts around key areas influencing agtech investment: 1) macro trends within agtech, 2) consolidation within agriculture and, last but not least, 3) granularities around venture transactions within agtech.

Some key findings from the report:

- Agtech investment continues to grow year to year, with 2018 financings on track to match those of 2017.
- Total capital invested so far in 2018 is $1.6 billion across 209 deals in agtech, with median deal sizes rising to $10 million at the late stage.
- Key drivers of this surge in funding, many of which are discussed across the Q&As in the following pages, include fast-shifting consumer preferences encouraging rapid investment in areas such as alternative proteins, healthier exit volume over than past three years and growing collaboration between ag corporations and venture.
- A common theme that emerged from multiple conversations with industry experts was the convergence between agriculture, technology and finance yielding a sizable market opportunity in translating the all-too-common risks borne by farmers across all regions into more readily measurable and trackable events, enabling greater financialization and credit opportunities of ag in general.
- Some subsectors within agtech are more highly invested than others, with crop protection & inputs management and precision ag & analytics making up the lion's share of capital invested. However significant opportunity exists within agtech to capitalize upon scalable, value-building technologies in underinvested sectors.
- By and large, data reveals that most agtech subsegments are enjoying upward trends in both venture deal value and volume, even though some may be off historic highs in 2017.

If you are interested in sharing your data to the PitchBook Platform, please do not hesitate to reach out to survey@pitchbook.

Agtech market map

Select companies, total raised & latest financings

Plant sciences

JOYN BIO — $100.0M — Joint Venture — September 2017

Agrivida — $82.2M — Late Stage VC — October 2018

kaiima — $35.0M — Late Stage VC

VOLOAGRI — $104.7M — Series C1 — September 2018

BENSON HILL — $95.5M — Series C — September 2018

Sound Agriculture — $15.3M — Series B — November 2017

AGRIsoma — $36.4M — Series C — March 2018

PHYTELLIGENCE — $20.0M — Late Stage VC — October 2018

Rootility — $15.0M — Series C — May 2018

INARI — $43.0M — Series B — August 2018

PIVOT BIO — $86.8M — Series B — September 2018

indigo — $620.6M — Series E — September 2018

GINKGO BIOWORKS THE ORGANISM COMPANY — $437.5M — Series D — December 2017

AgBiome — $119.0M — Series C — July 2018

VESTARON — $46.5M — Late Stage VC — June 2018

NewLeaf SYMBIOTICS — $54.1M — Series C — September 2017

Crop protection & input management

concentric THE PYTO-MICROBIOME COMPANY — $64.3M — Series B — April 2018

DICE Molecules — $94.5M — Series B — July 2018

BioConsortia — $41.0M — Series D — March 2018

CIBUS — $183.8M — Series C — June 2018

Animal technologies

Insect — $37.9M — Early Stage VC — December 2016

AAD Advanced Animal Diagnostics — $41.8M — Late Stage VC — January 2018

INNOVAFEED — $18.5M — Early Stage VC — February 2018

BIOWISH TECHNOLOGIES — $39.6M — Series E — September 2018

InnovaSea — $15.2M — Series A — April 2017

PROTIX — $50.5M — Late Stage VC — June 2017

recombinetics — $53.1M — Acquired by CRV — September 2018

ASCUS BIOSCIENCES — $23.7M — Angel — September 2018

stellapps — $14.2M — Series B — May 2018

Connecterra — $6.8M — Series A — May 2018

Imagery

TARANIS — $29.5M — Series B — November 2018

SATELLOGIC — $49.0M — Series B — June 2017

VRESSON — $30.1M — Series C — May 2018

sentera — $27.5M — Series A — September 2018

TerrAvion — $13.8M — Series A — February 2017

DroneDeploy — $56.0M — Series C — June 2018

prospera — $22M — Series B — March 2017

PRECISIONHAWK — $106.8 — Late stage VC — October 2018

ceresimaging — $35.4M — Series B — June 2018

HANGAR — $12.5M — Seed — December 2017

Indoor ag

BOWERY — $29.7M — Early Stage VC

Plenty — $260.0M — Early Stage VC

ILLUMITEX — $71.6M — Series 1 — December 2017

GOTHAM GREENS — $42.9M — Series C — June 2018

infarm — $29.4M — Series A — February 2018

AeroFarms — $114.5M — Series D — September 2017

BRIGHT FARMS — $125.2M — Series D — June 2018

Growstone — $22.1M — Series D — January 2017

CropOne — $18.3M — Series B

BACK TO THE ROOTS — $18.1M — May 2018 Series B

Ag marketplace & fintech

什马金融 SHENMA — $85.3M — Series C — May 2018

农分期 让农业经营更容易 — $33.5M — Series C — April 2018

Agrofy — $10.0M — Series A — March 2018

CROP PRO INSURANCE — $8M — Series A — August 2017

5 — $10.0M — Series A — July 2017

FARMERS BUSINESS NETWORK — $194.3M — Series D — November 2017

FULLHARVEST — $13.7M — Series A — August 2018

SafeTraces — $20.5M — Series A2 — October 2018

大丰收 农资商城 DFS168.COM — $29.0M — Series B — June 2017

PRODUCEPAY — $18.5M — Series B — October 2018

Precision ag

TRACE GENOMICS — $19.2M — Series A — May 2018

GROWERS — $6.8M — Series A — September 2018

CiBO TECHNOLOGIES — $38.2M — Series B — March 2017

MyAgData — $5.6M — Early Stage VC — August 2018

FARMOBILE — $25.6M — Series B — October 2017

aWhere — $26.1M — Late Stage VC — October 2017

THE YIELD — $10.1M — Series A — April 2017

conservis — $30.7M — Series B — September 2018

Premier Crop Systems® — $4.7M — Early Stage VC — January 2017

AgriWebb — $13.5M — Series A — August 2018

Sensors & smart farm equipment

RoboticsPlus — $10.0M — Early stage VC — November 2018

semios — $26.6M — Series A — October 2017

Phytech — $14.0M — Series B — September 2017

WaterBit — $14.8M — Series A — June 2018

cropx — $14.8M — Corporate — May 2018

SOFT ROBOTICS — $29.3M — Series A1 — May 2018

HORTAU — $21.5M — Series A — February 2016

ETwater — $19.9M — Late Stage VC — September 2018

ARABLE — $15.4M — Early stage VC — August 2017

ecorobotix — $13.6M — Series B — May 2018

AquaSpy — $10.6M — Late Stage VC — February 2016

abundant ROBOTICS — $12.0M — Series A — May 2017

FINISTERE VENTURES

The Mixing Bowl
CONNECTING INNOVATORS IN FOOD, AG & IT

Taxonomy & methodology

1. PitchBook venture data

PitchBook includes equity investments into startup companies from an outside source. Investment does not necessarily have to be taken from an institutional investor. This can include investment from individual angel investors, angel groups, seed funds, venture capital firms, corporate venture firms and corporate investors. Investments received as part of an accelerator program are not included. However, if the accelerator continues to invest in follow-on rounds, those further financings are included.

- *Angel & seed:* PitchBook defines financings as angel rounds if there are no PE or VC firms involved in the company to date and we cannot determine if any PE or VC firms are participating. In addition, if there is a press release that states the round is an angel round, it is classified as such. Finally, if a news story or press release only mentions individuals making investments in a financing, it is also classified as angel. As for seed, when the investors and/or press release state that a round is a seed financing, or it is for less than $500,000 and is the first round as reported by a government filing, it is classified as such. If angels are the only investors, then a round is only marked as seed if it is explicitly stated. It should be noted that in order to better reflect the agtech seed-stage market, this report increased that round size limit to $2 million or less. However, some seed-stage rounds in agtech may still not have been captured as of yet as a consequence.
- *Early-stage:* Rounds are generally classified as Series A or B (which we typically aggregate together as early stage) either by the series of stock issued in the financing or, if that information is unavailable, by a series of factors including: the age of the company, prior financing history, company status, participating investors, and more.
- *Late-stage:* Rounds are generally classified as Series C or D or later (which we typically aggregate together as late stage) either by the series of stock issued in the financing or, if that information is unavailable, by a series of factors including: the age of the company, prior financing history, company status, participating investors, and more.
- *Corporate venture capital:* Financings classified as corporate venture capital include rounds that saw both firms investing via established CVC arms or corporations making equity investments off balance sheets or whatever other non-CVC method actually employed.

2. Contributing partner data

- *SP Ventures:* The datasets on Brazil and Argentina were bolstered by the contributions of SP Ventures, as was the commentary.
- *Glocal:* Glocal, a Latin American accelerator, also contributed to the datasets and commentary for the regional spotlight on Latin America.
- *NXTP Labs:* NXTP also contributed underlying data for the spotlight on Latin America.

3. Agtech taxonomy*

- *Plant science:* The modification of existing plants and organisms to improve plant health and yield, including plant breeding, development of novel traits, genetic modification/editing, and more.
- *Crop protection & input management:* The development of products and technologies that when applied improve plant yield, including the development of synthetic and natural active ingredients, biologicals, formulations, seed treatments, and nutrient technologies to improve plant or soil health and reduce other inputs.
- *Precision agriculture:* The building of software suites, data management and analytics tools for improved farm management, including the measurement of crop inputs, soil, moisture, weather, inventory, etc., typically within the realm of enterprise suites with user-friendly mobile capabilities.
- *Agriculture marketplace & fintech:* Online marketplaces for the trading, buying and selling of agricultural goods, as well as platforms for the management of related financial transactions and administration of business relationships.
- *Indoor agriculture:* The production of turnkey software and hardware systems designed for the cultivation of crops within buildings, often focused on either residential or commercial real estate markets, as well as related services and building of infrastructure.
- *Sensors & smart farm equipment:* Hardware and software systems specifically designed to monitor a range of conditions, most frequently within close proximity, plus equipment for farming, with integrative capabilities for whole platforms.
- *Imagery:* Equipment, software and hardware systems plus actual manufacturing of drones and satellites for aerial monitoring.
- *Animal technologies:* Hardware and software systems specifically designed to enable management of livestock and other farm animals in general, with use cases ranging from monitoring of health to more efficient harvesting of related resources. In addition, technologies aimed at improving formulation of animal feed and medicines are also included, ranging from veterinary drug applications to the entire nutritional spectrum.

*Note: This taxonomy is kept consistent from year to year in our datasets to enable comparison over time.

Market overview

Agtech startups are on pace for another record year of financings in 2018. Thanks to a record haul in Q3, which brought in $895 million, the agtech sector is a mere $132 million off of the record high in financings in 2017 at the time of writing. The number of deals completed in agtech have also increased in 2018. Through October of 2018, 209 deals were transacted, nearly matching the volume of deals transacted for the entirety of 2017. If current financing trends continue, 2018 will surpass 2017 in both total capital invested and number of deals transacted. Helping bolster this year's numbers is an upswing in late-stage activity, where median deal size is trending at $10 million (up from $9 million last year).

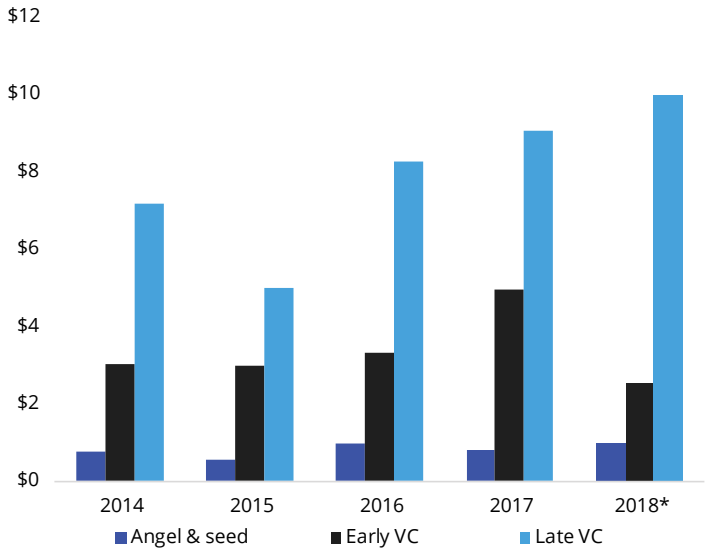
The agtech ecosystem is beginning to show signs of scaling up. In both 2017 and 2018, there has been a distinct increase in the volume of late-stage transactions, as more startups "graduate" to the Series C and later market. Interestingly, early-stage deal sizes, meanwhile, have declined. The 2018 median currently stands at $2.5 million, down from the $4.95 million median a year ago. This trend may again be reflective of a maturing agtech market as investors begin to explore investment in more capital-light segments of agtech requiring smaller rounds to achieve value inflections.

Examination of valuation trends in the sector paint a similar story. Median late-stage valuations have skyrocketed to $78 million, the highest mark yet, and well

Global agtech VC deal activity

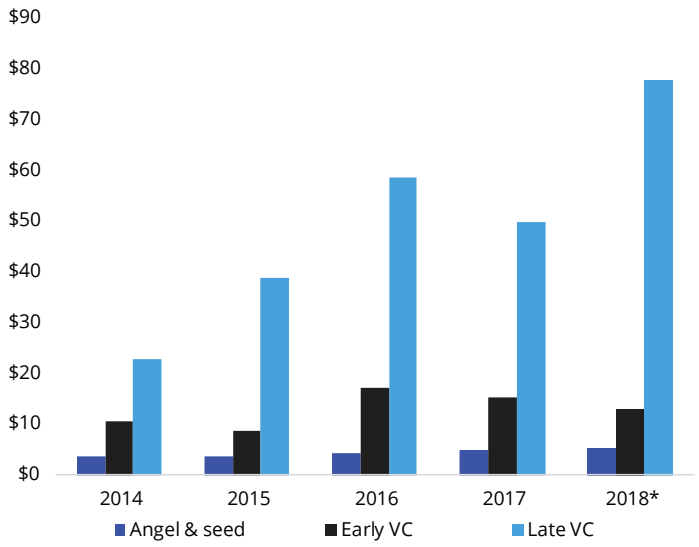
Source: PitchBook
*As of October 31, 2018

Median global agtech VC financing size ($M) by stage



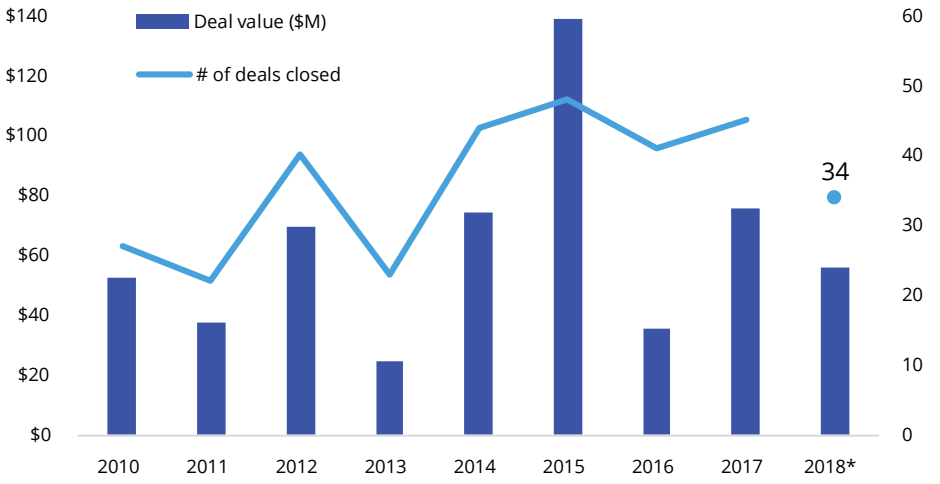
Source: PitchBook
*As of October 31, 2018

Median global agtech VC pre-money valuation size ($M) by stage



Source: PitchBook
*As of October 31, 2018

Global agtech first-time VC deal activity



Source: PitchBook
*As of October 31, 2018

above the 2017 median valuation of $50 million. A number of companies were awarded valuations north of $100 million this year, including several in the third quarter. Indigo Agriculture's September round was an outlier, raising a $250 million Series E at a $3.45 billion post-valuation. Other notable rounds included VoloAgri (achieving a $285 million post-valuation), Pivot Bio ($200 million) and Benson Hill Biosystems ($195 million).

Valuations are also increasing for some promising early-stage companies: Ceres Imaging raised a $25 million Series B at a $110 million post-valuation, an unusually high Series B markup in this sector. As agtech continues to mature as a sector,

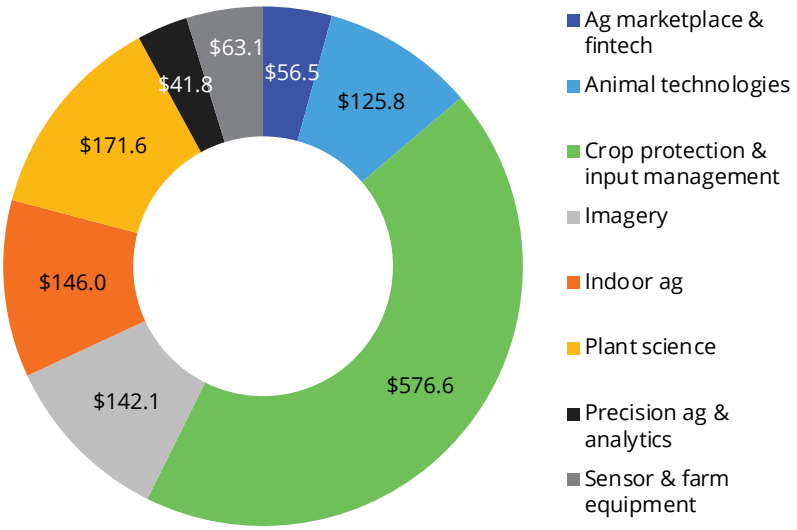
Median VC deals ($M) by agtech subvertical (2018)*

Agtech subvertical	Median deal size
Ag marketplace & fintech	$5.5
Animal technologies	$2.7
Crop protection & input Management	$25.2
Imagery	$2.4
Indoor ag	$1.7
Plant science	$9.6
Precision ag & analytics	$2.0
Sensor & farm equipment	$1.3

Source: PitchBook
*As of October 31, 2018

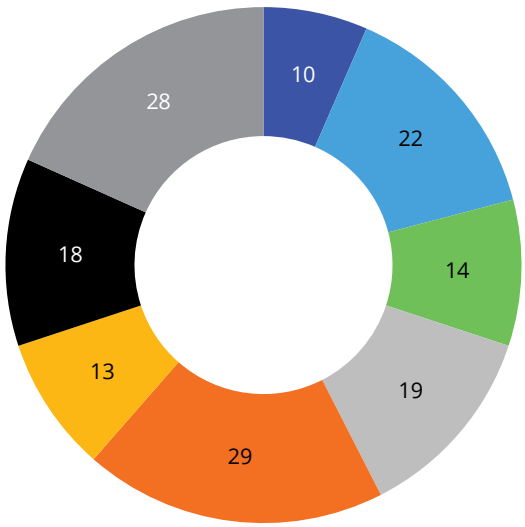
"Median deal sizes reveal which agtech subsectors tend toward capital-intensive applications and development."

Global agtech VC deals ($M) by subvertical (2018)*



Source: PitchBook
*As of October 31, 2018

Global agtech VC deals (#) by subvertical (2018)*



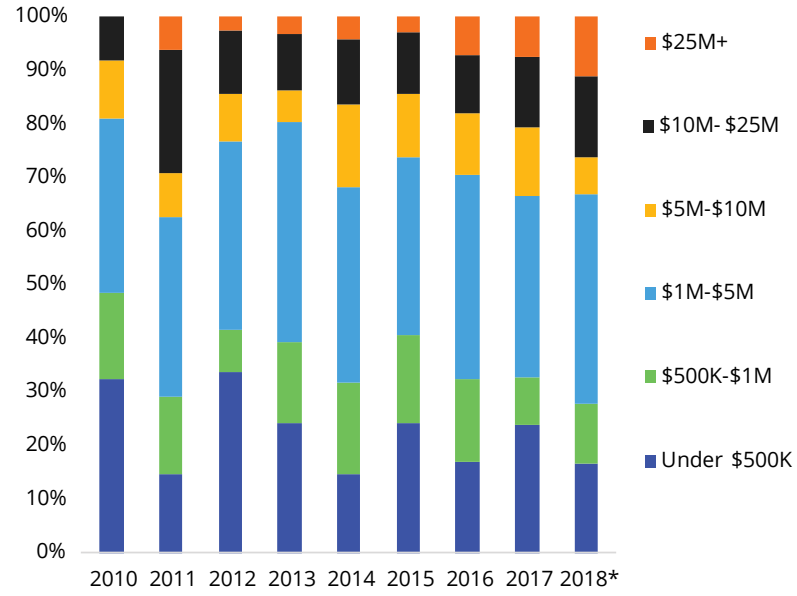
Source: PitchBook
*As of October 31, 2018

the market could see more nine-figure valuations at the early stage for the most promising applications.

It is worth noting that even as investors explore capital-light subverticals in agtech, median figures also reveal which areas are more capital intensive in general. The road to commercialization is more expensive for plant sciences and animal health startups, for example, which is why the former has one of the highest median tallies in 2018 to date relative to other segments. VC invested trends will therefore be affected for such segments down the road; volume can be a more useful indicator of investors' overall interest, consequently. But what can be even more telling when it comes to investors' interest and the maturation of agtech in general is analysis of activity by region.

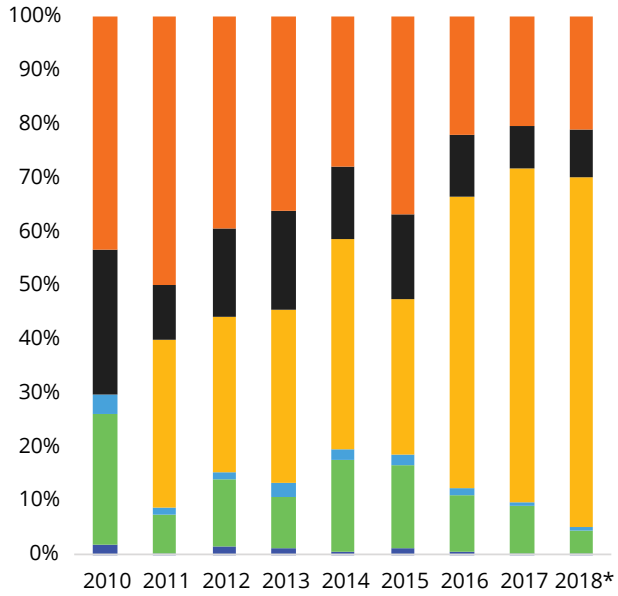
Although the US enjoys the advantage of the most robust venture scene globally, investors across the world are dialing up their agtech investing pace, with Europe and Asia emerging as heavyweights especially in the past few years. This trend is intertwined with not only the increasing incidence of late-stage investment in agtech, but also the growing globalization of VC, as

Global agtech VC deals (#) by size



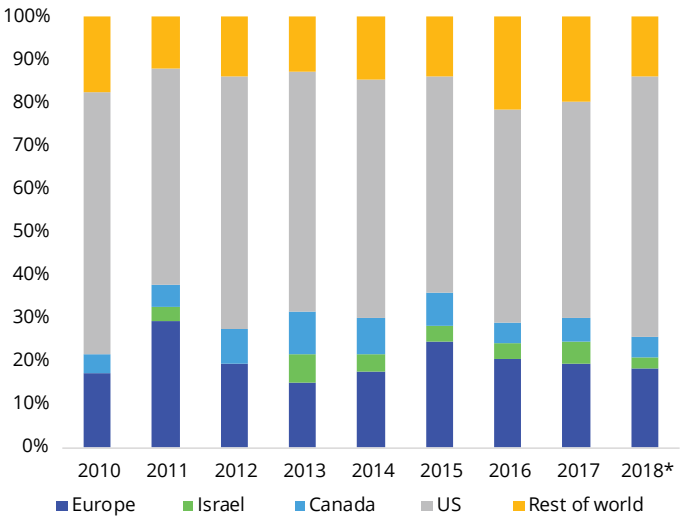
Source: PitchBook
*As of October 31, 2018

Global agtech VC deals ($) by size



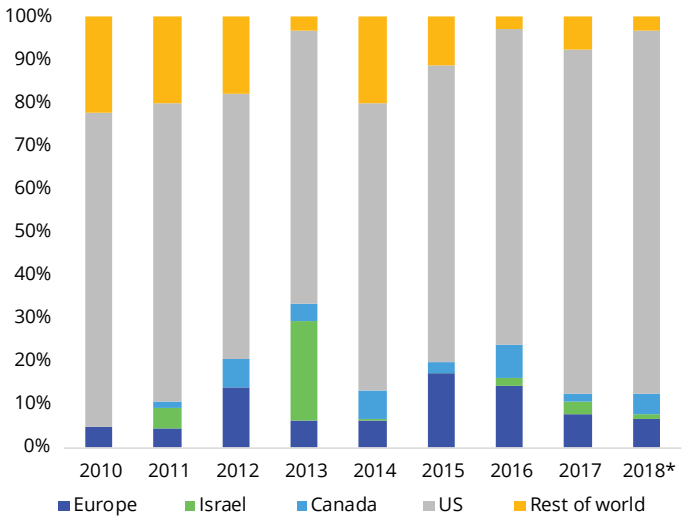
Source: PitchBook
*As of October 31, 2018

Global agtech VC deals (#) by region



Source: PitchBook
*As of October 31, 2018

Global agtech VC deals ($) by region

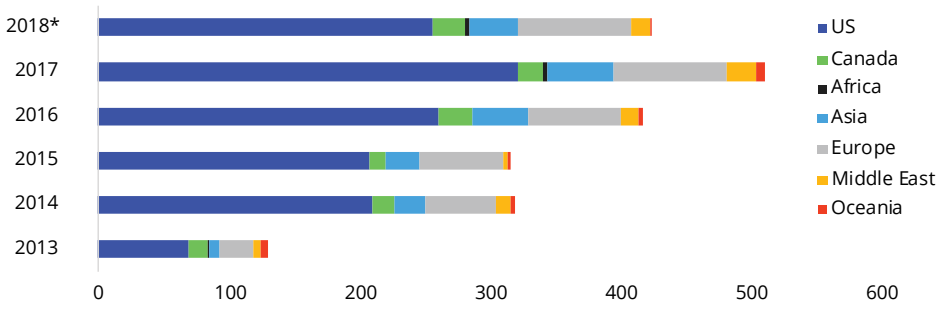


Source: PitchBook
*As of October 31, 2018

nontraditional and/or new firms look to gain exposure to companies growing privately. Agtech in particular benefits from such a trend as it is already out of necessity a global industry and boasts a plethora of investable segments that can cater to particular investors' strengths and strategies.

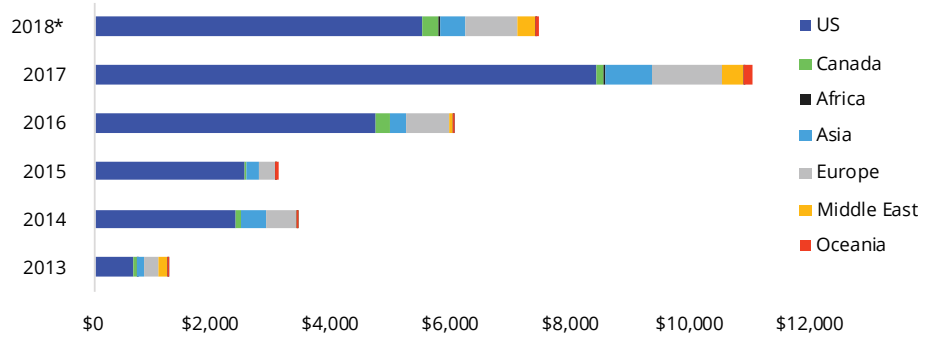
Consequently, we have seen a still-robust pace of first-time financings over the past several years, with scarcely a slowdown in 2018 to date. Not only is there plenty of capital within venture and increased interest in agtech in general, but enough of both to keep funding even fledgling startups with their first institutional round of financing. Such supplying of the pipeline of venture-backed agtech companies now will entail a need for future funding. As the leaderboard of most active investors in the past three years or so reveals, that need is somewhat assuaged by the variety of agtech firms' foci when it comes to stage, with the full spectrum from pre-seed to late stage reflected. All in all, agtech is scaling sustainably, with multiple companies across the lifecycle raising successfully.

Global agtech VC deals (#) by investor HQ



Source: PitchBook
*As of October 31, 2018

Global agtech VC deals ($M) by investor HQ



Source: PitchBook
*As of October 31, 2018

Most active investors in agtech by stage (2016-2018)*

Firm	Angel & seed	Firm	Early	Firm	Late
SVG Partners	8	S2G Ventures (Seed 2 Growth)	10	Kleiner Perkins	7
Yield Lab	6	SP Ventures	8	Desjardins Capital	6
SOSV	4	Finistere Ventures	7	Middleland Capital	5
500 Startups	4	Syngenta Ventures	6	Avrio Capital	5
Innova Memphis	4	Anterra Capital	6	S2G Ventures (Seed 2 Growth)	5
East Ventures	3	Monsanto Growth Ventures	6	Cycle Capital Management	4
Enterprise Ireland	3	Spruce Capital Partners	5	Cultivian Sandbox Ventures	4
Viking Global Investors	3	Alexandria Venture Investments	5	Syngenta Ventures	4
Plug and Play Tech Center	3	Innova Memphis	5	GV	4
NXT Ventures	3	Middleland Capital	5	WP Global Partners	4
Angelor Capitale	3	SOSV	4	Pontifax Agtech	4
Keiretsu Forum	3	Cultivian Sandbox Ventures	4		
		Data Collective	4		

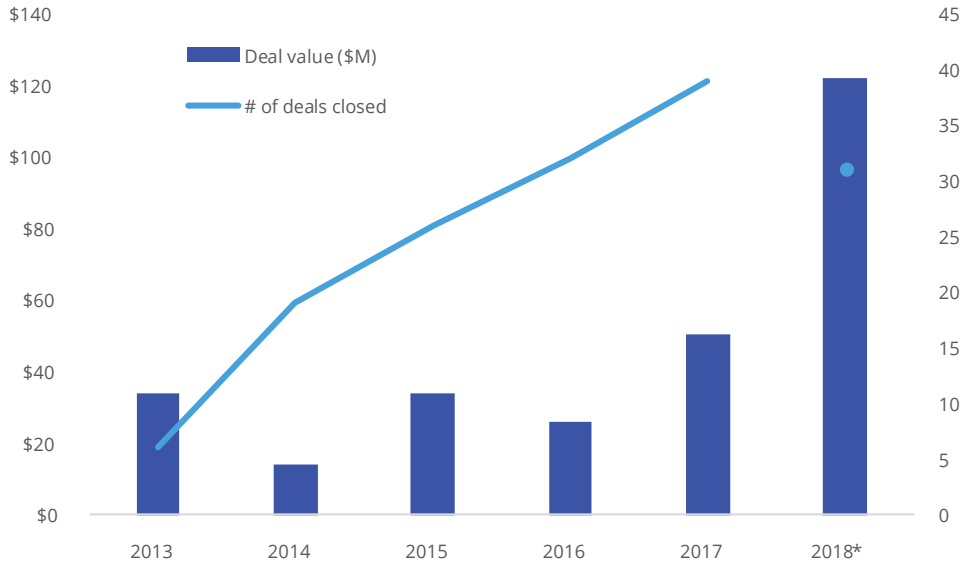
Source: PitchBook
*As of October 31, 2018

Regional spotlight: Latin America

Note: The datasets in this regional spotlight were compiled using a different methodology in order to capture the full scope of agtech investment. All venture deal types as well as non-control corporate transactions were included, while exclusions of backing statuses other than venture capital were also removed. In addition, as part of this spotlight, we invited regional investors and industry players to contribute their insights and knowledge of the local agtech ecosystems within Latin America.

Through the end of October, capital invested across the agtech sector in Latin America soared to an all-time new high exceeding $120 million. However skewed that tally is by the outlier $60 million financing of CargoX—a trucking platform based in Brazil—the volume of activity is also remarkably healthy, on pace to near 2017's mark of 39 financings. Such growth rates are encouraging, given that from an overall macroeconomic and capital perspective, agtech remains underfunded relative to the regional agricultural economy on the whole. After all, Latin America is an overall net food exporter, representing 13% of all agricultural trade worldwide. Rapid population growth within the region alone provides a compelling macro incentive for the agriculture sector to innovate and expand. The investors currently active within agtech in the region are cognizant of this context, and accordingly often focus on not only the particular strengths of each country's domestic ecosystem, but also broader technical infrastructure and opportunities. Each country boasts separate legacies of agricultural, technical and industrial development, which plays into how their agtech ecosystem is developing. For example, given the scale and intensity of sugarcane production in Brazil, there are plenty of opportunities in targeting products that can be immediately utilized in tandem with machinery that is currently used in production yet provide additional benefits in crop monitoring. On the other hand, as digitization and network connectivity in general has improved across multiple countries in the region, there are more novel crop protection and input management solutions being worked on, while other startups are tackling biologicals development, or more consumer-oriented products. NotCo, a company based in Santiago, Chile, produces plant-based food products via a platform that mixes more sustainable ingredients to mimic and replace other comestibles.

Latin American agtech VC and non-control corporate deal activity



Source: PitchBook
*As of October 31, 2018

Select 2018 financings & exits of Brazilian agtech companies

Company name	Select investors, acquirers	Deal size	HQ
Intergado	Inseed Investimentos	BRL10M	Betim
Gênica	SP Ventures	BRL6M	Sao Paulo
Aegro	SP Ventures, A.B. Seed Ventures	BRL5M	Porto Alegre
SpecLab	SP Ventures	BRL4.5M	Sumare

Source: PitchBook
*As of October 31, 2018

Looking forward, prospects seem fruitful for both venture investors in the region as well as agtech startups, as more generalist investors broaden their scope to address the burgeoning potential within the sector, and the broader exit environment has seen at least a handful of notable exits, although not yet to any sigificant degree in agtech. As the overall technology ecosystem matures country by country, continued exit flow will aid immeasurably in supporting domestic and regional investment firms, thereby trickling down to agtech in particular. A major area for agtech investors in particular to target will be the financialization and digitization of current agricultural technology, enabling a meeting in the middle along segments of the overall ag value chain in a given subsegment.

Regional spotlight: Latin America—Argentina

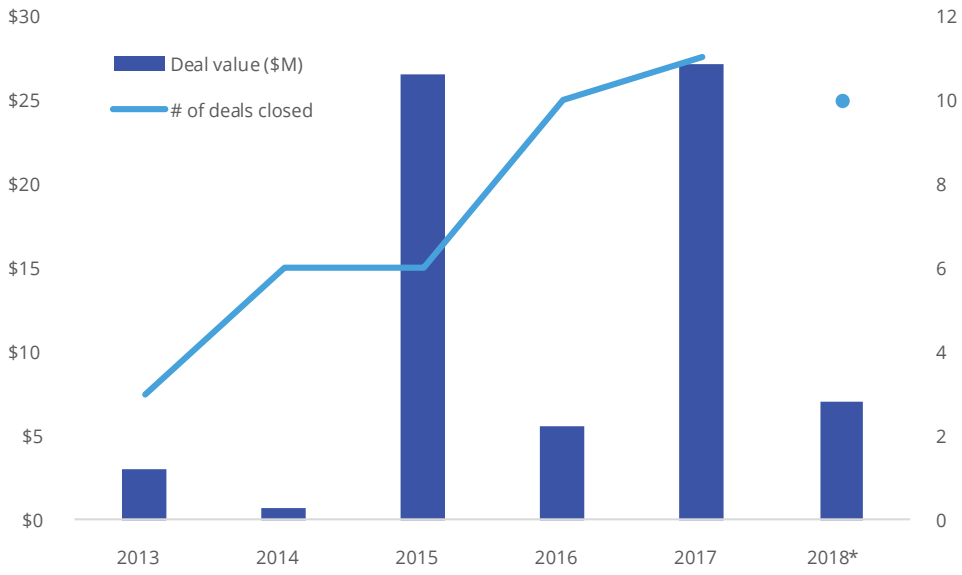
By Ingrid Fung & Jennifer Place, Finistere Ventures; Bernardo Milesy, GLOCAL Managers

Argentina boasts a nascent agtech ecosystem showing robust signs of growth. There has been strong support for public and private initiatives aimed at fostering collaboration and innovation within agtech. For example, FONDCE is a government fiduciary fund designed to bolster innovation through investment matching of up to $100,000 for startups selected by an elite group of accelerators. In recent years, Rosario has established itself as a hub of agtech excellence, which is no surprise as the city sits in the middle of the Argentina Pampa plains. Several accelerators focused on agtech (including GLOCAL) have also been founded. Bernardo Milesy from GLOCAL comments: "Although the ecosystem is more nascent, we are encouraged that in the last year alone Argentina has narrowed the gap in domestic venture and ag corporate interest in agtech compared to Mexico, Colombia and Brazil."

Agtech innovation is also bolstered by the highly active and productive R&D ecosystem in Argentina through the National Agriculture Technology Institute ("INTA"), providing startups with a strong source of technology. In addition to home-grown models and technology, Argentinian startups have also begun adapting business models that worked well in the US to the local market.

Examples of successful agtech startups are beginning to emerge. Bioceres, an Argentinian agricultural biotech company specializing in drought-tolerant soybean varieties, grew to $22 million in EBITDA in recent years. The company recently announced a reverse merger with the publicly listed Union Acquisition, backed by the private equity firm Union Group and Atlantic-Pacific Capital. Since its founding in 2001, Bioceres was nearly entirely backed by corporate investors, including by major local corporates such as the national oil company YPF to internationals like Monsanto. As the Argentine agtech ecosystem continues to grow, we anticipate that exit activity will grow alongside.

Argentinian agtech VC and non-control corporate deal activity



Source: PitchBook
*As of October 31, 2018

Select 2018 financings & exits of Argentinian agtech companies

Company name	Select investors, acquirers	Deal size	HQ
Agrofy	SP Ventures, GLOCAL Managers, Syngenta Ventures	$6M	Rosario
Kilimo	GLOCAL Managers, Alaya Capital Partners, Xpand Ventures	$950k	Cordoba
Bioceres	BAF Capital, Monsanto	N/A	Rosario
Auravant	GloCal Venture Capital, NESsT	$350K	Buenos Aires
Grupo PLA	Deere & Company	N/A	Las Rosas

Source: PitchBook
*As of October 31, 2018

To date, the Argentinian VC market is characterized by a high degree of investment from corporate and high-net-worth sources. Consequently, consistency of capital invested has been lacking, due to the relatively small venture ecosystem—total VC invested in 2017 totaled only $50.8 million. That said, foreign funds are beginning to focus on the Argentinian market, with Yield Lab establishing a presence in Rosario in 2017. Overall, capital invested into agtech startups has trended upward since 2012, rising from $3 million to a high of over $27 million in 2017. Though deal counts remain small, the number of transactions per year also has steadily increased from three agtech deals done in 2013 to 11 in 2017. Though agtech remains a relatively small segment of the Argentinian VC market, it is undoubtedly on a trajectory to continuing growing in coming years.

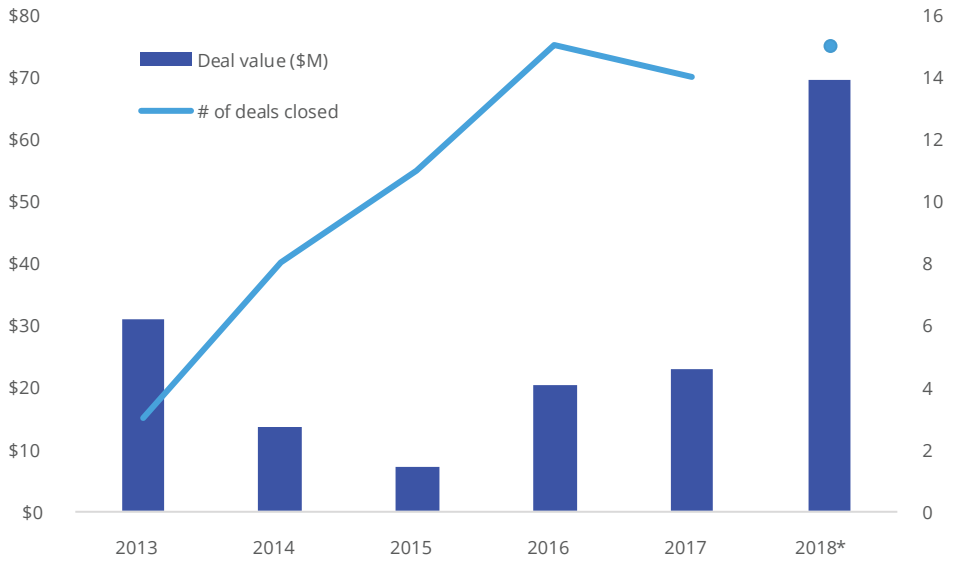
For a market map of the Argentinian ecosystem assembled by GLOCAL Managers, click here.

Regional spotlight: Latin America—Brazil

By Ingrid Fung & Jennifer Place, Finistere Ventures; Francisco Jardim & Thiago Lobão de Almeida

Brazil is a heavily agricultural economy that boasts a number of vertically integrated agribusinesses that encompass operations in production, processing and sales of end products. These highly industrialized operations are often first adopters of technology that can create operational efficiencies across their businesses. While agribusinesses comprise over 23.5% of the GDP,[1] only a small fraction of venture investment in the country flows into agtech startups. Over the past five years, there has been aggressive growth in research publications, technologies and more within agtech, but venture funding has not grown at a similar pace. Nevertheless, the Brazilian agtech ecosystem has shown consistent signs of growth, driven by a highly active venture environment within the country and strong appetite for technological integration with large agribusinesses.

Brazilian agtech VC and non-control corporate deal activity



Source: PitchBook
*As of October 31, 2018

A total of $623 million has been invested into Brazilian startups so far in 2018. Concurrently, Brazil saw the creation of three unicorn startups this year (99, PagSeguro, and Nubank) and produced several successful IPOs, including that of Stone Pagamentos (IPO: $6.65 billion). The country is also home to a number of highly active funds. In 2017, Brazilian VCs made up 33% of all funds investing in agtech startups within Latin America. However, to date, agtech has comprised approximately 11% of all VC invested into Brazilian startups. Nonetheless, investment into agtech startups continues to grow in Brazil, rising to $69.6 million in 2018.

The agtech market in Brazil is dominated by early-stage financings, with over 75% of deals financed between 2017 and 2018 being classified as early stage. Although most deals financed within Brazil are early stage, most capital (over 85%) is allocated to late-stage VC, suggesting that the market is maturing and that startups are graduating to larger rounds. Examples of late-stage financings include that of agricultural logistics software company Solinftec, which was primarily backed by foreign investors (TPG Alternative Renewable Technologies and AgFunder). Although data points are sparse, it appears that timelines to exit are also shortening within the Brazilian agtech ecosystem. For example, the founding and acquisition timeline for Atman was over 12 years, whereas Strider was acquired in 2018 by Syngenta only five years from founding. Taken together, trends indicate that Brazil is positioned to be the Latin American market to watch for agtech growth.

As the Brazilian agtech market continues to develop, venture investors are becoming more confident of exits within the agtech segment. According to Francisco Jardim of SP Ventures: "Throughout even the recent crisis of the past two years, agtech is one of the few sectors that has seen continued M&A—even one of the first digital ag acquisitions happened recently, when Syngenta bought Strider. We foresee Big Ag companies looking for digital assets that are local, that can provide not only products proven within this region, but also local talent and known brands. IT companies are also looking into the domestic agribusiness sector. Last but not least, private equity funds have also been increasingly interested in companies that are mature enough for their scope."[2] Given the active venture system with in Brazil, coupled with appetite for tech adoption by highly integrated agribusinesses, it is expected that this promising agtech ecosystem will continue to grow in the years to come.

1: "Brazil agriculture, agribusiness contributed 23.5 pct to GDP in 2017 - Can," Reuters, Anthony Boadle, December 5, 2017

2: Francisco Jardim, personal communication, November 5, 2018

Macro trends

A Q&A with Seana Day, Kenneth Scott Zuckerberg & Adam Bergman

Seana Day

Seana Day brings over 12 years of investment, M&A advisory and technology experience to her partner role at the Mixing Bowl.

Kenneth Scott Zuckerberg

Ken Scott Zuckerberg is a sector strategist and industry portfolio manager within Wells Fargo's Food and Agribusiness Industry Advisors (FAIA) division.

Adam Bergman

Adam Bergman is Head of Wells Fargo's AgTech & FoodTech Investment Banking Practice.

Given agtech's unique confluence between technology and agriculture, multiple macro trends have trickle-down effects across the sector. We sat down to discuss macro trends across agtech with Kenneth Scott Zuckerberg and Adam Bergman of Wells Fargo and Seana Day of Mixing Bowl to get some insight.

There has been intensification of investment into agtech over the past decade. Why, in your opinion, is this occurring?

Zuckerberg: So there are a couple of tailwinds at play here. The main driver, though grower adoption has lagged for a number of reasons, is the digital transformation that is hitting every industry. This is creating opportunities for investment in ag for non-ag investors. For example, some of the emerging technologies in agriculture are very useful for risk management (well understood by investors). This is where the intersection of agtech with banking and insurance companies comes into play. For example, if you're lending money on farmland, you might want to lend on an operating basis (cash flow working capital) or perhaps evaluate for lending against real estate. So how do you value the latter? Newer ag tech can assist in assigning those valuations based on property yields, soil quality and productivity of the land, thereby aiding lenders in providing financial guarantees. That's just one example of agtech becoming more and more valuable in the past decade and proliferating in applications. Over the next three to five years, we'll see that value chain continue to integrate vertically, where farmers will have greater ownership of storage, for example. Those risk dynamics will become more important, accordingly.

Day: From the startup side, there are two different breeds that have emerged within agtech; those that are tackling disruption and those that are trying to build on top of the existing technologies that, say, Deere or other corporates are using. Given that interplay, it's worth noting that the role of CVC in agtech remains very important. With respect to underlaying drivers, these are often on the consumer side and are reflective of broader market trends such as traceability, clean brands, etc. There are also plenty of investments in pilots within ag and more that are not really tracked as true VC. Investments don't always align with corporate need, so corporations have tended to look at whether they should start up dedicated investment vehicles, where the real value for them really lies and so on. Last but not least in terms of interplay, M&A within agtech has certainly picked up, leading to increased attention/interest. PitchBook data reveals a steady clip of venture-backed exits since a peak of 10 in 2013—29 alone since then, relative to 16 from 2006 to 2012.

How will the role of strategics continue evolving with regard to agtech going forward?

Bergman: Most companies in agtech are still quite early stage. Even Blue River Technology was not a very mature company that had significant cash flow yet. Strategics have been looking to these companies as springboards to new technology thus far, primarily. The cost of the acquisitions relative to their R&D spend isn't that high, all said and done. So we're still at the beginning of established ag corporations using acquisitions in the place of in-house R&D. There's also an educational component that is important for investors in general but also acquirers, as agtech doesn't fit neatly into the traditional industry segments like biotech or ICT where some (acquirers and investors) feel more comfortable.

Zuckerberg: When you think about the typical buy-side shop, there are a lot of different groups. For example, agricultural equipment manufacturers, seed companies and logistics companies all have different models and very desperate businesses. However, you will see a (startup) company involved in seed genomics that has ties to agriculture but also a biotech services component that doesn't fit neatly into any one of the business models in current setups. Strategics will have to evolve as business models change. An early example of this would be chemical crop protection businesses integrating seed businesses.

Do you see firms evolving to address those newer areas, and which new areas do you think are most promising?

Bergman: Yes, and it will be defined in part by what part of the country you are in, and which part of the value chain you can tackle. For example, there will be a significant automation opportunity where I am at in central California as labor costs rise and younger demographics shy away from labor on the farms. Plus migrant labor potentially may decline. Consumer taste changes will also significantly impact which areas firms can address. For example, with Beyond Meat announcing a potential IPO, plus nontraditional protein seeing an explosion in consumption—primarily in developed nations—you will see industries being forced to evolve alongside opportunistic investors that can capitalize on growth in those areas. Last but not least is the rise of the farm-to-table movement, which is encouraging the growth of indoor farming so produce can be more local, more sustainably transported, etc. Consumer preferences' shifts can't be underrated.

Zuckerberg: It's very important in investing not to forget the past when you're looking forward. Let's zero in on robotics and automation with that in mind. Back in the 1970s, there were labor issues much like we may see soon in our environment.

Bergman: I'd argue it's coming late to the US as parts of Europe and New Zealand have already had to develop newer technology given labor costs.

Zuckerberg: For example, a milking robot has been developed in Europe that, with the touch of a few buttons, can get a cow milked and that milk stored via entry to a pen after an ear tag scan. But it's not just livestock. Robots for row crops, given that that process is very industrialized already, isn't that exciting. But high-value crops, be they fruits or vegetables, will see more advances in robotics.

Day: If you look at the areas where categories are converging, from pest detection in the field to soil moisture tracking, etc., you see emerging congruences where producers are given real decision support. Data acquisition techniques that are capital efficient are critical. Patient capital is important from both sides, both investor and company. If digitization is the first step in the staircase, then you can measure what you do, then you can manage what you do, then you can optimize what you do and then you can automate it.

But without those initial steps of digitizing, which we've all now seen, it takes some time to get producers to stop relying on their notebooks or what's in their brain and to get it into a digital format. But that is not a one- to two-season proposition. That's a five-plus (season endeavor). And accordingly, in-field adoption of technology and feature sets will be truly critical and quite difficult to achieve depending on the area. This is likely why we don't see that many plant science companies. Another area where you are seeing more connections is between agronomic data and ERP data. When I talk to growers or dairymen, they're either managing toward better profitability or maybe yield, but to the extent that they can create tighter linkages between their field data and profit & loss statements, that's a powerful stimulus for adoption. Supply chain analytics and risk management, where companies can help food processors, manufacturers and handlers all benefit from more visibility into the actual farming practices, is another area of growth. This is a bit more of a difficult area, but soil health and its implications for food safety and inputs is another field that should stand to benefit from increasing interest.

What are some of the steps that you are working on to make the connections some of these developments will take?

Bergman: At Wells Fargo, since our firm is the largest commercial banking lender to production ag, we're working on connecting agtech companies with investors, so the former can get non-dilutive capital early on, given the potential length of ramping up. We've made a commitment to cleantech incubators, accelerators, and environmental organizations to the tune of about $100 million. Our Innovation Incubator, started a few years ago, works with companies on technical assistance during that roadmap, helping with validation and the like prior to scaling, and has recently added agriculture as an area of focus. Once a company has a working prototype equivalent, we'll find a partner that can act as a test validator as well as a reference customer.

Day: There are basically three parts of our business. We do principal investing through Better Food Ventures, which is currently fundraising. Within Mixing Bowl, there are two parts of advisory work that we do; one part is around corporate innovation advising, another more focused on information sharing and thought leadership within the space to drive the entire ecosystem forward. In brief, that advising role helps address the issues we see across the ecosystem in terms of relationships—how do big ag companies interact with innovators in Silicon Valley? Companies can be so culturally different. At times you need to bridge the gaps between divisional leaders that are embracing change and others that need to be persuaded. Three or four years ago, there were hardly any food or ag companies in Silicon Valley, and now many have built a presence or fostered a local network. It's not just Silicon Valley, either. There are other ecosystems popping up all over the country, whether in Minneapolis, Iowa or elsewhere. A diaspora of innovators is slowly unfurling.

How do you see those ecosystems developing going forward?

Day: Just a few weeks ago, we saw South Dakota State University and Raven Industries form an alliance to create a precision ag center at the university, spending $46 million. That type of momentum is huge, particularly with regard to academic and private sector partnerships. You can't always replicate exactly what has worked elsewhere in other ecosystems but retrofitting for your own market is possible and an important area of focus. Healthy M&A remains important for overall liquidity, but an underrated area is emphasizing investing in founders that are addressing real challenges. One of the frustrations in the space is seeing billions flow into just one segment—the e-grocery or meal-kit arena—while farm technology only sees a few hundred million dollars. There are real food system challenges, so I hope we continue to see strengthening of communities addressing disparate challenges. That is definitely happening, however; if you had asked me the same question a year ago, I would have been more pessimistic than I am today.

Do you have any other last topics you wanted to address?

Day: Growers don't really care about data. They care about whatever that will give them either more time or make them more profitable. The companies that really understand that dynamic and how to translate their value into dollars and cents will have the best shot, because they're able to provide links between field productivity and monetary results. Linkage to the financials is so, so important. Not just from a decision standpoint, but from the viewpoint of the bottom line.

Zuckerberg: Data analytics in the hands of an agronomist that understands both farming and technology and can express that to farmers and customers of all kinds, is very powerful. I think that within a year we are going to see a merger of a data software analytics company with a financial institution, and that will be the first shot of sorts for a new paradigm in agtech. We're going to see vertical integration of businesses across the industry.

Bergman: To me, it really is consumer preferences, which really are changing quite fast. On top of that, however, a lot of challenges agtech companies face is they have to sell into commoditized industries. You have to do your homework about end markets—there are a lot of moving parts. So how many of these companies will be able to get levels where they are generating net profitability? I think that the intersection of agtech with fintech and insurance tech will ultimately generate earliest adoption due to the economic benefits that are able to translate into farmers' bottom lines faster.

Consolidation and its effects on agtech

A Q&A with Rob Dongoski & Mark Thompson

Rob Dongoski

Rob Dongoski founded the Global Agribusiness Center at EY, where he works with Fortune 500, Global 1000 and private companies in advisory and transaction capacities.

Mark Thompson

Mark Thompson is currently the Vice President, Business Development at Nutrien, the world's largest agricultural inputs company.

From farm to cooperative to input supplier to food manufacturer, consolidation in the ag and food industry is likely to continue. As consumer preferences change, global megatrends become reality, and innovation and investment grow at a rapid pace, it is clear to see consolidation is not just about efficiency and scale. There are many reasons for each transaction but they mostly point back to producing more, feeding more, and using sustainable practices. At EY, we expect the ride is just beginning and will increase in interest over the next several years as the lines between supplier, customer, and competitor are transformed by innovative ecosystems. - Rob Dongoski, Global Agribusiness leader at EY

It's no secret that agriculture is experiencing a lot of consolidation at the highest levels. What trends have you seen in agtech and the broader agricultural industry driving this activity?

Dongoski: When you look at these trends on a macro basis, that's our starting point for understanding all this consolidation. Population growth means more food, and more food means finding ways to produce that, whether it's more inputs or better inputs. Population growth is an immutable fact at this stage. The second trend is a rising middle class and rising incomes across the world. We're no longer forecasting those out to 2030 or 2040. Incomes are rising as we speak. And rising incomes mean a shift in diets, chiefly to more protein and away from grains. That changes the dynamics of the food cycle. Third is around urbanization, which is translating into people leaving rural communities and heading into cities and suburbs. That leaves a void and the question of who will tend the farms. In many developed countries, the tradition of passing family farms down through the generations is starting to create consolidation opportunities for growers who want to be enterprise farmers. Those three factors—more food, different food and different people growing that food—creates a trickle-down effect on the value chain. Fewer, larger farms might mean fewer, larger, but more sophisticated customers, more high-end, capital-intensive customers, and more technology-adept customers at the producer levels. That whole cycle creates the need for consolidation.

Given that Nutrien has a unique prospective on the market, Mark, could you comment on how recent consolidation affected your segment?

Thompson: Over the last three years, we have seen an unprecedented wave of consolidation across the entire ag inputs sector—including continued consolidation at the farm level. It's also not a coincidence that during the period leading up to this M&A activity, we saw a significant multi-year decline in the prices of key agricultural crops, which created challenging economic conditions for the entire industry. I don't think there is any debate that this was an important catalyst behind the consolidation that's played out in the space.

Given the challenging market dynamics, it's my view that this M&A activity has been important to improving the health and viability of the sector—and I believe it will drive a number of positives. The most important stakeholder in this entire equation—and the one that Nutrien is always focused on—is the grower. And if we look at North America as an example, consolidation at the farm level has been driven by those growers with stronger financial positions, which increases farm size and scale over time, as well as operating efficiency. This is important to ensure sustainable profitability and financial returns for growers, even in challenging market conditions.

There's also a strong degree of connectivity in the value chain—and as larger growers consolidate their operations and farm size increases, it is increasingly important that we see the same push for increased efficiencies, lower cost-to-serve and stronger operating models that can better provide integrated solutions and innovation at the ag retail and crop input manufacturer levels as well. Nutrien was the product of a merger between Agrium and PotashCorp earlier this year, and these objectives I'm describing are all central to the strategic rationale and value proposition that drove the creation of Nutrien. And when you look at the other recent acquisitions and combinations in the ag space, I think we can see some very similar themes.

You bring up an interesting point on consolidation at the farm level. Nutrien's model is unique, not only in crop inputs but also in crop retailing. How does that affect profitability and efficiency of service?

Thompson: Nutrien is certainly unique in the marketplace because our operations are integrated across the ag inputs value chain and extend from ground to grower—with the combination of world-class, globally competitive NPK manufacturing and retail distribution businesses. We really see the merit in the combination of these platforms, which allows us to benefit from the unique financial and operating synergies across our business and ultimately push to create more value for our customers.

From our perspective, an integrated model that has direct line of sight into growers' needs and preferences, as well as how and where agricultural markets are changing and evolving, are all important drivers of our ability to be responsive, innovate and provide solutions for our customers that allow them to be more successful. This is also a business model that allows the company to better weather economic and commodity cycles, which is important for our customers and our shareholders. The combination of a leading retail distribution platform and a large upstream manufacturing business has built a more stable platform that can generate strong cash flows throughout the cycle and position us to be a reliable partner for our suppliers and customers, despite the cyclicality of the industry. It also creates a strong financial foundation that enables Nutrien to continue to invest in our assets and grow our business on an ongoing basis, independent of the external environment.

Taking a step back and looking at the broader market, Rob, could you comment as to how mergers are affecting consolidation at the lower end of the market?

Dongoski: What you see downstream is, what's the role of the retailer? What's the role of the distributor, who has historically competed on access to the growers through input supply distribution and infield services? If we're now digitizing advice and potentially distributing inputs directly, then is their role still just a distributor? Changing the dynamics at the level of the value chain certainly won't happen overnight, but it's creating innovation and changing the business model. People are rethinking the profit pools and where those profit pools will ultimately rest. Those are downstream impacts I'm seeing already.

Following the wave of mega-mergers over the past few years, observers have predicted a second wave of smaller acquisitions, including for VC-backed startups. Do you see evidence of this on the horizon? Is the market still expecting a number of "innovation buys" now that mega-merger dust is settling?

Dongoski: The first wave of consolidation included a lot of sorting out at the top. What assets did they want to keep? What did they have to give up or divest in order to finalize those deals? We may see some more movement around that question. Re a second wave, if these large input suppliers need to determine their place in the grower's experience, the question is what kind of experience they can give those growers that is much better than what they're getting today. How do you create visibility in the supply chain? How do you bring algorithms and advice down to the farm level in ways that didn't exist before? Those are the questions they might seek to answer through acquisitions.

For farmers, there's still plenty of coffee table talk around how their seeds performed or how many pounds of nitrogen they applied. To win over hearts and minds, startups need to prove their technologies work, and if they do work, how do they get the message out. When you look at agtech versus consumer technology, with agtech, you really only get one opportunity a year. Farmers are making annual decisions in most cases. That changes the messaging side—when the technology does work, how do you ensure the market knows about it in time? That's a challenge for investors, who want quick growth, exits and returns. The main technologies that comprise agtech, whether its wearables, sensors, drones or robotics, all that data needs to be connected for it to be actionable. What you see from smaller tech companies is a push for those types of technologies, and larger tech companies are trying to bring artificial intelligence and machine learning solutions to the table, ultimately to stitch the ecosystem together. The question is how Big Ag companies play into that. They may be starting at the same end as Big Tech in those cases.

Thompson: We have seen a few high-profile exits over the past couple of years, but they have been relatively few and far between. As a result, one sign that I continue to watch for as an indicator of the long-term sustainability of the agtech space is an uptick in the frequency and diversity of exits for early-stage companies and technologies, as well as some broader validation from the public capital markets via IPO, which we haven't really seen yet. One of the unique dynamics in ag is that there are only a handful of larger strategics in the space that have demonstrated the willingness to make substantial investments or acquisitions resulting in meaningful exits for early-stage agtech companies. And to make progress on the IPO front, I believe we will need to see a class of companies emerge that successfully demonstrate an ability to achieve both scale and profitability coupled together.

What are buy-side strategics looking for in today's market?

Dongoski: From a strategic standpoint, new technology acquisitions ultimately rest on two questions. Which customers are not being served today, and second, how do startups serve them at extreme levels so they become go-to disrupters? Growers are operating at such slim margins today that they have to make decisions based on risk, profit and effort. If they invest money, how does it change their risk profile? How does it impact profits, and how does it impact effort? Spending half a million dollars on a self-driving tractor will certainly impact profits in one way, but it changes the work they have to put in, in a different way, and it might not impact their risk profiles at all. But if that tractor doesn't positively impact the combination of all three of those variables, it will probably just be a shiny new toy.

The same dynamic happens outside of ag. Look at Uber, for example. People had access to taxis already, but Uber identified nuances in that model and served those customers differently and disrupted the entire industry. Agtech startups need to approach their ideas in the same way.

Can you speak to the impact the startup community has had on your segment of the market?

Dongoski: If we continue down the path where you need 10 years and $100 million to get a seed to market, we're going to continue to need large corporate R&D to fund that. The through-puts and success rates are lower, and there's a lot of risk involved, not unlike pharma. New technologies that are less reliant on genetics could present opportunities for startups, maybe around microbials or micronutrients. Some of those opportunities might require a nimbler organization compared to bigger organizations that need to shoulder those 10-year processes.

Thompson: There has certainly been a dramatic increase in the levels of investment being directed into early-stage companies across the ag industry verticals, as well as an expansion in the early-stage investor base that now extends beyond the pioneering agtech venture funds that have been familiar faces in the space over the last decade. I think that can be broadly seen as validation that there are positive long-term fundamentals underpinning the sector and an attractive value creation opportunity associated with global agriculture.

There are some very promising early-stage companies in agtech that have developed novel technologies with encouraging signs of on-farm adoption—and we have been actively engaging with a number of them, making targeted investments and acquisitions across Nutrien's areas of focus, while also partnering commercially on a number of fronts. To the extent that these investors and companies are focused on adding real, sustainable value for growers, we welcome the innovation and want to play a role in facilitating adoption.

That said, like other industries, there are many companies that have struggled to prove their utility or demonstrate value—and have crowded the space in certain verticals. It's our expectation that these companies will struggle to attract subsequent growth capital, and we will see some rationalization in certain areas of the sector over the next few years. While interaction among established industry participants and early-stage companies has certainly continued to increase dramatically, I think we are still in the early innings of understanding the impacts that this closer collaboration will play in the broader discovery and technology adoption pipelines for the ag sector as a whole.



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*Top 100 Farm Lenders Ranked by Dollar Volume, FDIC, 2Q 2018

1. Deposit products offered by Wells Fargo Bank, N.A. Member FDIC.
2. Wells Fargo Securities is the trade name for the capital markets and investment banking services of Wells Fargo & Company and its subsidiaries, including but not limited to Wells Fargo Securities, LLC, a U.S. broker dealer registered with the U.S. Securities and Exchange Commission and a member of NYSE, FINRA, NFA, and SIPC, Wells Fargo Institutional Securities, LLC, a member of FINRA and SIPC, Wells Fargo Prime Services, LLC, a member of FINRA, NFA, and SIPC, Wells Fargo Bank, N.A. and Wells Fargo Securities International Limited, authorized and regulated by the Financial Conduct Authority.

Financing structures and deal terms

A Q&A with Michael Lavin & Michael Brown

Michael Lavin

Michael Lavin founded Germin8 Ventures, which is a venture capital fund that is seeking to improve the global food system and is innovative in its own right, providing both investment and strategic resources to the founders of transformative food and agtech companies around the world.

Michael Brown

Michael Brown represents emerging and public life science, technology, and other growth companies in a broad range of major business transactions, including private placements, public offerings, mergers and acquisitions and joint ventures and other strategic collaborations.

As a unique sector, agtech can see both incentives that differ from the norm for founders and investors, which can contribute to differences in deal structures, collaboration and the like. We spoke with Michael Lavin and Michael Brown to hear what they have seen.

Do deal structures in agtech differ from what you observe in venture broadly?

Lavin: Agrifood tech is an ecosystem that is very quickly growing and attracting a lot of venture funding—more than tenfold increases in the past few years; we're just on the cusp of a revolution. Likewise, the ecosystem, appetites and deal structures continue to evolve. It takes a lot to build an ecosystem, after all, and requires creative collaboration in many ways. A high level of such collaboration exists in agtech; venture funds in the space are looking to build syndicates as much as possible that can bring diverse perspectives, experience and networks to the table. This dynamic, combined with the collaborative nature inherent in the food and agriculture sector, are driving structures that impart unique aspects of strategic orientation and realism.

In our investing, for instance, we become partners not only with the startups, but also with the co-investors. They're our colleagues, and we're keen to work well together and drive these companies forward and construct network effects that enhance the ecosystem. We are also very entrepreneur-friendly and flexible, so our structures can be creative. We also want to be dynamic as a partner. Sometimes, we'll be conducting diligence on an opportunity and an exciting business development presents itself to that company, creating room to evaluate an advancement in the form of a bridge round, enabling the company to capitalize on actionable opportunities, which may catalyze and enhance the next round.

Brown: Financing structures are by and large similar—agtech in general has room to grow, which has attracted me to this space. Financings seem to be smaller in general, which I think is primarily a consequence of the industry being at an early stage in its growth cycle. Corporations and their venture arms are also quite involved. Major ag companies are talking about becoming limited partners in funds if they don't have their own investing units and so on.

Let's get into specifics: Given that flexibility, where are your parameters when it comes to type of deal?

Lavin: There are funds with mandates constrained by not just sector focus, but geography and security types. This may work well for late-stage funds and those investing more prolifically, but we don't believe the geography or security type to be a precursor to transformational potential. That said, it's also important to consider whether the current round offering maintains capacity for having a successful subsequent round. We'll invest in equity offerings, convertible notes and SAFEs. In fact, we have seen a lot of SAFEs and convertible notes lately, which is likely due to our focus on seed and Series A rounds. Often, companies at this stage will raise their first round in equity, but then extend their seed, possibly offering the same terms (a true extension) or a bridge round that is in the form of a convertible note or a SAFE note which is often intended to expedite the receipt of capital through simplified terms.

Y Combinator developed four iterations of SAFEs, which is a good attempt to keep things simple and likewise more efficient and less costly. However, I have seen stark differences between the Y Combinator SAFEs and SAFE structures utilized in agtech. The former does have its issues—one example is a loophole that would allow payment of dividends to common stock holders but not other stakeholders—so investors must be wary, as with the SAFE, they are not an equity owner yet. Another issue is that none of the Y Combinator SAFEs define a qualified round for conversion, so there's the potential for manipulation—a relatively small investment could cause an arbitrary conversion price. Interestingly, I can't recall seeing that qualified round issue in any agtech deals.

SAFEs can be productive, let's be clear, as they can be used to infuse capital quickly without having to resolve the valuation right away. It seems in agtech, SAFEs are catching up with convertible notes in minimizing the occurrence of terms that create loopholes and misalignment. We've actually seen several SAFEs with more comprehensive terms than convertible notes. A trend seems to be occurring in the agtech ecosystem in that SAFEs and convertibles are converging on a structure that is efficient and quick while leaving opportunity for the next round. That could be due to how collaborative our ecosystem is, but it is likely also driven by its independent culture.

Brown: As the financing environment remains good, there's not too much trouble in getting resolution around problematic asks. Observationally, agtech is more international than other industries I have seen. It truly is global. I've recently worked with companies in New Zealand, Israel, Ireland and Germany, for example. Cross-border deals can often involve players that are new to the intricacies of such deals, so they may have requests that differ from what's typical, but they are usually resolvable. Most strategics will ask for right of first notice or right of first negotiation on the sale, for example. Strategic-related VCs typically tend to ask for more visibility, controls and the like. Pure financial VCs don't always ask for as much.

Do you foresee any evolution further along those lines?

Brown: I see more generalist firms now taking a look at agtech, particularly those that are focused on life sciences and related tech with applications in life sciences. There aren't that many entrances that are specifically agtech. In a way, it's related to international deals in the level of experience a firm or player brings to agtech in general. For example, I worked with a firm that treated a venture deal almost like an M&A event, with very heavy due diligence on the corporate governance and the like. It's not necessarily a bad thing, but it is the mark of a firm that is new to agtech.

Lavin: On the topic of SAFEs still, we're still seeing these structures evolve, even to the point where they have investor rights attached to them. Yet if they don't, side letters that have pro rata or preemptive rights on the next round are increasingly commonplace. Most-favored nation clauses are also more and more common. Basically, SAFEs are becoming more sophisticated without losing their original purpose, which is good, as they are making the agtech market more efficient.

As this market becomes more efficient, it also will be interesting to see the maturing companies that are now in the market at Series A and B stages look for new funding, as it will exemplify in some cases how the ecosystem is growing. Hopefully there is substantial growth ahead, access to meaningful sources of growth equity and a healthy mix of exits via both M&A and IPOs.

Are there any disparities in deal structures between agtech segments?

Lavin: I haven't necessarily seen disparities in structure, but the size of rounds can vary significantly between agtech segments. Ag biotech, for example, is probably the second-largest subvertical, behind midstream foodtech, in attracting dollars. In our view, this makes sense as these companies are likely to have long trajectories and require greater amounts of capital to endure field trials, prove out their technologies and market.

What is your take on the current exit environment? How are you positioning your portfolio based on that?

Lavin: Really notable exits in agtech have occurred recently, for example, the acquisitions of Blue River Technology, Granular and Climate Corp by several of the ag majors, which represented large returns to the target companies' investors. I'm hesitant to say for sure that we'll keep seeing exits of that size by the ag majors, so we make investments that do not rely on these exit paths. We try to diversify by type of potential acquirer, beyond just ag companies. For example, there are large and acquisitive players outside of agriculture within IoT, Big Data, remote monitoring, industrial technology and biotech, who can also be logical strategic acquirers, especially as they seek to expand into additional end markets. Companies that have multiple logical exit paths could well be the companies that are delivering very proprietary, hard-to-replicate solutions and creating demand from multiple customer types, which I think are big pieces of being truly transformative.

What is your perspective on the competitive landscape in agtech, moving forward, especially between subverticals?

Lavin: Categorizing the universe of agtech companies into subverticals is difficult and complex. While you can distinguish between technologies, many diverse technologies compete to deliver on the same value-propositions. With this in mind, we find it useful to consider what value do these companies offer today and to whom? This helps us better understand the direct and indirect competition. Now regarding general competitive dynamics, we believe there is a very fragmented set with few platforms and many platform enablers. Time will tell, but with regards to precision agriculture and data analytics, we think the platforms will be those with which users spend the most of their time interfacing, and these platforms will be supplemented by data from rather commoditized sources. Ag biologicals is also a very fragmented space, with many technologies tapping the same well as opposed to being truly proprietary and tapping a new well. We think this distinction will be the key for identifying the players with the most transformational potential. Those capable of being consolidators are also interesting. Given the likely long trajectories and capital-intensive field trials, these companies will also need very flexible investors that can act as sources of patient capital. There's a lot that needs to align.

Another area that we're canvassing is ag fintech. Ag fintech companies are attempting to reduce latency in payments, automate manual transaction processes and enhance the working capital and risk exposures for producers and others in the value chain. We believe these are much-needed, non-trivial solutions and expect to see more activity in this segment.

FARM2050

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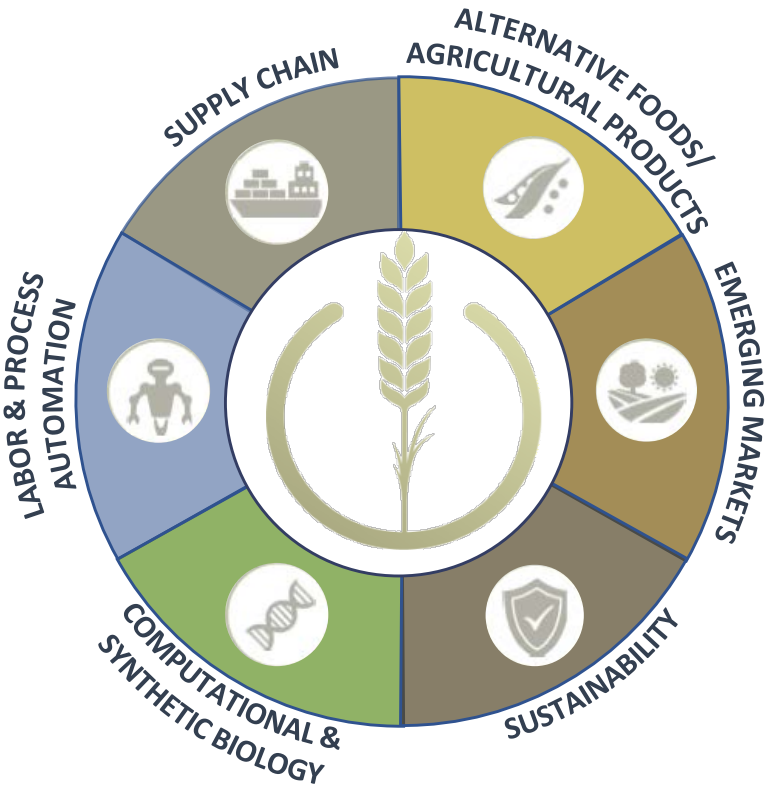

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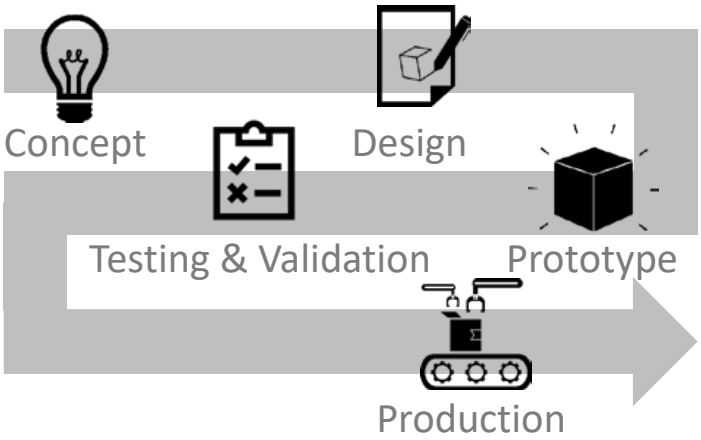

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