



START-UP NATION CENTRAL:
FINDER INSIGHTS SERIES

ISRAELI AGRITECH

Special Edition for Israel's
Agri-Food-Tech Week 2018

**START-UP
NATION
CENTRAL**

May 2018

INTRODUCTION

Half a year has passed since Start-Up Nation Central issued its first report on the Israeli Agritech sector. In time for Israel's Agri-Food-Tech week 2018, we offer the following data and analysis, which sums up 2017, and offers a review of developments in the sector since then. This update should be read as a supplement to last year's more extensive report.¹ It also serves as a precursor to the one we intend to release later this year.



SUMMARIZED HIGHLIGHTS

With **39 deals** amounting to **\$189M** (including one undisclosed round), 2017 was the Israeli Agritech sector's most highly funded year to date (see figure 1). The number of deals represents **7%** of the global count, and the total investment value, which has jumped an impressive **85%** from that of 2016, is **4.5%** of the global figure.² The former represents a 1.6% drop from that of 2016, while the latter rose 1.3%.³

2017 Q4 stands out for featuring the most funding Israeli Agritech has ever raised during a single quarter—a total of **\$62M** (see figure 2). Together, these investment trends portray a young sector well on the way to maturation and global relevance.

Figure 1: Agritech Investments — 2016 and 2017



Figure 2: Agritech Investments, Quarterly — 2016, 2017, 2018 Q1



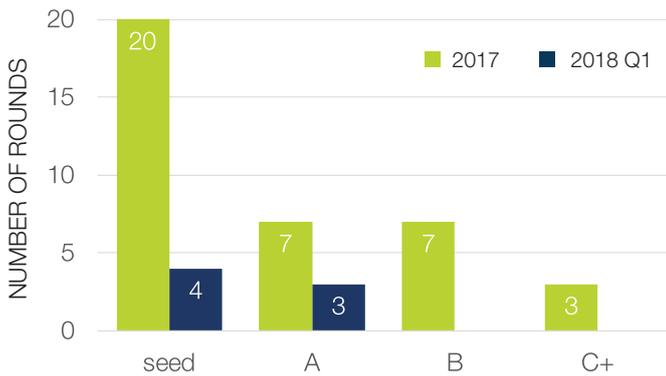
1 This supplement assumes the same methodology as that of last year's report; all figures pertaining to Israel are based on Start-Up Nation Finder™.
 2 Investments in the global Agritech sector in 2017 totaled \$4.2B in 569 deals. *AgFunder AgriFood Tech Investing Report—2017*, AgFunder (2018) 11. AgFunder's "upstream" group of technologies equates to Finder's "Agritech."
 3 Based on the growth percentages listed in *ibid.* 11.

DEVELOPMENTALLY HEALTHY SECTOR

While investment capital continues to invigorate Israeli Agritech, we consider the number of early-stage deals, and the overall consistency over the last few years, to be the most reliable indicators that the sector promises to become a leading global source of deal flow. While there were fewer deals in 2017 than in the preceding year (39 and 50, respectively), seed rounds were still the most common round type, followed by several A and B rounds (see figure 3). This early-stage funding reflects ongoing investor anticipation of deal flow from a sector that accrues more viable companies annually.

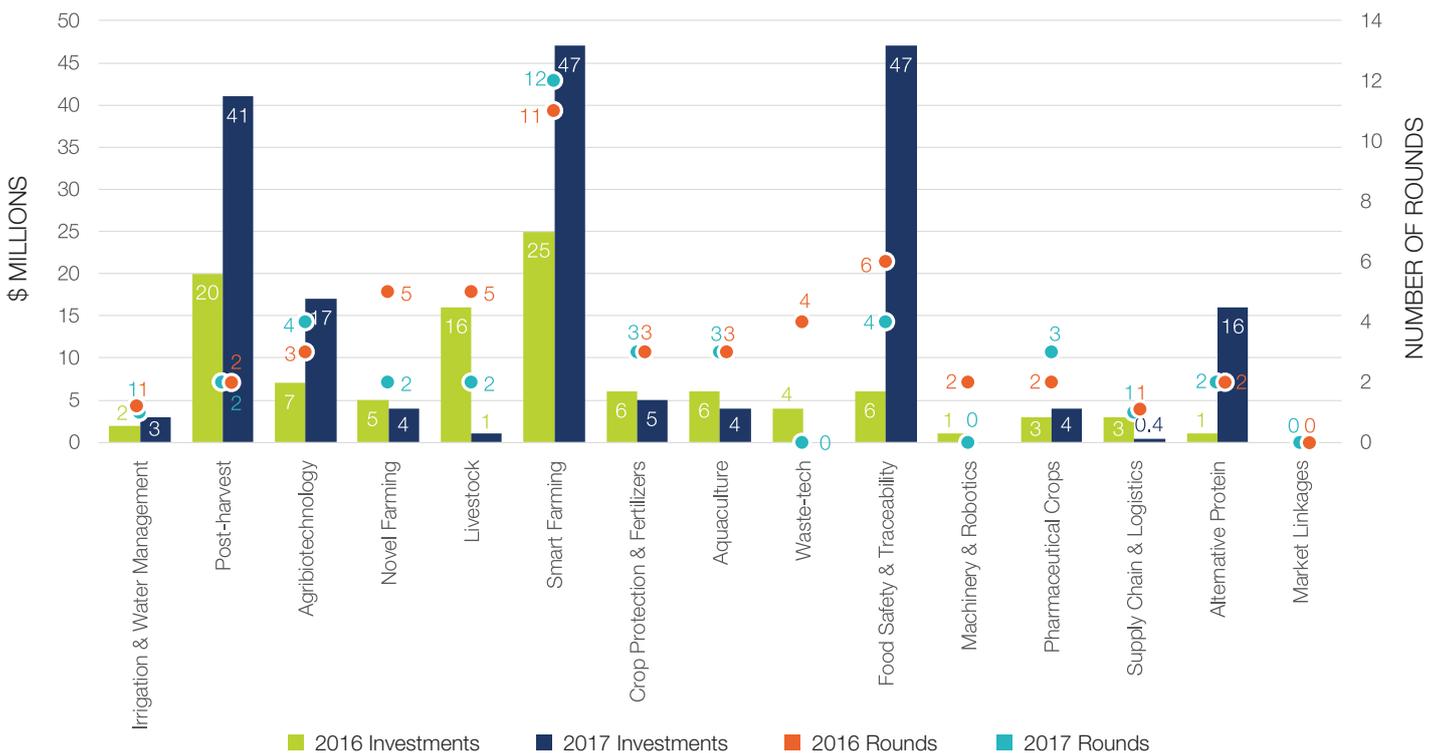


Figure 3: Round Types – 2017 and 2018 Q1



These early bids of confidence are prolific and span a diversity of technologies within the sector. In 2017, there were deals in eleven of these (see figure 4). Continuing this trend, in 2018 Q1 the sector accrued \$18M in seven early-stage rounds across five subsectors. Technologies therein include smart irrigation, smart pest/disease management, waste-tech, cultured poultry, plant genetics for breeding, and pharmaceutical crops.

Figure 4: Investments per Subsector – 2016 and 2017





Israel's Agritech sector (more than 500 companies) comprises fifteen sub-domains of innovation addressing the entire Agriculture supply chain. Whereas globally leading hubs of agritech tend toward specialization, the geographically concentrated Israeli sector contains the full gamut of training and expertise.

With the ongoing investment dispersed across the sector, entrepreneurs and innovators in all subsectors are being adequately sustained to navigate the complex Agriculture market while they concurrently expand their networks.

Since the sector is increasingly characterized by the diversity of its entrepreneurial innovators, the viability of their turning to alternate approaches to augmenting agriculture—either by creating new segments within their current companies, or founding new companies—is also growing. In other words, the current conditions bode well for ongoing agritech innovation in Israel.

Furthermore, the sector continues to grow in membership and diversity. Six start-ups were founded since the beginning of 2017 Q4, representing five subsectors:

 SUFRESCA	 FOODUP MONITORING	 Vitalgia	 OKO	 Beewise	 AlgaHealth
					
Post-harvest {Currently a project of Agrinnovation}	Post-harvest	Machinery & Robotics	Market Linkages	Smart Farming	Aquaculture

Four of these were founded in 2018, and two have already raised early-stage investment.

SUBSECTOR COMMENTARY

The thirteen investments made during the past two quarters (six seed investments and seven follow-on) bolstered nine of the Agritech subsectors. Four of the investments went to companies innovating in Smart Farming. This subsector has generally led the others in investment deals and value since 2016.⁴ In 2017, with one deal more than in 2016, the sum of investments increased by a huge 88% to \$47M, meaning that Israeli Smart Farming constituted 9% of global deals in this tech category and more than 10% of its investment value.⁵ In 2018 Q1, three Israeli Smart Farming companies already raised more than \$8M. This subsector, busy with innovation, continues to be a strong global contender.

The four recent investments in Israeli Smart Farming related almost equably in value to pest management and smart irrigation. FieldIn, which raised \$4M in seed funding in January 2018, has designed a platform that accompanies cash-crop growers throughout the pest-management process, outfitting tractors with a sensor that monitors spraying and its quality, and capturing a visual history of the treatment of crops. Another company, which raised an A round last October (and prefers to remain anonymous), is building a flexible robotics software for coordinating low-cost drones to perform automated spraying. Both solutions save growers time and labor, and optimize pesticide application. Both the smart-irrigation companies tend to orchards, offering growers high-resolution depiction of the hydration levels of their crops. Saturas, which raised a \$4M seed round in February, has achieved proof of concept with its stem-water-potential sensor; Viridix, which completed a small seed round in March, has built a low-cost, durable moisture-and tension-levels sensor. These recent investments follow on rounds raised earlier in 2017 by Saturas (again) and Phytech (smart irrigation), and Taranis, Prospera, and SeeTree (pest management). The number of recent investments in these two focus areas of Smart Farming allude to a group of twenty start-ups, each with its own nuanced approach to irrigation or pest/disease management. While some target distributors, and others target growers directly, each company has already entered the global market, including penetration of the USA, Brazil, Russia, India, Australia, and Spain.

Israeli Agribiotechnology has also proved especially attractive to investors in recent quarters. This subsector entails innovation in crop breeding, genetics, and biological inputs. In 2018 Q1, one company, which is in R&D for screening any plant to identify genes that enhance crop resilience (and prefers to remain anonymous), raised its second seed round. This investment broke the silence of 2017 Q4. During the three preceding quarters of 2017, four Agribiotechnology companies raised follow-on investment, among them EQUInom and Groundwork BioAg, bringing total funding up to \$17M. This sum amounted to a jump of 146% in total investment in the subsector, compared to that of 2016. This increase in investment for Agribiotechnologies in Israel is in direct contrast to the 11% drop experienced by the global subsector.⁶ It may be that Israeli Agribiotechnology companies are simply latecomers to the global stir around these technologies; their prominence appears to be increasing regardless.

We also highlight the nascent rise of Israeli solutions for alternative sources of protein, which address a rapidly expanding market representing the world's growing middle class. In 2018 Q1, SuperMeat raised a \$3M seed round to grow cultured poultry. This company's successful investment recalls that of Aleph Farms, the cultured-beef venture of a professor at Israel's Technion Institute, a year earlier. These investments bookend a \$15M B round raised by Hinoman, a company that drew the attention of Japan's Ajinomoto for its hydroponic methods of breeding Mankai, a leafy vegetable packed with protein.



4 Food Safety & Traceability appears to have overtaken Smart Farming in 2017, but the subsector's apparent lead is almost entirely owed to Vayyar's \$45M C round.

5 Global Farm Mgmt SW, Sensing & IoT raised \$464M in 134 rounds. *Investing Report*, AgFunder (2018) 25.

6 Ibid. 26.

LOCAL SOURCES OF ACCELERATION AND VENTURE CAPITAL

Several funding and training initiatives have been established in recent years, supporting innovators both financially and with business mentorship. We identify nearly 40 Israeli investors that count Agritech companies among their portfolios. Of these, twelve (eleven VCs and one PE) have invested in more than one Agritech start-up. Five of them were founded in the past five years, among which are AgriNation and Rimonim. The former, founded at the end of 2016, has invested in two Israeli companies: Groundwork BioAg (Agribiotechnology) and Nobactra (Crop Protection). Rimonim also funds two Israeli Agritech companies: SaliCrop (Crop Protection) and SkyX (Smart Farming).

Israeli VCs with larger Israeli Agritech portfolios include The Trendlines Group incubator, GreenSoil Investments, and Israel Cleantech Ventures (ICV). Trendlines partners with the government's Israel Innovation Authority (formerly the Office of the Chief Scientist) to infuse fourteen Agritech companies with seed investment, several of which have already advanced to follow-on funding, one of which is Saturas (Smart Farming), noted above for having raised its A round in 2018 Q1. Last year, Trendlines raised a fund from Bayer to invest in Israeli Crop Protection and Agribiotechnology, which quickly produced IBI-Ag last June. This new company is currently developing an environmentally friendly pest-management solution. GreenSoil has invested in six of Israel's Agritech start-ups: Phenome Networks and Rootility (innovating in plant breeding), CropX (sensor-based irrigation for pivots), Tipa (biodegradable packaging for post-harvest), Ecofer (data-based fertigation), and BioHarvest (nutrient discovery for fertilizers). Tipa raised a B round of \$11M last October, and one of the other portfolio companies raised a D round last summer, boosting its value to over \$30M. Finally, ICV has invested in four Agritech companies over the last decade, including Vayyar (Food Safety & Traceability), which raised its C round last December, and which was the largest investment round pertaining to Israeli Agritech, to date.

Support also comes from elsewhere in the ecosystem. In January 2018, TechForGood and the Yakhin Group founded Yakhin Impact, an accelerator dedicated to advancements in agritech that could wield socio-economic benefit. In addition to receiving mentorship, office space, and investment, and tapping into TechForGood's global network (currently including Singapore and Thailand), portfolio companies have access to beta-sites apportioned by the Yakhin Group, which owns large tracts of farmland in Israel. We perceive the launch of this accelerator as strategically perfectly timed: the 88 Agritech companies that raised seed rounds in the past two years now have a local resource devoted to all aspects of building their business.



START-UP NATION CENTRAL AND THE AGRITECH SECTOR

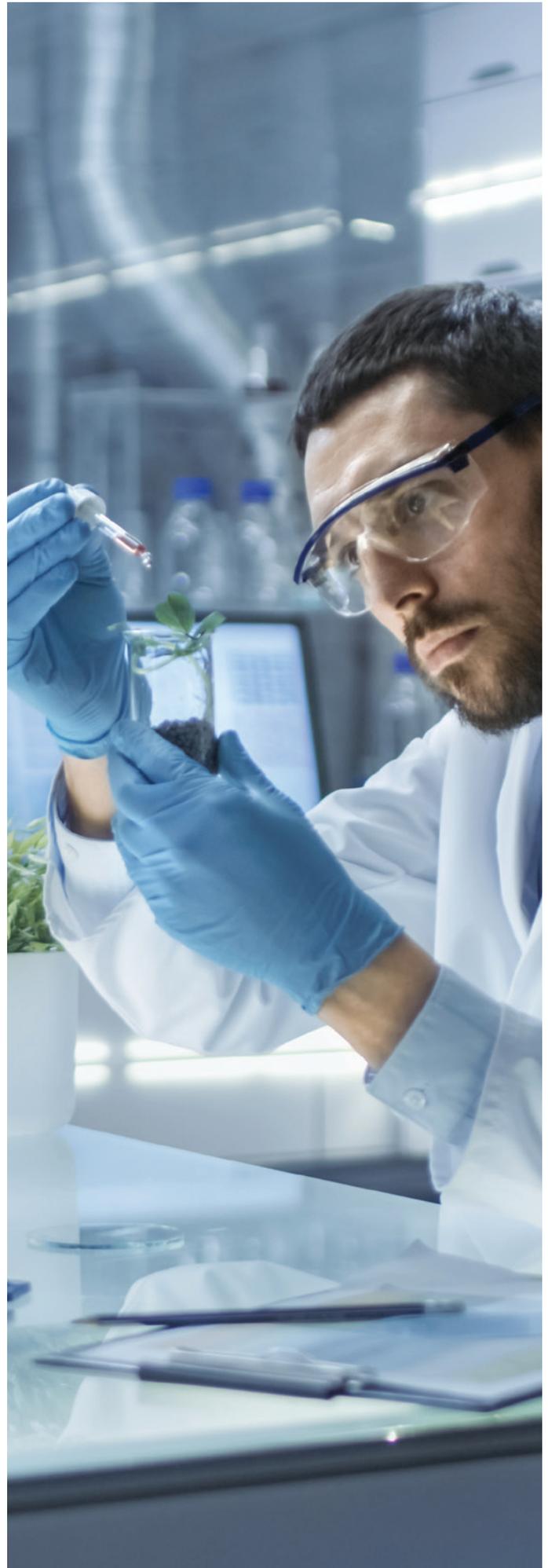
Start-Up Nation Central is an Israel-based non-profit organization that serves as a gateway to Israeli innovation. The organization leverages its in-depth knowledge of Israel's innovation sector to connect business leaders, governments, and NGOs from across the globe with Israeli innovation, by designing highly customized visits that introduce them to the Israeli people and technologies that can address their most pressing challenges. Start-Up Nation Finder is Israel's definitive innovation discovery platform, which was created by deeply mapping Israel's innovation ecosystem, includes more than 5,800 innovative companies, 300 multinational corporations' R&D centers, 400 investors, and 200 programs, and is kept continually up-to-date by Start-Up Nation Central's research and data teams. Start-Up Nation Central is funded entirely by philanthropy, and fuels Israel's innovation engine, convening thought leaders to help shape policies which support it, enabling companies and technologies to grow.

While many of our activities are cross-sector, we promote certain domains more actively. Among these is Israel's Agritech sector. We establish platforms and initiatives aimed at overcoming specific gaps that hinder the growth of the sector, so as to help realize its full potential. These include activities that expose Israeli innovation globally, deepen the local sector's knowledge and understanding of the global market, and develop strategic partnerships between the Israeli ecosystem and leading global players. Together with the Israeli Innovation Institute and the Ministry of Economy, Start-Up Nation Central has established "Grow. IL," the Agritech-focused Israeli community that enables different players in the ecosystem to collaborate, sharing knowledge and opportunities. We are also preparing to launch an investors platform for connecting international investors to promising Israeli deal flow, and also an accelerators guide. We are working with specific corporates to better understand their needs and expose them to different models of engaging with Israeli innovation on an ongoing basis.

The Israeli Agritech sector in 2017 and 2018 Q1 demonstrated that it is moving towards maturity and attracting continued global interest. The prospects for the remainder of 2018 are looking positive, and Start-Up Nation Central looks forward to presenting our full report later in the year.

For more information on the Israeli Agritech sector and the companies cited in this report, please visit finder.startupnationcentral.org.

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