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13 QUARTERLY INNOVATION MONITOR

# Agriculture & Food

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## Agriculture & Food

Investment in agriculture and food continued its sharp upward trend in 2014 with \$1.14 billion invested across 176 deals. The vast majority of investment was focused on US-based companies with European firms coming in a distant second. A wide variety of different sources contributed to making this the largest year in agriculture funding to-date. Venture investment came from traditional and specialist VCs, private equity firms, corporations, crowdfunding sites, and a burgeoning set of incubators and accelerators focused specifically on nurturing agriculture and food related companies. On a quarterly basis, investment was largely unchanged at \$304 million from \$320 million the previous quarter. Deal volume, at 32, was lower than the 47 deals the prior quarter.

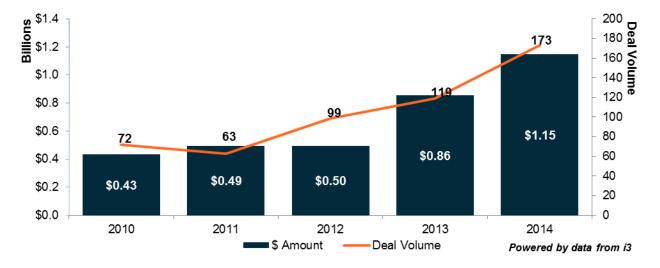
**DEALS:** 173 deals @ \$1.14B in 2014; 32 deals @ \$304M in 4Q14

COMPARISON: 45% increase in deals, 34% increase in dollars compared to 2013;
Quarterly dollars stable with declining volume

**THEME:** Supply chain efficiency, water and fertilizer use efficiency, indoor cultivation systems and remote sensing

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#### Yearly Global Venture Investment in Agriculture & Food Technologies



#### **DEALS**

A number of strong innovation trends in the agriculture and food space emerged in 2014; the first of which is shown by a pair of investments into plant trait developers <a href="Chromatin">Chromatin</a> and <a href="Arcadia Biosciences">Arcadia Biosciences</a>. These companies are working to develop the next generation

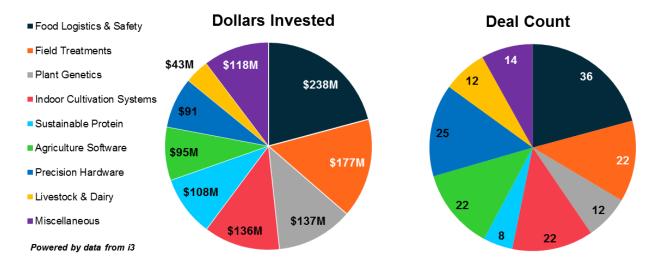
of staple and input crops capable of increased yields with less water, fertilizer and the ability to withstand increased stress from a changing climate. Innovative breeding programs have also contributed to the development of new crop hybrids capable of being

grown on land once considered unfit for agriculture.

The largest deal of the year in the sector came through in Q4 with <a href="KKR">KKR</a>'s \$90 million investment into <a href="Sundrop">Sundrop</a> <a href="Farms">Farms</a>. Sundrop is working to integrate solar-powered

desalination technology with efficient greenhouses capable of growing food in the most arid climates. Be it greenhouses or vertical farms in shipping containers and renovated buildings; indoor cultivation systems received an unprecedented amount of funding in 2014.

2014 Sub-Sector Breakdown of Investment into Agriculture & Food



The UAV industry has come in to its own, growing from skeptically viewed toy to powerful farm tool. In addition to the <u>drones themselves</u> companies are now working on <u>operating systems</u>, <u>collision avoidance</u>, and <u>image analytics</u>, all with agricultural applications. While drones get most of the attention <u>Google</u> has been active in the remote sensing space acquiring alternative space and high-altitude based companies <u>Skybox Imaging</u> and <u>Titan Aerospace</u> respectively.

Innovation abounds in other sectors as well; foodtech companies working on plant-based alternative ingredients to reduce our reliance on energy intensive livestock production, including <a href="Hampton Creek Food">Hampton Creek Food</a>'s and <a href="Beyond Meat">Beyond Meat</a>, closed large funding rounds this past year. The development of groundbreaking environmentally safe alternatives to traditional pesticides is another hot area with investment into <a href="Apeel Sciences">Apeel Sciences</a>, <a href="Oxitotecompactions">Oxitec</a> and <a href="Vestaron">Vestaron</a> highlighting this trend.

#### COMMENTS

All of these companies are working to address similar global problems albeit through different creative angles. Usable farmland is on the decline as traditionally fertile lands change from over-use, pollution and climate change. The advancements happening in regards to urban farms and greenhouse systems are working to address this problem by

allowing us to cultivate crops in areas we never tried or weren't able to in the past. Biotech developers and field treatment firms are working to ensure the ability for our crops to adapt while limiting further degradation of existing farmland.

As relatively new technologies like cloud software,

internet connected sensors, LED lighting and UAV systems become more prevalent there has been a realization amongst entrepreneurs, and investors, that these advancements can be implemented to enhance agricultural efficiency and resiliency. Given the massive and timely need for global change in innovation in the agriculture industry the opportunities seem almost limitless.

—Gannon McHenry, Analyst

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