Roger Royse in Silicon Valley Business Journal: 'Can Agriculture Technology Save the World? Some Investors Think So'

October 26, 2021 Roger Royse

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Agriculture has long been charged as a major culprit of climate change. According to the UN Intergovernmental Panel on Climate Change, agriculture accounts for 21% to 37% of global greenhouse gas emissions. Even if the indirect effects are removed, like transport, packaging and deforestation, the number is still as high as 24%. It doesn't need to be that way. For years, the tech industry has been working on ways to make farming smarter, more efficient and more sustainable.

Despite the issues, venture capitalists have shown interest in this sector, and rightly so. Like many world-changing industries, agriculture technology (AKA agtech) is being driven not by large established players but by startup innovators, often backed by venture capital. According to AgFunder, the sector of AgriFoodTech investment continues to break records, reaching $31 billion in 2020 — up more than eight times from 2012.

As the organizer of the Silicon Valley AgTech Conference, since 2014, we've aimed to showcase the newest, boldest and most innovative agriculture technology companies in the Valley and beyond. Here are a few highlights from our recent conference developments that are worth keeping an eye on.

Robotics

Precision agriculture is often thought of as a way to maximize output with minimal inputs, but the benefits of technology go far beyond farm profits. For example, Silicon Valley startup Blue River Technologies (acquired by John Deere in 2017) replaces herbicides with visual imaging, deep learning and robotics to identify and zap weeds while leaving the rest of the field alone. Autonomous vehicle (AV) tractors are also gaining momentum, and electric tractors are now available.

Animal agriculture

Cattle is a large emitter of methane. Unless alternative proteins become widespread, the most likely solution is the reduction of emission through feed additives. Manure is also a contributor, as it produces methane. Some startups are working on recycling technologies that mitigate the problem. The Yield Lab runs the global "manure challenge," which highlights some of these solutions.

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