

The Promise of 2020 Will be Achieved in 2021



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The AgTech & FoodTech sector started out with a lot of optimism in 2020, coming off a record fundraising year in 2019. The sector seemed poised for a strong performance as a growing number of companies were beginning to generate commercial revenue and to expand their businesses. Much of this momentum came to an abrupt halt at the end of Q1 2020 as the COVID-19 pandemic took hold. 2020 will be considered a lost year for many AgTech & FoodTech companies, particularly those early- and growth-stage firms, which expected strong revenue growth, but instead experienced zero or negative topline growth. Furthermore, numerous companies were forced to put financing rounds on hold in 2020 and, with COVID-19 likely to linger through at least 1H 2021, some companies will run out of funds, and either be sold at fire-sale prices or go bankrupt. However, it was not all negative for the sector as some companies thrived, by taking advantage of shifting consumption patterns and other changes brought about by COVID-19. I expect many other companies are going to build momentum in 2021 and take advantage of the increased investor interest in the sector.

Food & ag, like most sectors, was hurt by COVID-19, but some parts of the value chain fared worse than others. The need for social distancing has led to an increasing focus on automation and robotics. No area has this need been shown more than in meat processing facilities, which experienced significant outbreaks of COVID-19 that led to closures and reduced capacity. The specialty produce sector suffered similar issues as outbreaks occurred within their workforce during the harvest season, forcing some growers to abandon the harvest and leave produce to die in the field. This brought a renewed focus on reducing food waste, which occurs at every stage of the food & ag supply chain. For example, a survey from 84.51° found that 35% of Kroger shoppers strongly agree they are more conscious of food waste since the onset of COVID-19 and more than half plan to continue taking steps to limit food waste after the pandemic. Reducing food waste became a global imperative in August when China's President Xi Jinping launched a campaign targeting food waste, mentioning in a speech that "Waste is shameful and thriftiness is honorable," and describing the amount of food that goes to waste in the country as "shocking and distressing". This increased interest in food waste mitigation was a catalyst for numerous financing transactions in 2020, including deals done by AgroFresh, Apeel Sciences, Imperfect Food, KDC Ag and Mori, companies focused on extending food shelf-life and finding ways to use typically unused or surplus foods.

In contrast to the majority of AgTech companies, which face slow product adoption, due to the challenge of selling to farmers and the different parts of the supply chain, many FoodTech firms grew rapidly in 2020. Much of this difference can be linked to the increasing role of the consumer, who is demanding fresher, healthier, and more environmentally sustainable, tastier food options. Consequently, 2020 is likely to be remembered as the year that alternative protein went mainstream. Not only did sales of the Impossible Whopper® and the Beyond Sausage® Sandwich at Dunkin' grow tremendously, but the shelter-in-place orders led to 400% year-over-year sales growth of plant-based protein at grocery stores in March 2020. The dairy alternatives sector also saw strong growth. Oatly's Midwest region trial with Starbucks in 2020 will be extended to all US stores in 2021; and Perfect Day launched its own ice cream brand in 2020 with plans to expand into new alternative dairy products in 2021. The end of the year also brought about a major advancement in the cellular meat sector, with Singapore becoming the first country in the world to give regulatory approval to sell cultured meat to consumers. Momentum in the alternative protein sector is expected to build in 2021. We could see significant growth in bug protein, beginning in the animal feed sector and possibly expanding into the human side for those more adventurous consumers.

There were bright spots in indoor farming too in 2020, which generated increasing levels of customer and investor interest. In Q1 2020, Gotham Greens opened a new indoor farm in Denver, its fifth location in the US, giving it a footprint covering almost all the US. Later in the year, AppHarvest completed a public listing, becoming the first major indoor farming company to do so. Additionally, Plenty and Driscoll signed a joint development agreement for indoor-grown strawberries, pushing indoor farming beyond just leafy greens into the \$40 billion berry industry. Additional investment into indoor farming is likely in 2021, including further public offerings for companies that have successfully commercialized technologies, and which are looking to raise capital, both equity and debt, to build more farms, as they expand from a regional to a national footprint and establish a brand name.

Based on the significant amount of capital raised by AgTech and FoodTech companies in 2020, it is apparent that COVID-19 did not damp investor interest in this sector. It is even possible that the challenges caused by COVID-19 to the food and ag value chain increased investors' interest in AgTech & FoodTech companies by providing clear opportunities where innovation could help reduce waste and inefficiencies. Additionally, COVID-19 arrived at the same time there was a realization that ag & food technologies provide tremendous potential for positive environmental impact in a sector that is believed to account for upwards of 20% of greenhouse gas emissions globally.

However, although the financing market has shown overall strength, a two-tiered financing market has emerged, whereby later-stage and better-known companies (Apeel Sciences, AppHarvest, Benson Hill Bio, Farmers Business Network, Impossible Foods, Indigo Ag, Memphis Meats, Oatly, Perfect Day, Pivot Bio, and Plenty) have raised large sums of money at high valuations, whereas many earlier-stage companies either have delayed launching fundraising rounds or have struggled to complete them in 2020. Although I believe 2021 could be a record year for investment in the AgTech & FoodTech sector, I expect the two-tier financing market to

continue. Given that many companies won't be able to raise capital, the sector will undergo the first major wave of consolidation. Many large food & ag companies will pursue acquisitions, but I believe much of the consolidation will be done by AgTech & FoodTech companies looking to acquire complementary products and/or services on the cheap as well as new customers.

Another important trend in 2020 was the emergence of new locations as AgTech & FoodTech hotspots. The US is still the leading location for AgTech & FoodTech innovation, notably in the San Francisco Bay Area, Boston, New York, Research Triangle Park in North Carolina and St. Louis, Missouri, but innovative companies from Australia, Canada, Ireland, Israel, New Zealand, Singapore, and the UK are gaining prominence. Many of these locations are receiving strong support from local and/or national government agencies that believe AgTech & FoodTech will be a highly valuable sector that will provide many, high paying jobs in the future. Of course, as food & ag is a global industry, it makes sense that technology innovation will happen around the world.

Ag biotech and digital ag are also poised for strong growth in 2021. Given that there has been significant investment in ag biotech for many years already, more of these companies have been able to commercialize new technologies, including greener crop nutrients (biologics, chemical, fertilizers, pesticides), CRISPR / seed genetics, and products that deliver these technologies to the plants more effectively.

In contrast, the digital ag sector has grown slowly, but financial institutions (banks and insurance companies) are beginning to realize the value of the information that digital technology provides to mitigate risk. As a result, farmers are starting to embrace artificial intelligence, data analytics, and machine learning to help optimize performance. However, farmers are looking to purchase cost-effective integrated solutions rather than having to purchase a series of products from different vendors.

While the economic impact from the pandemic remains, we are seeing the emergence of other factors, including sustainability, that are moving to the forefront in many industries, including food and ag. Consumers are driving the commercial adoption of more sustainable technologies in food & ag sector, and investors are funding product development and achieving commercial scale. These consumers, particularly Millennials and Generation Z, are forcing consumer packaged goods companies and food retailers to respond first, followed by other parts of the whole food & ag value chain, ultimately reaching the farmer. Consumers are more interested than ever before in understanding the environmental impact of their lifestyle choices and retailers will become more focused on selling more eco-friendly products with lower carbon footprints, including indoor grown produce, plant-based proteins and sustainably packaged products. I also believe that COVID-19 will be a catalyst for the further development of food & ag technologies that will result in a supply chain that will be more efficient, resilient, and sustainable going forward. There is no doubt that AgTech & FoodTech companies have made great strides during the past decade, and even with the slow-down that COVID-19 caused, 2021 is poised to be the best year ever.