

● DIGITAL DIVIDEND

Start-ups pushing tech in agriculture

A slew of agri start-ups are using technologies such as AI and IoT to help boost production



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MUCH HAS BEEN written about the action around artificial intelligence (AI) in agriculture, especially in the West. In H1 2017, agri and food tech start-ups have raised \$4.4 billion. Accenture estimates the digital agriculture services market to hit \$4.55 billion by 2020. The acquisition of Blue River Technology by John Deere made headlines everywhere. So what is happening in India?

The good news is that the action is spreading to India as well. Several exciting start-ups are launching innovative businesses, leveraging the latest technologies (in-

cluding, but not limited to, AI) and enhancing value in the agriculture ecosystem. Here are four interesting areas of applications.

Satellite data: There are companies that provide satellite data. One can build models on these data feeds, and start predicting the future. Satsure combines satellite data with soil data (collected through IoT sensors, or otherwise) and predict output / risk associated with a particular farm and its farmer. They provide these solutions to crop insurance companies.

Automation: While labour costs may not be the biggest problem faced by Indian farmers, automation—with its inherent advantages of higher reliability, less errors, etc.—is picking up. Mitra makes automated sprayers as well as harvesters. They claim superior economics, despite the upfront investment.

Drones: There are loads and loads of companies working on drones—importing, assembling, manufacturing, running them, et al. Some of the companies are also working on analysis of trends and patterns basis the images collected through drones. Others are focused on follow-up activities. Check out Trithi Robotics; they deploy drones to spray fungicides and pesticides. The economics (and basic feasibility) works out in hilly areas.

Quality grading: AI can be used in food-grain quality grading. Algorithms can be trained with pictures of good quality



commodities plus images of all forms of damages, foreign matter, etc. Intello Labs offers such solutions to F&B firms, food retail, etc.

There are many other use cases evolving—can one build a predictive algorithm on food items' shelf life (basis the current quality state)? Is it possible to look at weather data, history of pest/disease attacks, images of healthy versus infested crops, combine all this and build a predictive solution around when a crop is "about to suffer an attack"?

Currently, there are different players spe-

cialised in different sub-segments (IoT sensors, drones, image analysis, precision agriculture machinery, etc. Large corporates are looking for "full-stack-solutions", and it remains to be seen whether any large end-to-end player will emerge here, or this will continue to be an arena of several specialised players. The action in this space is overwhelming; we are simply scratching the surface of this immense opportunity.

The writer is founder and CEO of Intello Labs, an agri-tech start-up