FEATURE NEWS

Siemens Wants to Feed the World Through Their Future of Food Project

By Special Guest Madindra Aryal / January 10, 2019

Last December, in Princeton, New Jersey, Siemens Corporate Technology US hosted its' annual Siemens ConneCTs conference and exhibition, with an array of demonstrations of its automation and robotics technologies.

One of the most inspiring was Siemens Autonomous Agricultural Pods or AgPod, a mobile growing unit which can be produced using 3D printing, can be connected and controlled over any communications network, and allows farmers to monitor and maintain the growth of any crop, from anywhere, and at any time.

Food Lab Project Manager Naveen Kumar Singa is working with the AgPod team, and his enthusiasm for the potential of this technology to address world hunger challenges is as inspiring as the technology itself.

"Starting from the seed and ending in packaging, we want to use our expertise in digital technology and robotics to create a fully autonomous, sustainable solution — one that is not only leaner and more resource efficient," Singa says, "but also satisfies demand for the same high quality of fresh healthy food, at relatively lower cost."

As the global population continues to grow at an explosive rate (from 7.6 billion today to over 10 billion by 2055) and natural resources are already being depleted by

climate change and overuse, the AgPod represents a new approach to precision farming, breaking down barriers by supporting crop production locally, resulting in fresher, better tasting and more nutritional produce.

AgPods autonomously perform all farming operations, from seeding to harvesting, without human intervention. The system requires no prior farming experience to produce industrial scale food, without the need for expensive farming resources like heavy machinery, tools and an irrigation system.

AgPods also automate and integrate the food processing and packaging operations immediately after autonomously harvesting the crop, reducing costs while improving quality, without expensive traditional farm machinery.

These Robot Farms of the future, envisioned by Siemens R&D team, build on a broader range of innovation being created. In 2017, for example, Siemens presented the "SpiderBots" produced by Siemens Corporate Technology US Research Scientist Sinan Bank.

The spider-like robots with 3-D printers even had a chance to appear with German Chancellor Angela Merkel at the Hannover Messe, the world's largest exhibition of industrial technology and automation.

"How can we facilitate a technological solution to produce food more efficiently by using fewer resources?" Bank said in a Siemens blog.

In its modern living lab in Princeton, the AgPod team is committed to "facing the global food challenge head-on by bringing unique and comprehensive food solutions that provide equal opportunities to agriculture industry stakeholders, enabling them to grow a more nourishing food supply that is safe and secure for future generations."

And they believe that the next-generation of agricultural progress will be driven by autonomous farming solutions, which can work from seeding to harvesting, without human intervention.

After harvesting, the system integrates the food processing and packaging operations, ensuring a faster time to markets with high quality, healthy and clean produce.

"When we're taking a closer look at how we're going to feed the population a couple of years from now," says Kurt Bettenhausen, Head of Siemens Corporate Technology U.S. "It's about producing more food with the same quality standards."

AgPods also grow with intelligence. One of the keys is using the Siemens MindSphere open IoT operating system, which employs machine learni

"We can even take this to Mars," Singa said, while demonstrating how the AgPod works, "using condensation techniques to create water."

Thinking ahead? Solving generational challenges? This is the mission of Siemens R&D, and a vision that motivates the next generation of innovators, engineers, scientists and researchers who can change the course of our planet and society.

Edited by Maurice Nagle
Get stories like this delivered straight to your inbox. [Free eNews Subscription]

Author Info

Special Guest
Madindra Aryal

Click here to read full bio

SHARE THIS ARTICLE

Post Share