

Drone makers seek input from growers on using their technology



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Andy Thurling, of AeroVironment, speaks to people at a panel discussion about the benefits of unmanned aerial systems for agriculture in Ventura County.

By Carol Lawrence

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Local unmanned-systems makers see agriculture as a prime market for their technology, but first they have to figure out what growers need, how to get it into their hands and how to do it cheaply.

With defense budgets shrinking, the industry is shifting its focus from the military market to commercial uses, and one of those is agriculture.

The Ventura County Economic Development Association, which aims to position Ventura County as an unmanned-systems industry hub, sought to get answers to those questions Wednesday during a panel discussion on agriculture's potential for the systems, also known as drones, at the Ventura County Office of Education in Camarillo.

"We are very interested in how we can use this application for agriculture," said Jagmohan Bajaj, vice president of technology for Teledyne Imaging Sensors in Camarillo, regarding the high-resolution infrared cameras that the company installs on unmanned systems. But he also asked, "Where is the pressing need so we can channel our development?"

Bajaj attended because Teledyne foresees using the cameras to identify chemical pollution, undesirable crops and pests, and diseases. But the company wants to know more, he said.

Only a few of the event's more than 60 attendees were growers, however. Most were from companies that make unmanned systems, parts that can be included in them such as cameras or software that produces data from the cameras.

<http://www.vcstar.com/news/2013/oct/16/drone-makers-seek-input-from-growers-on-using/#ixzz2hzmcSgEw>

“I really hoped there was going to be more farmers,” said Robert Morris, founder and CEO of TerrAvion, a startup in Livermore aiming to sell subscriptions to high-resolution data.

John Krist, CEO of the Farm Bureau of Ventura County and Ventura, and Oxnard strawberry grower Edgar Terry represented the local agriculture community. Krist, a panelist, told the audience the average farm in Ventura County is 106 acres and that because most are mixed in with residential communities, they need precision spraying of pesticides by helicopters. Pesticide spraying is a predicted use of unmanned systems.

But that won't happen soon, said Rob Scherzinger, who attended the seminar as co-founder of Aspen Helicopters in Oxnard, which sprays many of the local crops.

Scherzinger said he hadn't seen unmanned aerial vehicles large enough to carry the volumes of chemicals that crops need. Avocados, for example, need 75 gallons per acre, he said.

“We are in no way against unmanned aerial vehicles,” Scherzinger said. “We just think precision application is not there yet.”

Andrew Thurling, chief test pilot for AeroVironment Inc., which makes unmanned aerial systems in Simi Valley but has headquarters in Monrovia, talked about how Japanese rice farmers use drones to spray their small paddies and how UC Davis is using an unmanned Japanese helicopter to spray its high-value crops. Ranchers are using them for cattle monitoring and counting heads, Thurling said, while coffee growers on the Hawaiian island of Kauai use unmanned aerial systems to gauge the plants' health. An AeroVironment customer also used 3-D imagery to track water flow in a gravel pit.

“Clearly, you can see applications in agriculture to determine how your drainage flows across the landscape,” Thurling said.

Unmanned aerial systems are nothing more than vehicles, said event organizer Bill Buratto, president and CEO of the economic association.

“What makes the difference is the payload,” he said.

Audience members and panelists discussed forming partnerships with farmers for testing, but the farmers first would need federal approval to fly them.

Audience members also said service providers may be needed to analyze the sensors and camera data and deliver it to farmers quickly and cheaply.

What will be critical for growers are the cost-benefit aspect and the success at improving crop yield, Krist said.

“It's gotta offer significant advantages,” he said.