

Drone use in ag increasing, but lack of FAA rules slowing technology

By SEAN ELLIS
Capital Press

NAMPA, Idaho — The use of drones in commercial agricultural is beginning to rapidly increase.

But the Federal Aviation Administration's lack of permanent rules for unmanned aerial vehicles is slowing development of the technology, Ron Looney, chief pilot of Empire Unmanned told a couple hundred people at the Idaho-Eastern Oregon Seed Association's winter meeting Dec. 2.

Empire Unmanned in January became the first company in the United States to receive an FAA exemption to fly UAVs for commercial agricultural uses.

The Idaho business used drones to image 10,584 acres in 84 fields for 39 customers in 2015, Looney said. Those customers included farmers and researchers and the crops imaged included wheat, onions, alfalfa, sugar beets, corn and grapes.

The company charges about \$4 an acre, with a 150-acre minimum.

"We started out slow and are getting bigger all the time," Looney told Capital Press. "We think it's going to be a big deal."

For now, Looney said, the main benefit of drones in agriculture is providing farmers a quick assessment of crop health. This allows a farmer to make replanting decisions quickly, estimate yields, monitor nitrogen update, and see where a crop is stressed or where there are weed or disease issues.

"It also helps with insurance claims so you can show your insurance company ex-



Sean Ellis/Capital Press

Ag industry representatives ask Empire Unmanned employee Gary Smith about the use of drones for agricultural purposes April 22 following a demonstration flight over Bitner Vineyards in Caldwell, Idaho. Empire's chief pilot told seed industry members recently that drone use by farmers is increasing rapidly but development of the technology is being slowed by the lack of permanent FAA rules.

actly where the crop damage is," he said.

But Looney and North Idaho farmer Robert Blair, vice president of agriculture for Measure LLC, a commercial drone company, said the FAA's lack of permanent rules for UAVs is hindering further development of the technology for farming purposes.

Any legal commercial drone use right now is being done under an FAA exemption. If any farmer or rancher uses a drone as part of their operation, they are no longer a hobbyist and need an FAA exemption. They also have to have a commercial pilot's

license.

A drone can only be flown within line of sight, which is about half a mile, Looney said, and they can't be flown within 500 feet of a non-participant.

"That's a pretty good restriction," he said. "The restrictions from FAA are also restricting the development of the technology."

The FAA this year released proposed rules on drone use for public comment and permanent rules could be in place next year, said Blair, an early pioneer of drone use on farms.

Once the FAA has permanent rules in place, he said,

"you will see more research being done and we will see more use of this technology."

"I am excited about the technology," Blair said. "Farmers are going to benefit from (UAVs)."

Right now, drone use in agriculture is pretty much limited to assessing crop condition, he said, but using UAVs to apply chemicals will happen eventually.

"That application part is going to take some time but it is the natural evolution on the agricultural side of things," Blair said. "In my lifetime, you will probably see crop duster sized UAVs."



AP Photo/Alex Brandon

In this June 11 photo, a DJI Phantom 3 drone is flown by Matthew Creger, marketing director for Intelligent UAS, during a drone demonstration in Cordova, Md. The Federal Aviation Administration says nearly all drones must be registered on a new website.

FAA to require most drones to be registered, marked

By TOM KRISHER
Associated Press

Spurred by numerous reports of drones flying near jets and airports, the federal government has decided to require that the aircraft be registered in order to make it easier to identify their owners and educate amateur aviators.

The move, announced Monday by the Federal Aviation Administration, comes at a time when the agency is receiving more than 100 reports per month about drones flying near manned aircraft. The FAA prohibits drones and model airplanes from flying higher than 400 feet or within 5 miles of an airport.

Drones have become increasingly popular with hobbyists. The FAA estimates that 1.6 million small unmanned aircraft will be sold this year, with half during the last three months of the year. The agency said the registration requirement would let authorities track down unmanned aircraft owners if they violate the rules. But it also gives the agency a vehicle to educate owners just as thousands get

drones as presents for Christmas and other holidays.

Most people who fly drones and model aircraft have little aviation experience, but they become pilots as soon as they start to fly, said Deputy FAA Administrator Michael Whitaker. "They have the responsibility to fly safely, and there are rules and regulations that apply to them," he said.

The requirement covers aircraft weighing from just over a half pound to 55 pounds. Drone owners who are 13 and older will have to register on an FAA website that becomes available starting Dec. 21. The FAA expects parents to register for younger children.

Registration will cost \$5, but the fee will be waived for the first 30 days, until Jan. 20. Owners will have to mark aircraft with an identification number. They can register as many aircraft as they want on one registration number.

Those who got drones before Dec. 21 must register by Feb. 19. People who buy them later must register before their first outdoor flight.

Bayer CropScience chief executive officer addresses challenges facing agriculture

Blome recommends using social media to reach consumers

By MATTHEW WEAVER
Capital Press

KENNEWICK, Wash. — U.S. agriculture faces challenges from a tougher regulatory environment and consumers who know little about farming, the head of Bayer CropScience in North America says.

It's now basically standard operating procedure to expect legal challenges under the Endangered Species Act when registering genetically modified seeds or new crop protection technology, Jim Blome, president and CEO of Bayer CropScience in North Carolina, told the Far West Agribusiness Association winter meeting.



Matthew Weaver/Capital Press

Bayer CropScience president and chief executive officer Jim Blome delivers the keynote address at the Far West Agribusiness Association winter meeting Dec. 9 in Kennewick, Wash.

"We must use new technology barriers to new technology in food to drive higher yields, and yet the production have never been high-

er," Blome said.

The new regulatory environment means higher overall costs and less new technology to create efficiencies, Blome said.

More of the budget that had been used to research new discoveries is now going toward maintaining older products in the marketplace, he said. While the industry stresses the importance of alternative modes of action in pesticides to manage resistance, a new mode of chemical action hasn't been introduced in the marketplace in nearly a decade, Blome said.

Blome also urged the industry to embrace the young farmers representing in the millennial generation. The second fastest-growing segment of farmers falls between the ages of 25 and 34, Blome said.

According to a recent Purdue University study, 60,000 new agricultural jobs will be created in the

next five years. In animal science, 90 percent of students come from an urban background, Blome said.

Blome said the industry faces slower acceptance of agricultural technology from consumers who lack a farming background. Blome pointed to the perceived distrust of production agriculture, information overload and misinformation.

He urged the industry to communicate more efficiently through social media to address consumer concerns.

"We have young people who are absolutely enamored with new technology — they will wait in three-block lines for the newest, greatest version of an iPhone, and yet those same people will talk about how they would rather have their food produced (using) a pair of mules," Blome said. "We're seeing more emotional decision-making versus sound science (or) decisions based on fact."

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