

Idaho company envisions drone freight hub in Pocatello

By JOHN O'CONNELL
EO Media Group

POCATELLO, Idaho — An Idaho company that has pioneered the use of drones in agriculture plans to investigate the Pocatello Regional Airport as the potential site of a future international unmanned air-freight hub.

Steve Edgar, founder of Hayden-based Empire Unmanned, presented his vision for the future of aerial shipping Nov. 18 at Idaho State University before a crowd of state leaders and economic development officials.

Though Edgar emphasized it could be more than a decade before Boeing 747-size unmanned aircraft are hauling cargo, he intends to conduct an analysis of infrastructure at the airport and the surrounding community during 2017.

Edgar said Pocatello is his top choice because of its under-served airport surrounded by open space, location on a main Union Pacific rail line and access to two interstate highways. Furthermore, he said ISU and the Idaho National Laboratory provide expertise in the field.

“Pocatello has all of the infrastructure in place if they wanted to pursue development of an unmanned aviation base,” Edgar said, adding a 4.7 percent annual increase in global air freight is projected throughout the next two decades, and there’s a worldwide pilot shortage. “What we’re really talking about is the opening rounds of discussion.”

Assuming other investors share Edgar’s enthusiasm, Airport Manager David Allen believes the city should study how to best position itself to take advantage of the opportunity.

“I think it’s worth looking at this,” Allen said. “It would be a fun bone to chew on.”

In August of 2015, the Federal Aviation Administration approved protocol for the commercial use of drones within the pilot’s line of sight and below an altitude of 400 feet. Empire



John O’Connell/EO Media Group
Steve Edgar, founder of Hayden, Idaho-based Empire Unmanned, speaks Nov. 18 at Idaho State University in Pocatello about his hopes of creating an international freight hub at the Pocatello Regional Airport for Boeing 747-sized cargo drones.

Unmanned was the eighth company to receive an FAA drone exemption.

Edgar is optimistic the FAA will clear the next hurdle toward making his lofty ambitions a reality some time next year, allowing pilots to fly drones beyond their line of sight. He expects FAA will be selective in approving exemptions for operating drones beyond line of sight, but believes his company is well positioned to be included. In the near term, Edgar believes the anticipated FAA rule change will help his company cover more ground with its existing services in farming, mining, timber, natural resource management, civil engineering and aquaculture.

“The first thing we’ll do is larger farms,” Edgar said. “Instead of doing 400 acres at a time, I’ll do 1,000 acres at a time.”

His company now flies drones in Idaho, Oregon, Washington, Montana, Wyoming, Utah and Colorado. Business has grown rapidly, increasing by 169 percent this year over 2015 and is projected to grow by 100 percent in 2017.

However, jobs in agriculture, which represented 41 percent of Empire’s business in 2015, shrank to 17 percent of this year’s business, due to low commodity prices, Edgar said.

He sees growth potential in surveying, mining and inspections of railways, power lines and pipelines.

Presentations to focus on drones in agriculture

USDA scientist to share research at Farm Fair

By GEORGE PLAVER
EO Media Group

Experimenting with drones is nothing new at the Hermiston Agricultural Research and Extension Center.

Scientists started flying small unmanned aircraft over potato fields at the station in 2013, outfitted with infrared cameras to detect disturbances such as heat stress or pest damage. The idea was to show farmers exactly where they need to irrigate or spray fertilizer, rather than spraying entire fields, thereby saving money and increasing efficiency.

Ray Hunt, one of the project leaders, will discuss the benefits of drones in agriculture during a pair of presentations at the 43rd annual Hermiston Farm Fair. The first talk will begin at 8 a.m. Thursday, kicking off the morning general session in Meeting Room 1. The second forum will focus specifically on early detection of plant damage caused by Colorado potato beetles, as part of Friday’s pest management seminar.

Hunt, who works at the U.S. Department of Agriculture’s Hydrology and Remote Sensing Laboratory in Beltsville, Maryland, has participated in field day demonstrations at the Hermiston research station, teaching local growers how to read data from drone flights.

The key is recognizing how different wavelengths of light reveals information about the crop’s health. Plants reflect near-infrared light strongly when they are healthy, but less so when they are under stress.

Drones are also capable of mapping fields quickly, giving farmers a head start on figuring out where to concentrate their resources.

Growing potatoes costs roughly \$4,000 per acre, and being smart with water and fertilizer can be the difference between staying competitive or going out of business.

Efficiency is also good for the environment in a region like the lower Umatilla Basin, which is saddled with



Staff photo by George Plaver
The Yamaha RMAX Type II agricultural drone took flight during a demonstration Monday at the Columbia Basin Agricultural Reserach Center north of Pendleton.

critical groundwater and nitrate levels.

According to Hunt’s research, most growers already use color and near-infrared aerial photography to monitor their crops, typically running 25-30 cents per acre.

However, farmers rarely use satellite imagery for field management during the growing season, due in part to low resolutions and slow turnaround times for recording data. That’s where drones may have an advantage.

“(Drones) have many important characteristics as

platforms for agricultural remote sensing. First and foremost is the ability to fly at low altitudes and acquire very high spatial resolution imagery,” Hunt wrote in 2010. “The very high spatial resolution images would also help detect weeds, insects and diseases early. Therefore, (drones) provide an adaptable and general platform for crop monitoring.”

The agriculture industry has taken notice. Fred Ziari, president and CEO of IRZ Consulting in Hermiston, said the company has been following drone technology with quite a bit of interest,

but has yet to offer the service commercially.

Another use for drones, Ziari said, is for 3-D surveying of farms and construction sites. Like any technology, Ziari said he expects drones will become more common as they are perfected.

“We still have a ways to go, in my opinion,” he said. “We see the potential for it.”

For more details about the HAREC drone trials, visit www.uasag.com.

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