

Ideas: ‘Every farm is an internationally competitive small business’

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region’s high-value agriculture. Farmers here grow more than 170 different crops — everything from grass seed to winegrapes, berries and hazelnuts — which are processed locally and shipped to consumers around the world.

“Every farm is an internationally competitive small business,” Paraskevas said.

According to SEDCOR, agriculture, food and beverage companies employ 16,332 people in the three counties, with an annual payroll of nearly \$543 million.

By bridging the divide between rural farms and high-tech operations in Portland and elsewhere, Paraskevas believes the Willamette Valley can become fertile ground for agricultural technology designed to help growers increase yields and efficiency.

SEDCOR last year received a \$469,150 grant from the U.S. Economic Development Administration to launch the Hub. With the money, Paraskevas said they will hold regular events aimed at building those relationships.

Eventually, he said the goal is to establish a network of farmers that will host field trials and aid in the development of future tech startups, creating more jobs in the farm sector.

“We want to be sort of the pipeline and the funnel for startups, pairing them with farmers,” Paraskevas said.

Flipping the script

Last year’s grant award was the culmination of years of work that started in the small city of Independence, Ore., about 15 miles west of Salem.

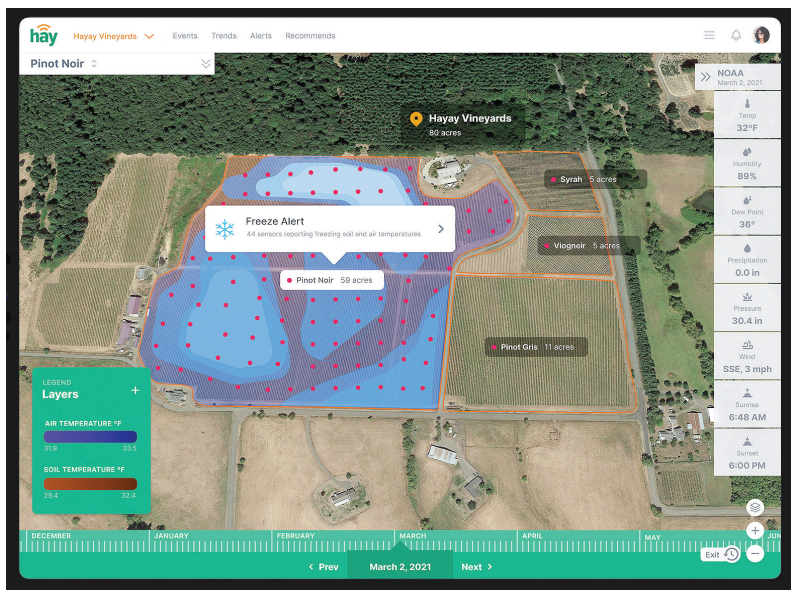
Shawn Irvine, the city’s economic development director, saw the potential for developing agricultural technology in 2006 after a municipal partnership with the nearby city of Monmouth led to the creation of MINET, providing high-speed internet to every home and business in those cities.

“This was an investment by the two cities to make sure our communities would be able to access the digital economy and keep pace in the digital age,” Irvine said.

Irvine said he felt Independence could be a place where people come from all around to develop and test new broadband technologies. Given its agriculture-rich profile, he said it made sense for the community to promote itself as an interface between urban tech and rural farms.

“Frankly, I think it’s an opportunity to flip the script on rural,” Irvine said. “Smart agriculture is a way to show what rural is really all about.”

About five years ago, Irvine began holding regular agricultural technology meet-ups in Independence, inviting growers, entrepreneurs, university researchers, tech companies and local govern-



Courtesy of Justin Kuntz

A web-based app, called Hay, was designed by a Eugene tech developer as part of the five-day design sprint challenge for farmers to quickly and easily analyze microclimate data.



Shawn Irvine



Alex Paraskevas

ment officials to sit down in the same room and begin the conversation.

Those meetings generated some early trials around the Mid-Willamette Valley. Intel, the tech giant with a large footprint near Portland, partnered with Rogue Ales, using remote sensors to track shipments of fresh hops from a farm near Independence to the brewery in Newport on the coast.

Intel later took the same concept and applied it to tracking blueberries from farm to processor. Along the way, sensors kept track of environmental conditions such as light, temperature and humidity, and uploaded the data directly to a blockchain — a digital ledger that tracks every transaction.

As interest grew, Irvine said he could no longer handle the initiative by himself. He applied for a grant from the Ford Family Foundation to hire a new position, which Paraskevas at SEDCOR now holds.

“Now we have an actual project,” Irvine said. “We have a thing that we’re doing, and all these partners want to help us.”

Sprinting toward solutions

Cara Turano, chief operating officer for the Technology Association of Oregon, said she was intrigued by the potential marriage of farms and tech to drive innovations.

The association, known by the initials TAO, is a business league dedicated to the tech sector and includes 500 companies in Oregon and southwest Washington.

One way TAO promotes networking and industry development, Turano said, is by hosting “design sprints” where teams have only five



Justin Kuntz



Cara Turano

how we could engage folks in our tech community to come up with solutions to their problems.”

The first Agricultural Innovation Design Sprint Challenge was in April 2020. A second was in June, and a third just wrapped up last month.

Winners have included the wine goggles, as well as a web-based app for tracking microclimate data.

“What we’re doing with these design sprints is really about ecosystem building,” Turano said. “How can we as a statewide tech association provide the infrastructure, capital and workforce to help with this industry that’s poised for digitization and expansion moving forward?”

Looking ahead, Turano said she hopes to see the Hub become an incubator for startups, turning potential into measurable economic growth.

“The hope is that this creates some businesses in the Mid-Willamette Valley, and they grow and employ lots of people,” she said.

Making HAY

Justin Kuntz, owner of Creative Soapbox LLC, led the team that designed the microclimate data app which they named “HAY,” or “Help Analyzing Yields.”



Courtesy of Pete Nelson

Scott Fullen, left, of Mid-South Family Farms and Paul Kennedy, director of Farmer Field Trials at AgLaunch survey irrigated cotton field while field testing TerreSentia robot. Mid-South Family Farms produces corn, soybeans and cotton across 17,000 acres in Tennessee and Mississippi and has field tested and helped scale several innovations in the AgLaunch portfolio.

The app was created to aggregate data from a variety of sources, Kuntz said, such as weather stations, soil moisture monitors and geographic information systems that are available through the National Oceanic and Atmospheric Administration.

Farmers can check for conditions in their fields, or even portions of a field, and make management decisions based on temperature, precipitation, dew point and frost.

“It would help them plan and understand when they might need to pool up resources to do certain management activities on the crop,” Kuntz said. “What we recognized quickly is we weren’t just developing a microclimate app. We were developing a platform that would help growers understand the bigger picture.”

Kuntz, who lives in Eugene, came to Oregon from southern Idaho, where he grew up on his family’s 40-acre farm. He established Creative Soapbox in 2005, finding his niche in creating web-based applications.

For the March design sprint with TAO, Kuntz rallied a team of six members. With HAY still in its early development, Kuntz said the team feels it has struck upon a product that could gain traction in the industry.

In the past, Kuntz said, startup companies have been derailed by venture capitalists driving the final product. Instead of focusing on solving the problem, he said developers become obsessed with satisfying investors, which only serves to muddy the water for potential users.

The Northwest Ag Innovation Hub is different, he said, because it involves growers from the start.

“I’m all about validating ideas with real users,” he said. “In agricultural technology, that is one of the only ways to move forward.”

Model for success

A similar model for agricultural innovation is already succeeding in Tennessee, providing a glimpse at what may be in store for the Northwest Ag Innovation Hub.

AgLaunch, based in Memphis, got its start in 2015 before becoming a nonprofit in 2018. Like the NW Ag Innovation Hub, AgLaunch is cultivating a network of farmers willing to work with technologists, screening products and assisting in field trials.

Pete Nelson, executive director of AgLaunch, said the group has 26 grower-members in its network. Roughly 36 startups have already accelerated through AgLaunch — including three within the last 10 months alone.

One of those companies, called SwineTech, is based in Iowa and has created a digital platform for hog farmers that allows them to adjust their on-farm activities remotely, reducing labor costs and animal mortality.

Another, called Stony Creek Colors in Tennessee, makes indigo dyes for blue jeans, creating a market for indigo as an alternative crop for tobacco farmers.

Now, Nelson said AgLaunch is working to build a national network of like-minded organizations. That includes partnering with the Northwest Ag Innovation Hub.

At a formal kickoff meeting for the Hub last month, Paraskevas, with SEDCOR, said they are still 3-5 years away from getting where they want to go.

But, he said, the momentum is building.

“We’re trying to build both sides of this marketplace to make the Willamette Valley as competitive in agriculture as possible,” Paraskevas said.

Nelson, who also spoke at the kickoff, said the possibilities are mouth-watering, given Oregon’s array of specialty crops and supply chains.

“I just literally drool when you guys talk about some of the opportunities you all have,” he said.

Organics: Certifiers continue to predict more farms will go organic

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“But I also think people are just really tuned into health right now,” she said.

Moving into the second quarter of 2021, as pandemic closures ease up and restaurants reopen, the Organic Produce Network report said it’s not yet clear how quickly consumers will return to pre-pandemic purchasing behaviors.

“Once again, sales of organic fresh produce continue to be a major growth opportunity for retailers across the country,” Matt Seeley, CEO of Organic Produce Network, said in a statement. “At the same time, as the country enters a post-COVID environment, with restaurants reopening and other food-service options available, it appears the dou-

ble-digit growth rate will be slowing.”

Some experts say it may be easier to predict continued high sales in the direct farm-to-consumers space, where consumers often have longer-term contracts or subscriptions to farms.

The past two months, for example, several organic farms running Community Supported Agriculture programs have told the Capital Press they expect even more CSA shares to be sold this year than in 2020.

Organic certifiers continue to predict more farms will enter the organic space, and Agriculture Secretary Tom Vilsack told the Capital Press in an interview last week USDA will be looking at ways to make the transition from conventional to organic production easier.



Sierra Dawn McClain
Capital Press
Organic produce sales continue strong through the first quarter of 2021.

Shipping: ‘We had not been preparing for a demand surge in 2020’

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“So this is part of the challenge that we’re facing from an export perspective in the dairy industry,” he said.

In addition, there’s been a moderate slowdown in shipping capacity, with world trade flattening in 2017 and 2018, he said.

“We had not been preparing for a demand surge in 2020,” he said.

“It’s not only the boats, shipping containers are in extremely short supply,” he said.

The situation has consequences for U.S. dairy exports. About 41% of the value of all U.S. dairy sales

in 2020 went to Asia. The challenge recently is suppliers, who have product and at good prices, have been forced to tell interested Asian buyers they have a hard time getting it to them in a timely fashion due to the container shortage and shipping delays, he said.

“When people talk about the freight issue and exports, that’s where the rubber is meeting the road,” he said.

Looking ahead, another \$1.9 trillion stimulus bill and the relative health of the U.S. economy will continue to buoy import demand. And the economic incentive to ship empty containers out of the U.S. will probably

persist into the second half of the year, he said.

On the positive side, vaccinations, improving safety and rising wages should help boost staffing levels at U.S. ports, and companies are racing to add container capacity, he said.

“So the bottom line, as we see it, time and money will solve this problem. But it’s not really going to loosen up much until later in 2021 or early 2022,” he said.

More workers at the ports and more containers are going to become available because economics and markets work, but it’s not going to happen by May or June, he said.



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