

People & Places

A smart app for growers

Chandra Krintz develops program that delivers information directly to farmers

By **TIM HEARDEN**
Capital Press

Chandra Krintz has always had an admiration for agriculture, having grown up on a farm in Indiana. But her first love has always been computers.

When she was 8, her father, a junior high school teacher and principal, brought a computer home from the school for the summer so it wouldn't be stolen, she said.

"I just dove in," Krintz said. "I wrote my first computer program at age 8 and it changed my life. ... I loved designing systems and solving problems. It's been my life ever since."

Now a computer science professor and researcher at the University of California-Santa Barbara, Krintz has come "full circle," she said. She's developing a digital program called SmartFarm, which seeks to help growers identify real-time conditions in their fields and run their operations more efficiently.

"It's Amazon.com for ag," she said. "Amazon was the first example of a smart shop. ... We want to do something analogous to that with SmartFarm."

Using tiny fence-like sensors that Krintz says are "super-cheap," SmartFarm will virtually monitor the conditions of each plant and the soil around it and compile it with



Courtesy of UCSB

Chandra Krintz, a computer science professor at the University of California-Santa Barbara, is leading a project called SmartFarm that aims to help growers use data and technology to make their operations more efficient.

other data such as weather forecasts to show a grower specifically where the needs are.

The program, which will work as a phone or tablet app, will also enable growers to more efficiently tackle such tasks as irrigation scheduling and soil health management.

"It will make predictions of the future, like when a frost is likely to occur, so when you take actions to prevent frost damage you can do that more

accurately," Krintz said. "We work with pistachio growers, and they turn on their water when it's 9 degrees above a hard freeze. We believe that by taking very precise measurements at the plant level, we'll collect individual information ... that will help a farmer make better decisions than what is possible today."

"Right now a farmer looks at statewide weather information and sees that it might freeze," she said. "We can

Western Innovator

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tell you, 'These are the trees that are going to have a hard frost.'"

Krintz and fellow UCSB researcher Rich Wolski, a former chief technology officer at Eucalyptus Systems, are testing their system on a 20-acre experimental farm in a natural reserve north of Santa Barbara. They're also collaborating through the UC Cooperative Extension with about 20 growers throughout California, Krintz said.

"We're kind of taking it from the tech angle," she said. "We are not farmers or ranchers, but we feel like agriculture today is underserved by technology given the boom (in digital data use)."

For Krintz, spending time on farms is all too familiar. Her family raised corn, soybeans and alfalfa on 8 acres in rural Indiana, where her father — who was also raised on a farm — passed on to her a love for the earth and soil, she said.

She moved to Southern

California in the early '90s to work in the computer industry, later earning a bachelor's degree from California State University-Northridge and a master's degree and doctorate in computer science from UC-San Diego. She joined the UCSB faculty in 2001.

Krintz said the SmartFarm technology will be provided free to growers, who will own the data they load into the system. The hardware will be inexpensive, and because farmers and ranchers are busy, the researchers are trying to make the system as easy as possible to use, she said.

"It has to make sense for growers," she said.

The system will come online by the end of this year and the software will be available online for people to try, Krintz said. She said the researchers hope the technology is someday commonly used by farmers around the world.

"I'm super excited," she said. "I think the future looks tremendously bright. Even though growers and ranchers are facing many, many challenges, there's been such a boom on the consumer side with data analytics. Everything that's done by Amazon, Google and Facebook can be applied to problems farmers have, and because these big, huge companies have done it for millions of people, we can do it for individuals as well."

"We have no other choice" but to make better use of technology in agriculture, Krintz said. "We have to produce enough food to feed 9 billion people by 2050, and 7 billion people today. We think automation and computing can really simplify what farmers do today. I really believe that."

Extra-large steer named Buford stars at auction

By **JANAE SARGENT**
Capital Press

LEBANON, Ore. — Coy Cowart and three friends joked about how many hamburgers his giant steer Buford would make.

They decided the steer would produce 3,600 quarter-pound hamburgers.

Buford is not your average steer. Weighing in at 2,175 pounds, he brought 83 cents per pound at Cowart's Lebanon Auction Yard on July 21. When Cowart stood next to Buford in the auction ring, the steer towered over him.

Buford was nearly twice as heavy as the average steer, which typically weighs approximately 1,200 pounds.

Cowart called Buford his pet steer, having raised him for four years.

"He was always the most gentle guy," Cowart said. "When I would call him in he would lead all of the other cattle in with him."

Cowart said he would have liked to keep Buford longer to see how much bigger he would get but that he became too big



Janae Sargent/Capital Press

Coy Cowart sold his pet steer Buford July 21 at his Lebanon Auction Yard for 83 cents per pound. Buford weighed in at 2,170 pounds, making him nearly 1,000 pounds heavier than an average steer.

to manage with the other cattle.

Cowart is co-owner of Lebanon Auction Yard with his wife, Helen, son Terry and daughter-in-law Lezlie. He started the auction yard in 1987 after he retired from a career in construction.

"I never thought I would own a business before I retired," Cowart said. "At 54 years old I spent a lifetime making money for other people and thought,

Why not do it for myself?"

When Cowart started the auction yard there were 18 other auction yards in Oregon — now there are eight. Three are left in the Willamette Valley.

Diversification has been a big contributor to Cowart's success. He said he realized early on that auctioning dairy cows wouldn't be enough to sustain his family so he began

investing in other areas.

The auction yard now sells farm equipment and animals and provides trucking services, contracts cattle and transports hay and feed.

Cowart expanded the auction yard last year with the addition of a 100-by-240-foot barn and expects to put in another, bigger barn later this year.

Cowart said family is a

huge part of Lebanon Auction Yard and his life. He has 12 grandchildren and 8 great-grandchildren that help out at the auction yard and in his garden at home.

"I believe in God, family and the nation," Cowart said, quoting Republican presidential candidate Donald Trump.

Cowart said he encourages all of his children and grandchildren to own their own businesses.

He spoke proudly of his grandson, Matt Cowart, who in 2015 opened a brewery in Lebanon, Ore. Cowart said he takes out-of-town business associates and friends to Conversion Brewing whenever they are visiting.

He said everyone at Lebanon Auction Yard is like family, whether they are related or not.

In selling Buford, Cowart said most people don't want to eat pets once they've named them but that he won't have that problem.

"I'll have no problem eating Buford," Cowart said. "He's going to make some good steaks."

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To submit an event go to the Community Events calendar on the home page of our website at www.capitalpress.com and click on "Submit an Event." Calendar items can also be mailed to Capital Press, 1400 Broadway St. NE, Salem, OR 97301.

Friday, July 29
Hood River County Fair, noon-11 p.m. Hood River County Fairgrounds, 3020 Wy'east Road, Hood River, Ore. Gates open at noon each day, carnival rides begin at 1 p.m. General admission is \$8 per adult Wednesday and Thursday, and \$10 per adult on Friday and Saturday. Children ages 6-12 (inclusive) are admitted for \$3 every day; children younger than 6 are admitted free. Season tickets are available (\$30 for adults, \$10 ages 6-12 inclusive). Fair parking is free.

Saturday and Sunday July 30-31
The Great Oregon Steam-Up, 9 a.m.-5 p.m. The Great Oregon

Steam-Up is the largest event at Antique Powerland during the year and it involves all of the museums and many other participants. One of the unique aspects of the event is that most of the equipment is operating. 3995 Brooklake Road NE, Brooks, Ore. Daily admission \$12 per person, 12 and under free. www.antiquepowerland.com/html/steam-up.html

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Saturday and Sunday Aug. 6-7
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Sunday, Aug. 7
"Raised Country" Music Festival, 1 p.m. Antelope Church lawn, Antelope, Ore. The festival kicks off at 1 p.m. with Joni Harms, followed by an authentic Chuckwagon Barbecue with Paradise Rose and the harmonies of Central Oregon's Mud Springs Gospel Band, while the kids stay busy with the ranch animal petting area, face painting and other activities. Headlining the festival at 3:45 p.m. will be Susie McEntire.

Saturday, Aug. 13
Harvest Fest, 10 a.m.-4 p.m.

Yamhill Valley Heritage Center, 11275 SW Durham Lane, McMinnville, Ore. Threshing, binding and baling oats using vintage farm equipment, horses and mules; "Parade of Power" tractor parade at 1 p.m. each day; pioneer kids' activities, pedal tractors and petting animals. \$5 admission, kids under 12 are free. www.yamhillcountyhistory.org

Oregon Cannabis Growers Fair, 10 a.m.-4 p.m., Oregon State Fairgrounds, 2330 17th St. NE, Salem. Over age 21 only. <https://oregoncannabisgrowersfair.com/>

Sunday, Aug. 14
Harvest Fest, noon-4 p.m. Yamhill Valley Heritage Center, 11275 SW Durham Lane, McMinnville, Ore. Threshing, binding and baling oats using vintage farm equipment, horses and mules; "Parade of Power" tractor parade at 1 p.m. each day; pioneer kids' activities, pedal tractors and petting animals. \$5 admission, kids under 12 are free. www.yamhillcountyhistory.org

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Tuesday, Aug. 16
Oregon Soil and Water Commission Meeting, 8:30 a.m.-12:30 p.m. Hilton Garden Inn, 3528 Gateway St., Springfield, Ore. www.oregon.gov/ODA/programs/NaturalResources/SWCD/Pages/SWCC.aspx

Practical Food Safety & HACCP Workshop. This is a comprehensive, three-day workshop, designed for those individuals responsible for implementing and managing a HACCP system in a food manufacturing facility. Participants who pass a final test will receive a certificate of completion. Idaho Water Center, 322 E. Front St., Boise, Idaho. Cost: \$650. www.techhelp.org/events/273/practical-food-safety-haccp-workshop-august-16-18-in-boise/

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