People & Places

New potato physiologist has his eye on storage

By CAROL RYAN DUMAS Capital Press

KIMBERLY, Idaho — A research and extension position with the University of Idaho this spring came as a birthday gift for Gustavo Teixeira, who turned 50 in April.

The new assistant professor and potato postharvest physiologist had applied for several positions in the U.S. after a two-year research sabbatical at Virginia Tech University, from 2017 to 2019.

A native of Brazil, his research has primarily focused on postharvest physiology and biochemistry in fruits and vegetables, but not potatoes. The good thing about the position with the University of Idaho is it didn't restrict the required postharvest experience to work in potatoes, he said.

Potato storage

"I think they were trying to get someone from outside. You get a different perspective, think of potato postharvest in a different way," he said.

He's been learning a lot about potatoes and how he can apply his knowledge to potato storage since starting at the Kimberly Research and Extension Center in April.

He's planning to use his knowledge to address the problems and constraints of potato storage, especially regarding new varieties that are being released.

He has extensive experience with gas chromatography to determine gas composition inside plastic bags, a fundamental aspect of modified atmosphere packaging (MAP), used to extend the shelf life of different commodities, especially fresh-cut products.

He's also used near-infrared spectroscopy as a non-destructive method to evaluate the quality of produce and has used high-performance liquid chromatography (HPLC) for quantifying phenolic com-



Carol Ryan Dumas/Capital Press

Gustavo Teixeira, a new potato storage researcher with the University of Idaho, at his desk at the Kimberly Research and Extension Center.

pounds in tea and apples.

"I try to use the technologies that are commonly available to understand the physiology of underutilized fruit and vegetables," he said.

He plans to use those technologies as well as new ones linked to the understanding of the physiology of potatoes in storage to benefit Idaho's industry.

"I'm keen to study the use of imaging to sort potatoes based on the presence of defects and also based on internal quality, such as dry matter and nutrient level," he said.

First project

His first research project will be measuring the respiration rates of different potato varieties during storage to make a connection between respiration and potato quality and provide insights into storage management, such as temperature and ventilation control.

The potato is a living organism that depends on stored carbohydrates for energy. Higher respiration rates mean higher consumption of those reserves and shorter shelf life. It also tends to increase the heat load and carbon dioxide content inside storage, which compromises the quality of the pota-



other people in the industry, he said.

"I want to have more contact, get the picture and connect what I'm planning to do and the needs of the industry. That's my job," he said.

Valuable crop

With a value of about \$1 billion, potatoes are the most important crop in Idaho. The state produces 35% of all U.S. potatoes, he said.

"That's really important, not just for the state but the country," he said.

Potatoes can be in storage for at least 8 months, and that's why storage research is important for the Idaho potato industry, he said.

That position was made possible by a \$1 million endowment by Wayne and Peggy Thiessen, the Idaho Potato Commission, Northwest Farm Credit Services and McCain Foods.

Course planned

In addition to his research work, Teixeira is also planning a potato postharvest course on physiology, storage and management. A couple of other big universities have organized similar postharvest courses but not focused on potatoes. His course will include theoretical analysis, hands-on activities and tours.

He is also helping to organize and convene the International Symposium on Postharvest Technologies to Reduce Food Losses as part of the 31st International Horticulture Congress, Aug. 14 in Angers, France.

The funny thing is — considering all his accomplishments — he wouldn't have gone into research if not for his wife, Izabella. When they began dating, she suggested he apply for scholarships because of his high grades.

Until then, he had intended on being a poultry and fruit farmer.



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Western Innovator **GUSTAVO TEIXEIRA**

Position: Assistant professor and extension specialist, potato postharvest physiologist, University of Idaho

Location: Kimberly Research and Extension Center

Focus: Reducing potato postharvest losses

Education: Ph.D., agronomy, post-harvest physiology focus, Sao Paulo State University, Brazil, 2005; master's degree, agronomy, post-harvest physiology focus, Sao Paulo State University, Brazil, 2000; bachelor's degree, agronomy, Federal University of Lavras, Brazil, 1998

Doctorate work: Control of browning in fresh-cut carambola, Department of Primary Industries, Queensland, Australia

Honors: Brazilian National Council on Scientific and Technological Development, Ministry of Science and Technology, three fellowships, 2015-2018, 2018-2021, 2022

Family: Wife, Izabella Teixeira, assistant professor and extension specialist, dairy, University of Idaho; son, Pedro, 17; daughter, Ana, 14

toes, he said.

The project has been approved for a grant through the Northwest Potato Research Consortium.

Making contacts

Teixeira recently attended a potato industry tour exploring all segments of Idaho's industry - seed potatoes, farms, processing, wholesale and

"That was great, I could see

many technologies being used, many gaps I have to focus on and the challenges I have," he said.

He has also been attending Idaho Potato Commission meetings and will be setting up more meetings with stakeholders.

Nora Olsen, University of Idaho professor and extension potato specialist, "has been great" and putting him in contact with growers and

Effort begun to eradicate giant African snails in Florida

By CURT ANDERSON Associated Press

PETERSBURG, ST. Fla. — Invasive giant African land snails that can eat building plaster and stucco, consume hundreds of varieties of plants and carry diseases that affect humans have been detected once again in Florida, where officials said Thursday work has begun to eradicate the pests.

The snails, which grow as long as 8 inches (20 centimeters) and have a distinctive whirled, brown mottled shell, were confirmed by state agriculture officials in New Port Richey, Florida, on June 23. The location in Pasco County is just north of the Tampa Bay area on the Gulf coast.

Florida has twice before eradicated the snails in other parts of the state, most recently a 10-year effort in Miami-Dade County that

Rui Almeida/Creative Commons via Wikimedia Commons **Giant African snail.**

cost \$23 million and ended in 2021 after collection of about 170,000 snails. Now they are back again, most likely the result of the illegal international exotic pet trade or arriving hidden in cargo from overseas.

"We will eradicate these snails. We've done it before and we will do it again," said Nikki Fried, commissioner of the state Department of Agriculture and Consumer Services, at a news conference Thursday.

The snails have been found in numerous parts of the world such as Hawaii and parts of the Caribbean, including in Cuba where an effort is ongoing to rid the island of the pests.

The snails are known to eat 500 different plant types, making them a major threat to agriculture including peanuts, beans, cucumbers and melons. They will also eat plaster and stucco in buildings, even tree bark, and carry a parasite called the rat lungworm that can cause meningitis in humans, according to the department. They can produce up to 1,200 eggs a year.

"They are one of the most damaging snails in the world," said Fried, a Democrat who is also running for governor this year.

A quarantine area has been set up in Pasco County where the snails were found, initially by a homeowner. The properties involved will be treated with a molluscicide bait and snails are being collected by state workers aided by dogs trained to sniff them out.

Greg Hodges, assistant director of the state Division of Plant Industry, said it is illegal to import or possess giant African land snails in Florida without a permit. It is also illegal to move them from a quarantined area, such as the one in Pasco County, or to take away other material in the area such as soil, yard waste or building materials without an agreement with the state.

About 1,000 snails have already been collected in the quarantine area, Hodges said. He said anyone who spots a snail should not touch it but instead call 888-397-1517 to report the find.

Fried said people should definitely shy away from the snails, which are not the type one finds in escargot.

"This is not something you want to touch. It is not something you want to eat," Fried said.

RSVP for these or any of OAT's other events and refer any questions about the event to diane@oregonagtrust.org 503-858-2683

TUESDAY AUG. 9 Transitioning Your Ag Busi-

ness to the Next Chapter: 12:30-4 p.m. Lake County Library,

26 South G St., Lakeview, Ore. Farm and Ranch succession counselor and accountant Diana Tourney will prepare you for the human and financial elements of succession planning. Easement specialist Marc Hudson will answer your questions about working lands conservation easements —what they are, what they aren't, and how they may be helpful in executing your agricultural business plans. These in-person events are part of a free 6-workshop series in Lake, Harney and Malheur counties. All are welcome, and the events are free. RSVP for these or any of OAT's other events and refer any questions about the event to diane@oregonagtrust.org 503-858-2683

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JULY 15-31 California State Fair & Food Fes-

tival: Cal Expo, 1600 Exposition Blvd., Sacramento, Calif. The California State Fair is dedicated as a place to celebrate the best the state has to offer in agriculture, technology, and the diversity of its people, traditions, and trends that shape the Golden State's future. Website: https://calexpostatefair.com/

TUESDAY JULY 19 Transitioning Your Ag Business

to the Next Chapter: 9:30 a.m.-1 p.m. City of Vale Library, Vale, Ore. Attorney Maria Schmidlkofer will present on the topics of succession and estate planning, and how to prepare your operation to be resilient for future generations. She will review the steps of estate and succession planning, how to address taxes and corporate farm structuring, and more. Easement specialist Marc Hudson will answer your questions about working lands conservation easements — what they are, what they aren't, and how they may be helpful in executing your agricultural business plans. These in-person events are part of a free 6-workshop series in Lake, Harney and Malheur counties. All are welcome, and the events are free. RSVP for these or any of OAT's other events and refer any questions about the event to diane@ oregonagtrust.org 503-858-2683

Intro to Good Manufacturing Practices (online): 8 a.m.-noon. Dr. Janna Hamlett & Catherine Cantley of TechHelp and the U of I will help participants learn and understand the revised current Good Manufacturing Practices or cGMPs according to the final rule for FSMA's Preventive Controls for Human Food. Contact: 208-736-3610 Website: https://bit. lv/3v3SNa9

WEDNESDAY JULY 20

Blueberry Field Day: 1 p.m. North Willamette Research & Extension Center, 15210 NE Miley Road, Aurora, Ore. This annual field day will inform participants about the latest research in

CALENDAR

blueberry propagation and breeding. Contact: Amanda Davis, (971)-801-0394 or amanda.davis@oregonstate. edu Website: http://extension.oregonstate.edu/NWREC/

SATURDAY-SUNDAY JULY 30-31 Great Oregon Steam-Up:

7 a.m.-6 p.m., Powerland Heritage Park, 3995 Brooklake Road NE, Brooks, Ore. Enjoy a steam-powered day with train and trolley rides, a parade, steam sawmilling, traditional tractor pulling, machinery demos, threshing, flour milling, fire apparatus demos, museum tours, kids pedal tractor pulling and a youth passport program. Website: www.antiquepowerland. com/steam-up Phone: 503-393-2424

SATURDAY-SUNDAY AUG. 6-7

Great Oregon Steam-Up: 7 a.m.-6 p.m., Powerland Heritage Park, 3995 Brooklake Road NE, Brooks, Ore. Enjoy a steam-powered day with train and trolley rides, a parade, steam sawmilling, traditional tractor pulling, machinery demos, threshing, flour milling, fire apparatus demos, museum tours, kids pedal tractor pulling and a youth passport program. Website: www.antiquepowerland.com/ steam-up Phone: 503-393-2424

MONDAY AUG. 8 Transitioning Your Ag Busi-

ness to the Next Chapter: 12:30-4 p.m. Paisley Community Center, 705 Chewaucan St., Paisley, Ore. Farm and Ranch succession counselor and accountant Diana Tourney will prepare you for the human and financial elements of succession planning. Easement specialist Marc Hudson will answer your questions about working lands conservation easements — what they are, what they aren't, and how they may be helpful in executing your agricultural business plans. These in-person events are part of a free 6-workshop series in Lake, Harney and Malheur counties. All are welcome, and the events are free.