Researchers receive grant to study rapid apple decline

By SIERRA DAWN McCLAIN Capital Press

ITHACA, N.Y. — Cornell University researchers recently received a \$299,000 USDA grant to study rapid apple decline, a little-understood phenomenon responsible for killing apple trees across Canada and North America, including in the Pacific Northwest.

The three-year study is one of the first federally funded projects to investigate RAD in the U.S. The goal is to track down the cause, or causes and learn about root systems of apple rootstocks in the process.

Awais Khan, associate professor of plant pathology and plant-microbe biology at Cornell and lead project researcher, said the study will likely prove "very help-



Awais Khan Marc Fuchs

ful" to the apple industry.

Rapid apple decline was so named to describe the rapid deterioration and death of trees associated with the syndrome. It is also called sudden apple decline, apple decline or rapid decline of apple trees.

Scientists started tracking RAD around 2013, although a similar phenomenon was reported in Washington state orchards as early as 1983.

Scott Harper, assistant professor of plant pathology at Washington State University, said in recent years



Courtesy of Cornell University A tree killed by rapid apple decline.

he and fellow researchers

have responded to reports of decline at about 20 sites from the Yakima Valley north into the Brewster-Omak region.

Khan, of Cornell, said it's not clear whether people have recently been reporting more cases because cases are on the rise, because people are simply more aware,

Because RAD's cause is unknown, it's also unclear

whether trees in different regions are dying for the same reasons.

Khan suspects the syndrome may have something to do with root health.

'We can see only above ground. So, if a tree's declining, we think something is wrong with the leaf or branch or trunk," he said. "But we ignore the hidden half of the plant, the roots."

Over the next few years, Khan and fellow researcher Marc Fuchs, a Cornell University virologist, plan to study roots.

Khan said one possible explanation for RAD might be that modern, high-density orchards lead to weaker root

About 15 to 20 years ago, growers planted 250 to 300 trees per acre.

"That has changed dra-

matically," Khan said.

Many growers have moved to dwarfing root systems and plant 1,500 to 2,000 trees per acre. This is called a high-density orchard, which has a high economic return and is easier to manage. But Khan said he wonders if the root systems are too close together, possibly causing trees to rob one another of nutrients.

"There is no comprehensive scientific study on the sustainability and vulnerability of high-density orchards," he said.

Khan and Fuchs aim to study this.

The researchers have obtained young trees from one West Coast nursery and two East Coast nurseries. They will also work with adult trees provided by commercial growers.

Idaho Water Users Association slates ag water safety campaigns

By BRAD CARLSON **Capital Press**

The Idaho Water Users Association is adapting its annual canal-safety messaging to a growing population and increasingly diverse media landscape.

IWUA each year promotes safety around the state's irrigation canals, ditches, laterals and other water-delivery infrastructure. Its new Ag Water Safety Week campaigns, set May 24-28 and July 26-30, will replace the traditional six- to eight-week summer campaign.

Executive Director and General Counsel Paul Arrington said delivering safety messaging during a concentrated period over broadcast, print and social media aims to leave a lasting impres-

Paul Arrington

more people. That's important partly because

the state's

fast-growing population lives near irrigation infrastructure for the first time.

"Our hope at the end of the day is less drowning. ... For us, success is not experiencing injuries or deaths in the canals," he said.

At least one person dies most years in an Idaho The association canal. reports more children drown in irrigation facilities than in any other water body in the

"We teach children to stay out of the road, and we way a scenic amenity.

need to teach them to stay away from these canals as well," said Twin Falls Canal Co. Field Supervisor Jay Barlogi, who chairs IWUA's Rural and Urban Affairs Committee.

"To some, a canal might look like an inviting place to swim or recreate," Arrington said. "Really, they are quite dangerous."

Swift undercurrents, subsurface structures and debris, and steep banks that make escapes difficult are among the factors that make canals much more dangerous than they may appear, he said.

Black Canyon Irrigation District Manager Carl Hayes said municipal planning also can put more people close to canals. An example is a public walkway positioned to make an irrigation water-

Club aims to enhance visibility of LGBTQ students in agriculture

OSU starts first **Cultivating Change** chapter on West Coast

By GEORGE PLAVEN **Capital Press**

CORVALLIS, Ore. — Growing up in suburban Seattle, Abi Bickford admits she didn't know much about agriculture.

Bickford, 21, came to Oregon State University four years ago and initially planned to major in sociology. Then she took a class in soil science, and it changed her outlook.

We got to dig in the dirt, and get our hands dirty. It was fun," said Bickford, who switched her major to agricultural sciences. "I realized this is my path, and these are my people."

However, Bickford, who describes herself as a multiracial queer woman, said she didn't recognize herself reflected among many of her classmates. While nobody intentionally made her feel unwelcome, she had a hard time connecting with other people like her.

A new club aims to change that feeling of isowere instrumental in forming a new chapter of the Cultivating Change Foundation at OSU, promoting LGBTQ+ inclusiveness in the agriculture industry. LGBTQ refers to Lesbian, Gay, Bisexual, Transgender and Queer.

Cultivating Change is a national nonprofit founded in 2015, with university chapters at Penn State, Virginia Tech, North Carolina State, Ohio State and now OSU — the first west of the Mississippi River.

OSU officially recognized Cultivating Change as a student organization in January. Before that, Bickford said members and faculty advisors met regularly over Zoom to discuss their mission, and develop their constitution.

"It's really about visibil-



Abi **Bickford**

Walsh ity, networking and advocacy, all within LGBTQ+ agriculturists and allies," Bickford said.

Christina

Christina Walsh, student engagement coordinator for the College of Agricultural Sciences, serves as one of the club's faculty advisers. Walsh also openly identifies as a queer woman, and is a highly visible presence on campus. Students approached

Walsh and Robin Frojen, who manages the OSU Creamery, about forming a club for members of the LGBTQ+ community specifically in agriculture. "Being a part of the

LGBTQ community, it's not always obvious who else around you in class, or in your college and on campus, is also part of that community," Walsh said. "What I hear overwhelmingly is a great appreciation that this opportunity to connect with others exists."

Frojen, faculty co-sponsor alongside Walsh, said she is excited about the potential of more people who identify as LGBTQ+ getting the support and acceptance they need to thrive in their future agricultural careers.

"We believe this club has the ability to open a lot of doors that students may have felt were closed in the past," Frojen said.

Ryan Auld, a first-year student at OSU majoring in bioresource research, was another key figure in starting the club.

As a bisexual, transgender man, Auld said there is a perception that agriculture is dominated by white cisgender men. But that is not really true.

"Because there's no one really representing anyone else, we don't see the real



Frojen

tural community," he said. Once students return

to campus for in-person classes next fall, Walsh said she believes the group will be able to reach many new members.

"The conversations are starting to turn toward what we can do, and what we can get out of this," she said. "There is talk about possibly doing outreach to high school LGBTQ+ groups. "We're also hoping to

hear from and do outreach to agricultural sectors and industry members who either run operations or are part of the community, who want to connect with our group and do some professional development," Walsh added. "I know those folks are out there, and we hope the establishment of this group will help identify them and make those connections."

Kirk Maag, a Portland attorney and OSU alumnus, is president of the board of directors for the national Cultivating Change Foundation. The foundation previously held its third annual reception in Portland in 2019.

"I am particularly proud to see such enthusiasm for this important work at OSU," Maag said. "It takes leadership from the top and vocal allies that students would even feel comfortable presenting an idea like this."

Bickford was elected as the first president of the OSU chapter, and hopes to continue in the group's leadership. She said they are planning to hold more in-person events in the coming months as pandemic restrictions are lifted, such as group picnics and plant swaps.

"Queer people are here, and they are actively part of this (agricultural) com-munity," Bickford said. "I think the need for this club is pressing."





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