

Massive research effort will develop wheat for changing climates

By **MATTHEW WEAVER**
Capital Press

The University of California-Davis is leading a \$15 million, five-year research project to accelerate wheat breeding to meet new climate realities and train a new generation of plant breeders.

A USDA National Institute of Food and Agriculture grant will create a coordinated consortium of 41 wheat breeders and researchers from 22 institutions in 20 states. Researchers from Mexico and the United Kingdom are also participating.

UC-Davis plant sciences professor Jorge Dubcovsky, who leads the research, said the effort is a continuation of public breeding efforts. The researchers have been working together for the last 20 years, he said.

"You cannot create a general, magic, climate-resistant wheat," Dubcovsky told the Capital Press. "What you do is accelerate your breeding cycles and try to be more efficient, so you are always

catching up with the variation on the environment that you are breeding for."

The project will provide a centralized facility to analyze data from growers and breeding programs, to provide more information faster about the varieties under development. The data will be entered into a central database, Dubcovsky said.

Four high-throughput USDA genotyping labs are part of the project, which will allow all data collected from growers and breeders and genetic information to select varieties faster, Dubcovsky said.

"Breeding is always local," Dubcovsky said. "The varieties that are good for Texas are not the same that are good for the Pacific Northwest, and are completely different than the varieties we grow in California."

Yield is always one of the highest priorities, to feed more people, he said. As climate changes, pathogen populations shift and can become a high priority. Drought resis-



UC-Davis plant sciences professor **Jorge Dubcovsky** with wheat plants. Dubcovsky is leading a national research effort to coordinate and develop wheat varieties in response to the changing climate.

tance and baking quality are other key traits.

"Quality and disease resistance, we understand the genetics very well," Dubcovsky said. "Yield is more complicated. Each year, what makes the top variety yield better is different than the next year. If one year there's a lot of wind, the variety that doesn't shatter will be the top variety. If the next year there's a lot of rain and you have lodging, the variety that doesn't lodge will be the

best one. The next year, you have a lot of (pathogen pressure), and only the varieties that will be resistant will be the best one. Every year, you get different results. It's not that easy to integrate all that information."

The database will help breeders determine which varieties will work best in which part of the country, he said.

Washington State University, University of Idaho and the USDA Agricultural

Research Service branch in Washington are among those participating in the consortium.

"These efforts will directly contribute to PNW variety development for both winter and spring wheat programs at WSU," WSU spring wheat breeder Mike Pumphrey said.

The project will also help train future plant breeders.

Twenty Ph.D. students in breeding programs will participate in fieldwork, collect data from drones and DNA samples, and learn to integrate that information to accelerate wheat breeding. The students will participate in online and face-to-face workshops, educational events and national scientific conferences.

Much of plant breeding has moved into the private sector, so there are fewer public breeding programs releasing varieties in the U.S., Dubcovsky said.

"You cannot train plant breeders if you don't have a breeding program," Dub-

covsky said. "We are using all these technologies also to prepare students (for) the place where they will be working."

Large private companies have similar abilities to collect data and select traits.

"It's kind of putting the public breeding programs at the same level (as) the modern private breeding companies, so then we can train students in modern plant breeding," Dubcovsky said.

Dubcovsky has been breeding wheat at UC-Davis since 1997. He estimates he's released 20 wheat varieties.

"My goal is to have something better than what the growers have in the field today," he said. "The main benefit of this large grant is not a particular trait or a thing. It's to help us coordinate all the breeding programs and train all the students as a group. It will allow us to avoid duplication of effort, to move efforts together. ... The important thing is the coordination."

Lawsuit filed to halt BLM salvage logging in North Umpqua watershed

By **GEORGE PAVEN**
Capital Press

EUGENE, Ore. — Environmental groups have filed another lawsuit to block post-wildfire salvage logging in Oregon's Umpqua River watershed.

Cascadia Wildlands, Oregon Wild and the Klamath-Siskiyou Wildlands Center are challenging the Bureau of Land Management's plans to cut down 12,562 acres of dead and burned trees from the Archie Creek fire, one of several large blazes that amounted to a record wildfire season for western Oregon in 2020.

The complaint was filed Feb. 8 in U.S. District Court in Eugene. It accuses the BLM of rushing through its analysis of the project, without considering impacts to spotted owl habitat, protected streams and old-growth forests.

A spokesperson for the BLM said the agency does not comment on pending litigation.

The Archie Creek fire burned more than 130,000 acres, including 39,900 acres of BLM forestland. In response, the agency authorized salvage logging to improve public safety and recover economic value from damaged trees.

It is the largest post-fire logging project in Oregon following the 2020 wildfires, according to the lawsuit.

Yet environmentalists argue the BLM did not properly consider what effects the work will have on the landscape. Agency officials published an Environmental Assessment for the Archie Creek Project in August



Craig Reed/For the Capital Press File
Hillside such as this one in the Glide, Ore., area were blackened by the Archie Creek Fire in 2020.

2021, which only studied two issues in detail — the economic benefits derived from logging, and impacts to water and soil quality.

By narrowing the scope of the analysis, the lawsuit claims that BLM "proactively eliminated a host of other social and environmental impacts from consideration" in finding the project had no significant environmental impact, thereby side-stepping a more thorough report under the National Environmental Policy Act.

Specifically, the groups said the BLM did not gauge how logging would affect endangered northern spotted owl habitat. Fifty-four spotted owl home ranges are within the project area, where the birds roost, nest and forage.

"Post-fire logging can negatively affect owl use of these areas and exacerbate any negative effects associated with high-severity wildfires," the lawsuit states. "The BLM's failure to take a hard look at the impacts of this extensive logging is illegal."

Under the BLM's 2016

Northwestern and Coastal Oregon Resource Management Plan, it originally anticipated roughly 2,000 acres of salvage logging across the region from 2013 to 2063. Instead, this one project calls for more than five times that amount, raising alarm among opponents.

Doug Heiken, conservation and restoration coordinator for Oregon Wild, described the project as an "overzealous timber sale" that will impact key tributaries of the North Umpqua River.

"Claims that there will be no impact from clear-cutting recently burned forests are simply untrue and unjustifiable," he said.

This is not the only lawsuit challenging salvage logging from the Archie Creek fire.

Last year, Cascadia Wildlands, Oregon Wild and Umpqua Watersheds sued the Umpqua National Forest to block salvage logging along 65 miles of Forest Service roads where the fire burned. Nick Cady, legal director for Cascadia Wildlands, said a settlement may be coming soon in that case.

Idaho Legislature panel backs bill on Anderson Ranch Reservoir water right

By **BRAD CARLSON**
Capital Press

A bill in the Idaho Legislature addresses the state's application for the right to additional water stored in the Anderson Ranch Reservoir after it is expanded.

The House Resources & Conservation Committee Feb. 17 voted to send House Bill 584 to the full House with a do-pass recommendation.

The Legislature last year and in 2020 appropriated money to raise Anderson Ranch Dam, northeast of Mountain Home, and is considering adding funding this year. The Idaho Water Resource Board filed a water right application with the Department of Water Resources for the additional volume.

The department director evaluates every water right application by certain criteria set in state law.

HB 584 confirms that certain elements of that criteria are met — but continues to require the director to consider other criteria, including the impact on existing water rights.

The bill "declares that the application is made in



U.S. Bureau of Reclamation
Anderson Ranch Dam in Elmore County, Idaho.

good faith and not for delay or speculative purposes," its purpose statement reads.

The statement said the legislation addresses issues that have arisen concerning how the director evaluates water right applications for large storage projects. It would allow the board to focus on project-related issues other than establishing criteria in the rights process.

The Idaho Water Users Association proposed HB 584. Committee members asked if it changes or adds evaluation criteria, and if the department director supports it.

Paul Arrington, association executive director and general counsel, said it states certain criteria are met in the application. It does not change criteria used for evaluating this or other rights applications.

He said an association committee developed the current proposal and earlier drafts with input from state water managers, communities and various water organizations.

The reservoir can hold 413,000 acre-feet of water. Plans call for raising the 456-foot dam by 6 feet, which would add 29,000 acre-feet of capacity.

USDA provides premium benefit for cover crops

Capital Press

Agricultural producers who have coverage under most crop insurance policies are eligible for a premium benefit from USDA if they planted cover crops during the 2022 crop year.

To receive the benefit from this year's Pandemic Cover Crop Program (PCCP), producers must report cover crop acreage by March 15.

This year's program comes on the heels of the recently announced Partnerships for Climate-Smart Commodities, which creates market opportunities for U.S. agricultural and forestry products who use cli-

mate-smart production practices and include innovative, cost-effective ways to measure and verify greenhouse gas benefits.

PCCP, offered by USDA's Risk Management Agency, helps farmers maintain their cover crop systems despite the financial challenges posed by the pandemic. It is part of USDA's Pandemic Assistance for Producers initiative, a bundle of programs to bring financial assistance to farmers, ranchers and producers who felt the impact of COVID-19 market disruptions.

"Producers use cover crops to improve soil health and gain other agronomic benefits, and this program

will reduce producers' overall premium bill to help ensure producers can continue this climate-smart agricultural practice," said Marcia Bunger, RMA administrator.

PCCP was first offered in 2021, and producers with crop insurance received \$59.5 million in premium subsidies for 12.2 million acres of cover crops.

PCCP provides premium support to producers who insured their crop with most insurance policies and planted a qualifying cover crop during the 2022 crop year. The premium support is \$5 per acre, but no more than the full premium amount owed.

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