

## Oregon

## Students test unique ways to grow food without soil

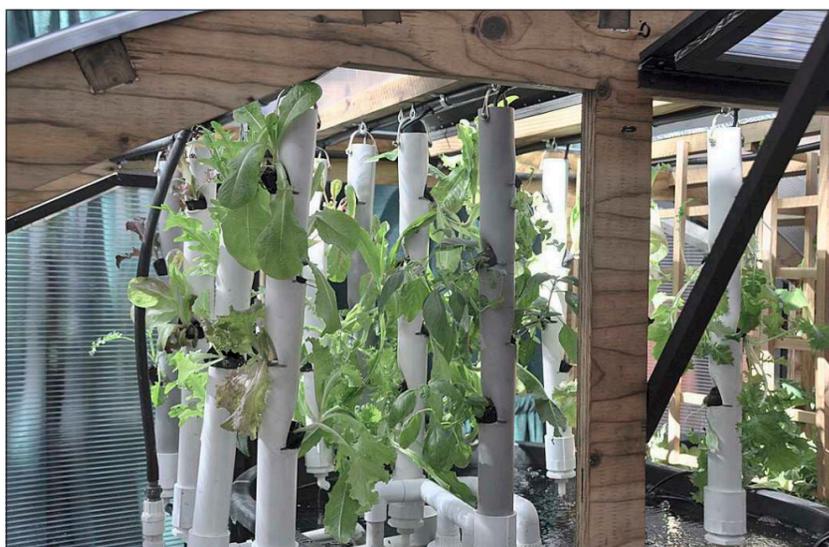
By ERIC MORTENSON  
Capital Press

PORTLAND — Student researchers asked to find “clean tech” solutions to pressing problems came up with agricultural answers in this year’s Oregon Best Fest challenge.

The entries included NexGarden, a system for growing vegetables with a nutrient-rich mist circulating amid bare roots in a closed container while the plants grow out the top.

Presenters Hugh Neri and Skyler Pearson envision such systems producing food on building roofs or elsewhere. Neri, of Portland State University, said they could become “hyper-local” urban food systems serving stores, restaurants or homes within a mile or so.

Brett Stoddard, of Oregon State University, displayed the Hydrone, a soil moisture monitoring system. Sensors stuck in the ground take readings and transmit them by an-



Vegetables grow from an aquaculture piping system in a mobile platform developed by Aquarian Provisions, a team of Portland State University engineering students. The entry was part of the PSU Cleantech Challenge at Best Fest in Portland.

tenna to an overhead drone. Stoddard said the system can be built and deployed for \$1 per sensor.

Four Portland State Uni-

versity engineering students formed an enterprise they call Aquarian Provisions, essentially a mobile hydroponics system for growing vegetables.

Students Greg Sakradse, Tyler Bray, Sarah Smith and Ryan Crist were driven by a particular problem: Rising ocean water flooding and



Eric Mortenson/Capital Press

Skyler Pearson, left, and Hugh Neri show the NexGarden vegetable growing system, which they say could be used to establish “hyper-local” food systems in cities. The project was among the top entries in the PSU Cleantech Challenge, part of the annual Oregon Best Fest held in Portland.

salting crop land in the Marshall Islands. Sakradse said the team envisions their food production system mounted on barges to aid the Pacific islanders. For Best Fest, they put a working model on a small utility trailer and hauled it to the competition.

All were part of the Best Fest PSU Cleantech Chal-

lenge, in which students and faculty from Oregon universities and community colleges compete for \$50,000 in development grants and prizes. In the initial round, students pitch their ideas to a panel, with winners receiving \$2,500 to develop prototypes that are judged in the finals.

## Wolf numbers increasing in Mount Emily and Meacham packs

By GEORGE PLAVEN  
EO Media Group

A misty rain fell on a recent Wednesday morning in the Blue Mountains east of Pendleton, where Greg Rimbach drove the muddy forest roads scanning for wolf tracks.

“When they want to go somewhere, they like walking along roads down ridges. It’s just easier,” said Rimbach, district wildlife biologist for the Oregon Department of Fish and Wildlife.

Since wolves dispersed from Idaho and returned to northeast Oregon in the late 1990s, more of the predators are settling and forming packs in the Walla Walla and Mount Emily wildlife units. The district is now home to seven packs or groups of wolves totaling at least 36 animals — nearly one-third of the state’s

known wolf population.

Rimbach spends a quarter of his workdays managing wolves, from trapping and collaring to investigating claims of livestock predation. His latest project involves finding and re-collaring OR-11, a male wolf from the Walla Walla pack that initially split to form the Mount Emily pack, and has split once again and paired up with a new mate at the south end of the Mount Emily Unit.

The trajectory of increased wolf activity is no surprise to Rimbach.

“This is absolutely what we expected,” he said. “It certainly is tracking with what other states have seen.”

## Meacham pack

The presence of wolves, however, remains a polarizing issue as ranchers contend with livestock losses. Most recently, ODFW determined

the Meacham pack was responsible for attacking cattle four times in eight days last month on the same 4,000-acre private pasture owned by Cunningham Sheep Co.

Predations occurred less than a mile from Interstate 84, and two miles from the community of Meacham. In response, ODFW issued a limited duration wolf kill permit, allowing Cunningham Sheep to shoot two adult or sub-adult wolves on sight within the densely forested pasture.

One of the wolves, a non-breeding female, was shot Sept. 7. The action sparked a wave of anger on both sides of the debate, with environmental groups criticizing ODFW for allowing any wolves to be killed and the Oregon Cattlemen’s Association arguing the entire pack should be removed.

Wolf-livestock conflicts were anticipated when wolves reentered Oregon, Rimbach said. That is why ranchers and environmentalists were both included at the table when the state wrote its Wolf Management and Conservation Plan, to balance conservation with protection of livestock.

“This is exactly what came out on the back end of those discussions,” Rimbach said.

ODFW is still in the process of revising the plan, which it hopes to present back to the Oregon Fish and Wildlife Commission by December or early 2018.

Personally, Rimbach said he sees wolves as another part of the local ecosystem that needs to be managed.

“Hopefully someday, we can start normalizing wolves into our fauna,” he said.

## Compensation committee

When wolves do prey on livestock, the state has a mechanism to compensate ranchers for their losses.

The Oregon Wolf Depredation Compensation and Financial Assistance Grant Program is administered by the state Department of Agriculture with funds allocated by the Legislature, distributed to counties and awarded to producers.

Jerry Baker, a part-time wildlife biologist who lives in Athena, serves as chairman of the Umatilla County Wolf Depredation Advisory Committee. He said the group meets two or three times a year to apply for funding and consider requests for compensation.

“We know (wolves) are here,” Baker said. “We’re trying to deal with them.”

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## Wildfire season sparks calls for forestry reform

By GEORGE PLAVEN  
EO Media Group

PENDLETON, Ore. — Out of the ashes of another record-breaking wildfire season across the West, Oregon lawmakers are calling for changes in the way national forests are managed and how the government pays for fighting increasingly large, destructive fires.

Rep. Greg Walden, the state’s lone Republican member of Congress, visited Pendleton and Hermiston on Thursday where he touted the Resilient Federal Forests Act of 2017, which passed the House Committee on Natural Resources in June. The controversial bill includes provisions that would expedite certain forest thinning projects, while establishing a pilot program to resolve legal challenges through arbitration.

Democrats Ron Wyden and Jeff Merkley, meanwhile, joined a bipartisan group of senators pushing to end the practice of “fire borrowing,” where the Forest Service and Bureau of Land Management are forced to rob money from fire prevention programs to pay for fighting wildfires.

Their bill, the Wildfire Disaster Funding Act of 2017, would make federal disaster funding available when the cost of firefighting exceeds the 10-year average, thereby maintaining the agencies’ budgets for other conservation and restoration programs.

In a statement Wednesday, Wyden said communities are put in danger and fire prevention work is left undone because of the backward fire budgeting system.

“It’s past time for Congress to make it a top priority to end fire borrowing, stop the erosion of the Forest Service becoming the ‘Fire Service,’ and start treating wildfires like the natural disasters they are,” Wyden said.

The Forest Service has spent more than \$2 billion so far on wildfires nationwide in 2017, setting a record. Nearly 8 million acres of forest have been consumed by fire this summer, including 678,000



Alisha Jucevic/The Columbian via AP

In this Sept. 6 photo, Washington Department of Natural Resources firefighter Chris Werner, of Chehalis, works the south fire line of the Archer Mountain fire in Skamania County, Wash.

acres in Oregon.

The problem, Walden said, is a lack of active management in the forests, which has resulted in a buildup of overly dense and dead tree stands ready to burn.

“I don’t want to see our forests continue to go up (in flames) like they are,” Walden said during a meeting Thursday with the *East Oregonian* editorial board in Pendleton.

More than three-quarters of the Umatilla and Walla-Whitman national forests are at moderate to high risk for uncharacteristic fire, according to the Northern Blue Mountains Coalition, a group dedicated to increasing forest thinning and logging. Across the country, 58 million acres of national forests are at high or very high risk of severe wildfires — an area equal to the size of Pennsylvania and New York combined.

“We’ve got to deal with these forests,” Walden said.

A version of the Resilient Federal Forests Act has passed the House each of the last four years. It focuses on measures to speed up the pace of restoration, providing categorical exclusions for certain projects to expedite environmental review.

Projects that would qualify for categorical exclusion include hazardous fuels reduction, salvaging dead trees, protecting watersheds or im-

proving wildlife habitat. The bill caps project sizes at 10,000 acres, or 30,000 acres if they are developed by a multi-interest collaborative group.

The bill also directs the Secretary of Agriculture to establish a pilot program to resolve lawsuits filed against forest management through arbitration, rather than heading to court, and would prevent plaintiffs from recovering their attorney fees in such cases under the Equal Access to Justice Act.

Opponents of the legislation, however, claim it would severely undermine environmental review and cater to the interests of the timber industry. Steve Pedery, conservation director for Oregon Wild, described the bill as a wish list for timber lobbyists.

“It’s really about maximizing the profits of logging corporations over the health of our public lands, and the ability for Americans to enjoy them,” Pedery said.

Specific to Eastern Oregon, the Resilient Federal Forests Act would allow logging of trees more than 21 inches in diameter. Individual forest management plans would also no longer be subject to the National Environmental Protection Act — the Blue Mountains Forest Plan, which includes the Umatilla, Walla-Whitman and Malheur forests, is 13 years overdue for its latest revision.