Dry farming: Climate more forgiving for plants

Continued from Page A1

Hailey Hoffman/The Astorian

Winter squash grows in a dry bed on LaNa's Conscious Farm and relies on rain and moisture within the earth to survive.

It's a historic agricultural practice, but until recently it has remained widely unheard of on the Oregon Coast.

In 2015, Amy Garrett, an assistant professor at Oregon State University, kickstarted a dry farm trial that now stretches across the state. As of 2019, three farms on the coast participate in the trial, two of them just a short drive from downtown Astoria.

"It seems like the coast is a really good place for dry farming, mostly because of the climate," said Matthew Davis, the project coordinator at Oregon State for dry farm site suitability. "It's a lot cooler on the coast … It's just a more forgiving place."

Davis began working with the project in May under professor Alex Stone and alongside Garrett. Their research is ongoing.

Davis visited both North Coast farms in May, where he installed plants and soil moisture monitors. The monitors are inserted and left in the ground, where the small white rods and green cords help scientists and farmers know how much moisture is being held in the soil below.

"Dry farming doesn't mean that no water is used by the plant," Davis said. "Water is stored in the soil, it's held there."

The farm's soil type controls how much water is held. On the coast, moist soil and a high water table, coupled with the cool, damp climate is the reason both farms have seen success.

"The plants are less stressed, I think, in the coastal environment," Garrett said. "Teresa was kind of our pioneer there."

Quality, not quantity

Retzlaff got involved with the project in 2016, and has dry farmed a portion of her plants ever since. This year, she is dry farming eight rows of produce for the trial's research and 10 additional rows on her own.

Dry farming is not a yield-maximization strategy. In order for dry farming to work, plants are plotted more sparsely to decrease competition and help ensure each plant's roots has access to enough water.

"You can't plant as densely as you would if you are irrigating," Retzlaff said. "Because all the moisture they have is just what's in the soil."

But for Retzlaff, her main goal isn't the quantity of produce, it's the quality.

Dry-farmed produce typically has a stronger flavor and a firmer texture. Retzlaff strongly prefers the taste of her dry-farmed crops.

Oregon State's small farms collaborative conducted blind taste tests, where consumers and farmers preferred the dry-farmed produce over the same variety that was irrigated.

"They have a very intense flavor because they're not watery," Retzlaff said. "Because you're not watering them."

Last year, 46 North Farm sold their dry-farmed produce to local restaurants. The Astoria Golf and Country Club's kitchen bought more than 80 pounds of dry-farmed zucchini and squash.

"They had a really nice, concentrated flavor," said chef Gehrett Billinger, who used the produce on specialty dishes, to create kimchi and to flavor beverages and meat marinades. "It's a really really delightful flavor."

"And," he said, "I like that it uses less resources."

Resource conservation is one of the aspects that initially sparked the dry-farmed trial, and it's a theme that keeps farmers and researchers coming back year after year. As the climate changes, summer water availability has become a pressing issue.

"It's of more interest now because of drought and decreased summer water availability," Garrett said. "A lot of people are looking at alternatives to irrigated crop production in our dry season."

The farmers that participate in the trial meet annually to discuss how specific crops weathered the dry season and exchange ideas to improve the next year's yield.

"I think that this collaborative approach of adapting to a changing climate is super important given the predictions for summer water availability into the future," she said. "We're going to see a lot less of it."

Coastal farmers, whose summer season is cooler and wetter than farmers in the Willamette Valley, are still paying attention to summer water access.

"Water is one of those resources, I feel like especially out here on the coast, we really take for granted because it feels like it's so abundant," Retzlaff said. "Just because you have a lot of it doesn't mean you have to use all of it.

"If you're a farmer and you're irrigating with that water or you're pulling that water out of a creek or a stream in August, that's water that's not being left in a waterway to help fish habitat and wildlife habitat. I think the more we can share with wildlife habitat, the better."

Inherent risk

Retzlaff recognizes that not all farmers can practice dry farming. There is inherent risk with the technique. It requires fertile, moist soil and more land to produce the same yield. For some crops, dry farming is not a profitable practice.

"Part of the learning curve is finding out which crops you can break even on," she said. "The zucchini has more than paid for itself already," as have some of the squash varieties.

Other products, such as the dry beans, won't make it to the public market, but will feed the 46 North Farm team throughout the upcoming season. Retzlaff will likely harvest just one or two melons per plant this year.

But even without the high yield, she saved time and money by not paying for water or labor to irrigate the plants for months.

"I feel like that's profitable," Retzlaff said. "There's also the knowledge. To me, that's a huge return on investment."

There is also an economic incentive. On the Nelson's farm, their winter water bill is typically around $35 a month. In the summer, that bill can be up to $250.

"I am fascinated in growing things without water because water is a big expense," Nelson said. "The dry farming for me is just another aspect of the farming itself. It's another tool in the tool shed that we can utilize to grow some things less expensive."

Both farms still irrigate the majority of their crops, but they are hopeful to continue transitioning and evolving their dry farming for many seasons to come.

"The more that I can do dry-farmed, the more that I will do," Retzlaff said. "It's less of a resource that we're pulling on, and I honestly feel like the plants are better for it."

Sarah Zimmerman/AP Photo

Republicans show their support of a GOP walkout outside the state Capitol in Salem in June.

Fines: GOP able to claim political wins after both walkouts

Continued from Page A1

Twice during the 2019 Legislature, Republicans brought the Senate to a halt by walking out in protest.

They were able to claim political victories both times.

During the first walkout, Gov. Kate Brown killed bills regulating guns and vaccinations to bring them back. Democrats announced during the second walkout that they would no longer pursue a controversial carbon pricing bill, though they said that legislation died because they didn't have the votes within their own party.

To date, Senate Democrats haven't imposed any punishment on their peers for walking from the Capitol.

"Stopping the work of the people by denying a quorum is unconscionable and undemocratic. Senate Democrats will work to protect Oregon's democracy by giving Oregonians and their representatives more tools to stop any future quorum denials," state Senate Majority Leader Ginny Burdick, D-Portland, said in a statement. "I hope our Republican colleagues now see that this is not a tactic that should ever be used again, and that they will work with us to prevent either party from walking off the job."

Burdick's statement comes after Senate leaders were peppered by reporters asking if they were going to issue fines. Throughout the past two months, the Oregon Capital Bureau asked several times about the fines, and each time was told that they were going to be issued.

The issue was brought back to the foreground last week when a coalition of unions and liberal groups escalated the kerfuffle after noticing a political action committee set up to help pay for the absent lawmakers' expenses while gone out of state has donated to each Republican senator.

The coalition has updated its state elections complaint against the 11 Republican senators, contending it's unlawful to use campaign donations to pay for their political exodus.

Patty Wentz, a spokeswoman for the coalition, said the complaint still stands.

The only senator who's paid his $3,500 fine is Sen. Brian Boquist, R-Dallas. He did so to establish grounds to sue Senate President Peter Courtney in federal court, claiming he has no authority to issue such fines. Boquist's check has not been cashed.

Rick Osborn, the spokesman for Senate Democrats, said the retreat from the fines was not because the caucus believed it could be on shaky legal ground. Rather, it was to save taxpayers from funding a legal fight.

Senate Democrats said that "imposing the fines would have been bogged down by lengthy litigation and hundreds of thousands of dollars in taxpayer-funded legal fees."

The Oregon Capital Bureau is a collaboration between EO Media Group, Pamplin Media Group and Salem Reporter.

Softball team: Area sponsors were crucial to creation of Future Fish

Continued from Page A1

The first tournament the Future Fish played this season was against the Silver Bullets, which draws from a larger pool of players.

"We got beat kind of bad," Svensen said. "We were all looking at each other like, 'What did we get ourselves into?' But from that first game till our last tournament in nationals that we played in Newberg … we played eight games in four days and it was double elimination and we were still one of the teams playing on Sunday for the consolation championship."

The team had the opportunity to play at NAFA Western Nationals and they got fifth place.

"For a new team that has never played, seeing them at the end versus seeing them at that first game with the Silver Bullets was a night-and-day difference," he said. "It's not the same kids. They went from kids that played softball to like little softball players and they were actually playing the game the right way.

"And so parents seeing that, I think they get excited about it …to see a kid grow and improve. They enjoyed it."

Svensen said baseball was the favorite part of his childhood in Astoria.

"And so when I think back when I was a kid, that's what I remember. I remember that was fun … so the more kids that get to do that, I think it's a good thing."

Warrenton Fiber and Big River Construction are the two major sponsors for the team and pay for all the tournaments, as well as a portion of the parents' hotel expenses.

"We went into this thinking — when Alina and I were trying to set this up — how can we do this so a parent's never going to say, 'I can't do it, I can't afford it?' So we structured it in a way to where we think we accomplished that."

They could not have created Future Fish without the sponsors, Svensen said, and they are committed to continuing to fund the team for years to come.

The coaches and sponsors feel gratified when they see the girls have fun and feel good about their performance, he said.

"And just the competitiveness and the pride that they put into how hard they worked and seeing success," Svensen said. "I'm sure it feels good (for them) and I'm trying to raise tough little girls and that's part of it."

Solar power: Room on the roof for more panels

Continued from Page A1

The students identified the least shady spot on top of the high school to place the array and designed a digital mock-up. Green Ridge Solar was hired to install the array.

"Some students might go into those types of fields," Shumaker said. "Others probably won't. They'll do something else. But I think it's still helpful just to know that, even if you don't want to focus on the technical side of it, just to know that a solar panel works, even in a cloudy place like this."

Each 300-watt panel comes with a micro inverter to turn the DC electricity into AC. The array will connect to a meter inside the school showing how much power the panels produce, and how much that saves the school district.

Josh Jannusch, an assistant principal and technology teacher at the high school, sees the solar array adding to curriculum, with students creating projects out of monitoring the school's energy usage and production.

"We definitely have room on the roof for more solar panels," he said. "Hopefully with the success of this program, we can parlay it into future projects."

This isn't the school district's first attempt at solar panels. Warrenton Grade School hosted a small solar array in the early 1980s, but the technology did not prove successful, said Mike Moha, the district's business manager.

Photos by Edward Stratton/The Astorian

Installers with Green Ridge Solar assemble a 3 kW solar array on the roof of Warrenton High School.

Stephen Shumaker, left, an instructor with Clatsop Community College's Upward Bound Summer Academy, had his students design a new solar array installed on top of Warrenton High School.

State law requires 1.5% of public contracts for new buildings to be spent on green energy such as solar or woody biomass. The school district recently held a community forum with the Energy Trust of Oregon on engineering energy efficiency into the middle school at its new Dolphin Avenue master campus.

"I was just excited with the … thoughtful design of trying to build it to take advantage of natural sunlight, natural wind, the temperate environment, making sure those sort of crucial aspects are in play," said Tom Rogozinski, the school superintendent.

"We're always open to money and treating the environment right," he said.