PRESSING F

ORWARD:

Oregon's Budding Olive Industry

The bottles of olive oil precisely lining the shelves at Durant Olive Mill in Dayton appear as beautiful as any high-end Oregon winery displaying their estate pinot noir.

But the similarities between wine and olives don't stop at the storefront.

Just as it took a small-but-enthusiastic group to invest in wine production more than 60 years ago, today a new group is equally determined to start another new Oregon agriculture industry with olives. While there are only about 10 commercial olive growers in Oregon so far, and less than 100 acres in cultivation—almost all in the Willamette Valley region—the passion for this promising industry is strong. This intrepid collection of growers believes in their crop while also acknowledging the roadblocks to their dream of hefty harvests.

To address those roadblocks, a few of these early olive growers, including owner of Durant Olive Mill, Paul Durant, approached Javier Fernandez-Salvador in 2017. Fernandez-Salvador is a berry, and now olive, specialist in Oregon State University's College of Agricultural Sciences. The growers' goal was to determine whether this niche crop could be viable in a state where the climate is not necessarily friendly to olive trees.

Fernandez-Salvador was more than happy to jump in. With five degrees in agriculture and horticulture, he brings an abundance of knowledge and experience to the subject. Securing an initial grant of $193,000 from the Western Sustainable Agriculture Research and Education (SARE) program, he started the Olea Project: Olive Research of Oregon, and began working with growers like Durant.

By Kym Pokorny

Stephen Ward photo

OSU olive specialist Javier Fernandez-Salvador (left) and owner of Durant Olive Mill Paul Durant (right) examine olive trees in a research greenhouse on on OSU's Corvallis campus.

New Opportunities from Old Traditions

Like many of these burgeoning olive growers, Durant is not new to agriculture. His parents started in the industry 50 years ago with their own vineyard, then added a nursery and lavender fields. In 2005, Paul and his father, Ken, planted a few thousand olive trees as a grand experiment. His mother, Penny, became fascinated by the trees that can live hundreds of years.

"Why did we get involved?" Durant asks. "One is a fascination with the tree. It is enchanting. It has a long history—6,000 years as a cultivated crop. That's pretty phenomenal, so that's appealing. And then honestly, it was a way to differentiate ourselves in wine country. So now people come up for the olive oil and leave with some lavender and rosemary and hopefully a couple of our own olive trees. It gives us a little bit of a competitive edge. From a business standpoint, it's been really good."

In the tasting room just feet from his souped-up mill, Durant pours olive oil into tiny paper cups and offers tastes. The oil—depending on the variety of olive—hits the tongue with hints of fresh-cut grass, spicy black pepper, and fragrant fruit. There are as many ways to describe olive oil as there are for wine.

"We have five single-cultivar oils and a Tuscan blend that's super unique," Durant says. "I liken the Arbequina to a white wine, very fruity and mild as compared to the Tuscan, which is more robust like a red wine. We try to educate people how to use different olive oils with different foods. It's meant to enhance the flavor of food. That's the beauty of olive oil."

Customers have to get used to the price, though, which is why Durant offers tastings.

"It is enchanting. It has a long history— 6,000 years as a cultivated crop.

"When people who are used to shopping for olive oil in the grocery store see ours, it's going to seem really expensive," said Durant, who now has 10,000 trees and produced 25,000 liters of oil last year. "But the quality is so much higher. Once they taste it, people geek out on it. They go nuts."

That sticker shock is similar to the early years of Oregon pinot noir. At the time, no one imagined the state would one day support a flourishing wine industry, but today it contributes more than $3 billion to the state's economy, according to the Oregon Wine Board. Like the people who invested in wine while critics dismissed them, olive growers envision a profitable industry. But they also are realistic. To make a living, olive education and agri-tourism is the future, Durant and Fernandez-Salvador echoed each other.

Just as wineries don't make their money from the grapes they grow, olive growers won't find their profits in the olives as much as the oils and the tasting experience.

"A person who grows olives and sells all of their fruit to try to make a profit is not going to make money in Oregon at this time," Fernandez-Salvador says. "You need to sit down and learn about oil appreciation and start bottling your own, going to the farmers markets, put up a storefront. This is not a business to necessarily get rich. It's a business of passion."

The Challenge of Establishing a New Crop

At 44 degrees latitude, Oregon teeters at the very northern range for growing olives. Traditionally, these ancient trees are cultivated in milder winter regions with a true Mediterranean climate, countries like Italy, Spain and Greece. In the U.S., California is the largest producer of olives. In Oregon, the hope is to grow fruit that will give such high-quality oil that it brings a premium price for a specialty product.

Although tolerance to winter injury is the most pressing issue in growing olives, there are others, said Fernandez-Salvador, a native of Ecuador who has travelled around the world satisfying his curiosity about olives, wine and, during some time in the Caribbean, rum. Olive cultivars must be identified that not only resist winter cold but can be propagated successfully so that Oregon growers and nurseries can produce their own trees at a lower cost than buying expensive trees from California.

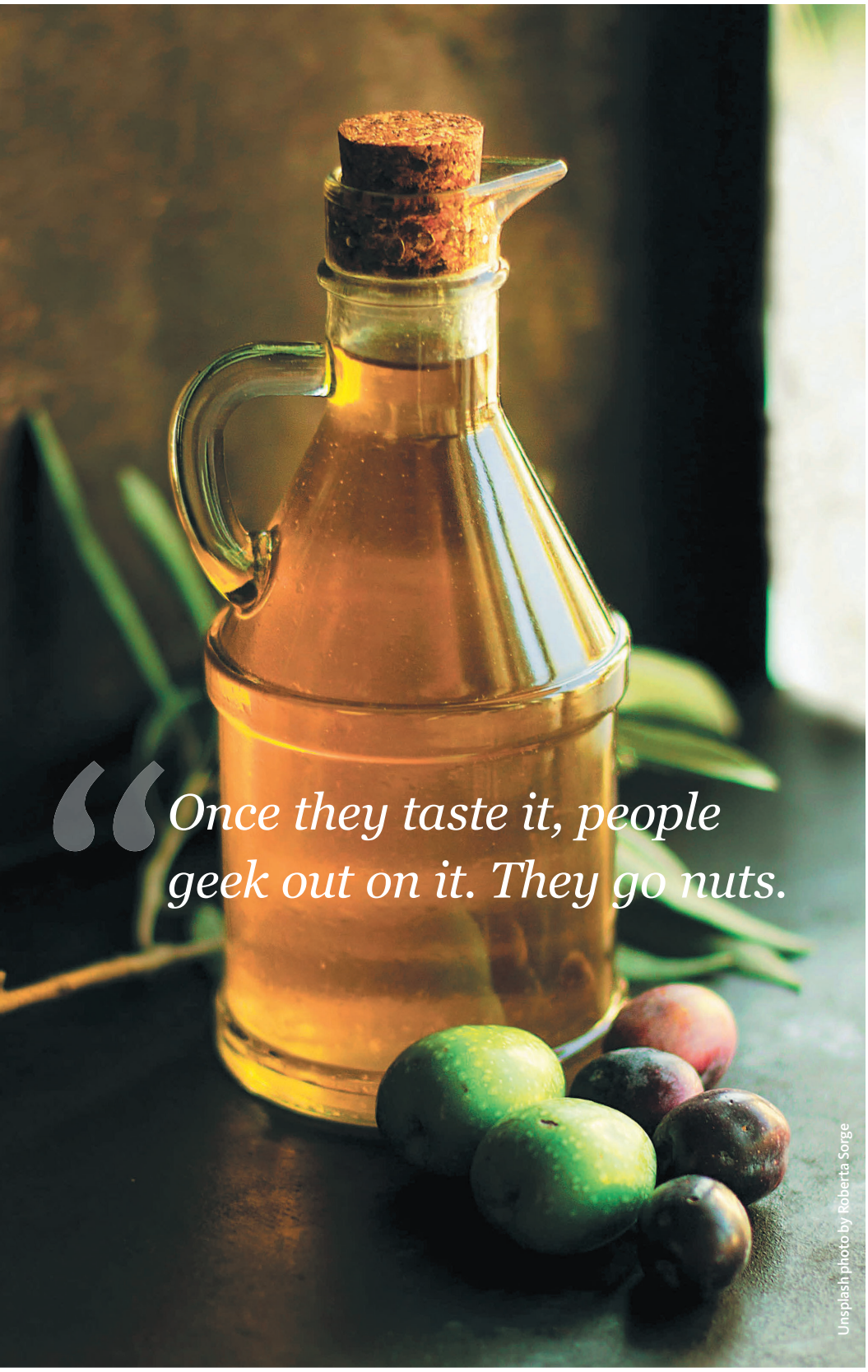
"Growers are interested in growing their own plants because now they need to purchase plants from California," said Heather Stoven, a horticulturist with the College of Agricultural Sciences who joined the project as a propagation specialist. "It's challenging because they're limited to what is good for California, but we don't know if they are what we would want for our climate."

Care also must be taken not to import any diseases or insects. Producing plants locally will avoid that risk and show growers which cultivars do best for them. If a tree survives a cold winter and produces an abundance of fruit, they can make an informed decision to propagate those trees with the desired qualities.

Researchers measure root cuttings to look at root health and the effectiveness of various treatments.

"Not every single grower would be interested in propagating their own plants," Stoven said, "but we have some that are, even if just for increasing the size of their small orchard. The ones that have been propagating their own trees are having more success since collaborating with us."

For now, success is hit or miss. Propagation is no easy undertaking. In the greenhouses at OSU's North Willamette Research and Extension Center, Stoven dips cuttings gathered from California into various rooting



“Once they taste it, people geek out on it. They go nuts.

hormones and “sticks” them into several different media. She’s tried coconut coir and perlite, peat moss and perlite, and 100 percent perlite. So far, propagation trials, which are also being done at Durant and other orchards, are showing promise, but research has barely begun.

The hardiness question is complicated, but the bottom line is not.

“The big issue is how do we get a commercial orchard established in cold weather without trees dying,” Fernandez-Salvador says.

It’s not about just temperature. It’s the combination of both time and temperature. In 2018, it got to 20-some degrees for a few hours and nothing happened to the young trees.

“When we started the project, we called it a cold hardiness study,” he says. “We quickly found out that when you’re talking about hardiness and olives there are multiple things you could be referring to.”

Olives do fine down to 25 degrees F for a short period of time, but if a colder snap comes along, trees will suffer damage for a longer period or die.

To make it even more problematic, timing plays a part, too. If it’s under 25 degrees on a winter night and then warms up, the trees are fine; if it’s a prolonged cold snap, all bets are off. To make it even more problematic, most olive trees need a sustained period of chilly temperatures below 45 degrees for flower induction and fruit production. Cold spring and late winter temperatures can also damage olive tissue and the buds that will become fruit. If the stars align and there’s a mild winter and no hard frost in spring when buds are breaking, the trees survive, grow well and can produce a healthy crop.

It’s tempting to ask which cultivars to plant, says Neil Bell, a horticulturist with the OSU Extension Service who is in charge of evaluating dozens of cultivars, which will be planted in 2021 at the North Willamette research center in Aurora. You can ask, but there won’t be an answer, not yet anyway.

"It's a long-term process for sure," he says. "There are no predictions. We've got a large number of cultivars compared side by side. It's an interesting undertaking, and the cool thing is that if you look in the literature, you don't find any large-scale replicated studies of olive cultivars for winter cold hardiness because they're mainly growing in climates where cold hardiness is not an issue. Maybe we'll find one that yields good oil but is adapted to a cool climate."

That's down the road. Olive trees may take five to seven years to establish in Oregon. The more developed the tree, the better chance it has of survival. To give them a fighting chance, Fernandez-Salvador starts cuttings in the greenhouse and transplants—or up-pots—tiny trees slimmer than a pencil into bigger and bigger containers. After three years, the hypothesis is that the larger trees planted in the field may survive better during a cold winter. Trees of multiple ages are planted to see how they survive at trial sites.


Stephen Ward photo

Olive Trees being grown at the North Willamette Research and Extension Center in Aurora, Oregon. Most of these trees were donated by industry growers for research.

Waiting on the Future

Fernandez-Salvador is passionate about the future of olives. However, he recognizes passion alone is not enough. As an emerging commodity, the research necessary to gain a better understanding of the opportunity in olives was only just emerging when the COVID-19 pandemic put a serious hitch in his work. With restrictions on travel, support staff hiring delays and personal distancing to account for, he's scrambling to keep on track. The loss of three student workers in the field means regular maintenance has slipped.

"Pruning, some data collection and field maintenance was supposed to happen in March, but it hasn't," he says. "I've been putting out fires. One at a time with limited firefighters."

Fernandez-Salvador does the best he can under the circumstances with help from two faculty colleagues, a graduate student and a strawberry biotechnician when possible. The five of them can muddle through, but if one person leaves, the project may be halted temporarily. Besides pruning, other work has gone undone. Weeding has been delayed as has irrigation and the ever-important data collection. With COVID-19-related budget cuts, he worries about money, too.

But the agriculture industry is no stranger to external factors impacting their crops—from diseases to climate change—Oregon's agricultural industry has always worked in partnership with OSU's scientists to find solutions. Fernandez-Salvador is not about to give up. It's a stressful time, he says, but he believes in his work and so do the growers who collaborate with him.

From the beginning, the challenge of growing olives has been daunting. But if growers get their hardier trees, establish them well, bottle high-quality oil, and pay attention to marketing and diversification, Fernandez-Salvador believes they can be successful. It just means being smart and making careful choices.

"The truth is that Oregon is not the best place for growing olives," Fernandez-Salvador says. "So, we can make great oil but we'll never have the yield California does. That's impossible. But we can create a specialty niche market that can make the industry successful and rival the quality of any oil in the world."

Oregon olives may never have the global reach of Oregon wine, but it's a crop that could be another addition to Oregon's rich agricultural tradition. It's not always about quantity when you have such enthusiasm for quality.

Whether it's the history, mystique or simply the possibility of being on the ground level of a new Oregon crop, olives pull people in.

"People want to support innovative ag and diversity of crops," Durant says.

"OSU is making that happen. It's taken us 15 years to learn what OSU can learn in five. They've cut the timeline down and are making it viable for people. If you're looking to make the investment, you need informed decision making."

While COVID-19 has slowed that research, it hasn't slowed the passion that fuels it. Fernandez-Salvador and growers like Durant remain committed to a future when olives take their place in Oregon agriculture.