

Oregon researcher builds ‘smoking chamber’ to test impact on winegrapes

By **GEORGE PLAVERN**
Capital Press

CENTRAL POINT, Ore. — At first blush, the “smoking chamber” at Oregon State University’s Southern Oregon Research and Extension Center might look like your average garden hoop house, with plastic sheeting draped over a PVC frame.

In reality, the prototype was designed for a novel purpose — to simulate wildfire smoke in rows of winegrapes, allowing scientists to study the effects on finished wine.

Alec Levin, a viticulturist and associate professor at SOREC, is leading the experiment as part of a \$7.65 million federal grant to researchers at three West Coast universities targeting smoke exposure on grapes and potential solutions for growers.

By next summer, Levin hopes to build five chambers over rows of Pinot noir at the research farm near Medford. Each will be fixed to a wood pellet grill piping in varying levels of smoke, replicating wildfire conditions.

Once the grapes are harvested, they can be tested for several types of organic compounds believed to contribute to “smoke taint” in wine.

Tainted wines have been described as having an unpleasant ashy or chemical taste, and worries over diminished quality can prompt wineries to reject grapes from vineyards inundated with wildfire smoke.

“As of late, we’ve had a lot of fires toward the later part of the summer and early fall,” Levin said. “Fire season is getting longer and longer.”

That observation was recently backed up by data from the state Department of Environmental Qual-



Courtesy of Alec Levin

A prototype “smoking chamber” has been developed at Oregon State University’s Southern Oregon Research and Extension Center to simulate wildfire smoke exposure in Pinot noir winegrapes.



Alec Levin

ity, which found the number of days with poor air quality due to wildfire smoke is increasing

across the state.

Medford had 27 such days last year, the second-highest total on record dating back to 1985.

A team of scientists from OSU, Washington State University and the University of California-Davis is now working to solve the riddle of smoke taint and provide tools for the wine industry to adapt. Funding for the four-year study is provided by the USDA’s National Institute of Food and Agriculture.

According to WineAmerica, an industry group based in Washington, D.C., winegrapes contribute \$220 billion to the U.S. economy, with California, Washington and Oregon representing three of the top four wine-producing states.

Levin said he is still fine-tuning the smoking chamber to provide just the

right amount of smoke concentration for his project.

“Our first few (trials) that we did, it got really smoky, really fast,” he said. “Where we’re at now, we need to figure out how to get a really low concentration of smoke that is more akin to what we’d have during a wildfire event.”

The plan, he said, is to begin collecting data next year. Each row of vines will be “smoked” twice per year, including once in early August at the onset of ripening and again 4-6 weeks later, just before harvest. Each time will be about eight hours overnight.

Levin said they will use Douglas fir pellets as the fuel source for smoke. They chose Pinot noir since it is Oregon’s signature variety, and as a thin-skinned red grape variety, it is highly susceptible to smoke taint.

“A lot of the problematic compounds that reduce wine quality are in the skins,” he said.

As if to underscore the urgency, Medford was awash in wildfire smoke earlier this year from three

blazes burning just across the California border, including the 60,392-acre McKinney Fire and 7,886-acre Alex and Yeti fires.

Levin said his findings could help growers better determine which smoke levels are problematic, and when they should file a claim for crop insurance.

“We just don’t know what those thresholds are,” he said.

Other facets of the USDA grant across the three universities involve:

- Developing coatings for winegrapes to minimize or prevent uptake of compounds that contribute to smoke taint.
- Establishing low-cost sensors and sensor networks for real-time risk assessment in the vineyard.
- Optimizing a rapid small-batch fermentation method to predict what a wine impacted by smoke will taste like when fermented on a commercial scale.

“Because we have this huge group of researchers on this grant, everybody is taking a piece of the puzzle and working with it,” Levin said.

Senate bill would remove barrier to meat processing

By **CAROL RYAN DUMAS**
Capital Press

Legislation introduced in the U.S. Senate would remove regulatory roadblocks to increasing meat processing capacity by allowing livestock auction market owners to invest in small and regional packing facilities.

Livestock auction markets are not currently able to own, invest in or participate in the management or operation of a packing plant or meat marketing business due to a Packers and Stockyards Act regulation.

The Expanding Local Meat Processing Act, S.4709, would remove that barrier.

The bipartisan bill was introduced by Sens. Ben Ray Lujan, D-N.M., and Joni Ernst, R-Iowa, both members of the Senate Agriculture Committee.

Reps. Vicky Hartzler, R-Mo., and Jimmy Panetta, D-Calif., introduced companion legislation, H.R.7438, in the House last April.

The legislation directs the secretary of Agriculture to amend the Packers and Stockyards Act regulation to allow livestock auction market owners to own, finance or participate in the management or operation of a meat packing plant with a cumulative slaughter capacity of less than 2,000 animals per day.

The slaughter cap would exclude investment by the top 10 meat packers.

The legislation would remove outdated regulations that hinder producers’ ability to increase livestock processing capacity, Lujan said in introducing the bill.

“This is a priority that I

will continue to advocate for in the upcoming farm bill,” he said.

Ernst said eliminating outdated regulations hindering the livestock industry and increasing processing capacity is a no-brainer.

“Allowing livestock auction owners to invest in local and regional meat packers will expedite the safe processing of meat, increase competition within the industry and, ultimately, lower meat costs for consumers,” she said.

National Cattlemen’s Beef Association supports the legislation, said Tanner Beymer, NCBA senior director of government affairs.

“Opening new processing facilities is essential for removing longstanding bottlenecks in the beef supply chain, but these facilities require substantial capital and technical expertise to get off the ground,” he said.

“Livestock market owners understand complex commodity markets and have the industry experience to launch successful processing facilities,” he said.

The legislation is supported by a number of other national and local agriculture groups, including the Iowa Cattlemen’s Association, Livestock Marketing Association and U.S. Cattlemen’s Association.

The companion legislation in the House is also supported by several organizations, including the NCBA, Livestock Marketing Association, National Pork Producers Council, U.S. Cattlemen’s Association and American Sheep Industry Association.



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