

Winemaker takes a concrete step forward

By MARGARETT WATERBURY
For the Capital Press

French oak and stainless steel have earned their place in the winery, but a growing number of Northwest winemakers are experimenting with a third maturation material: concrete.

At Lange Estate Winery in Dundee, Ore., winemaker Jesse Lange celebrated the 30th anniversary of his family business with a brand-new piece of equipment: a 500-gallon concrete tank from Sonoma Cast Stone. With a pricetag of about \$15,000, it weighs about 6,000 pounds, is made from specially

formulated concrete, and is shaped like a gigantic egg. According to the company's CEO, Steve Rosenblatt, they've sold roughly 500 concrete tanks to wineries.

"It shows up during the middle of harvest," Jesse laughs of his purchase. "We had to use two forklifts to unload it, it was so heavy."

Why concrete? Jesse had tasted some concrete-matured wines from other wineries, including Syncline Wine Cellars in the Columbia Gorge AVA, and was excited by the textural and flavor contributions of the material, especially when it came to the balanced, Burgundian-style wines he and his team produce.

After an initial treatment that included spraying the egg with a solution of tartaric acid, Jesse was ready to take the egg for a spin. The very first fill was Pinot gris must, which

underwent a complete fermentation in concrete.

A sample pulled from a valve in the side revealed a citrusy, lightly tropical wine with chalky mineral undertones and a soft, almost powdery texture. "The wine has gained some gravity," Jesse says, "especially in the mid-palate. There's a lot of richness, but it's not heavy, it's more like volume."

After the Pinot gris is finished, Jesse plans to replace it with Chardonnay, followed by Pinot noir. It's all part of the getting-to-know-you process, he says. "You can't improve something until you understand it, and you can't understand without experimenting."

Concrete is trendy right now, but it's not a brand new material in the wine world. Subterranean tanks made from concrete have historically been used in Burgundy, France, and ceramic amphorae made from similar material have been employed for millennia in Georgia in eastern Europe. Jesse is excited about concrete's potential contribution to Oregon wines, especially white wines such as Pinot gris and Chardonnay, which he says are becoming more popular.

"We've been making Chardonnay for 30 years, but all of a sudden, people are like, 'Can we get more?'" says Jesse. "I know we're making some of the best Chardonnay in the world. New world Pinot gris started in the Willamette Valley. As Oregonians, we don't toot our own horn very well, but as an industry, we need to do it."



Margarett Waterbury/For the Capital Press
Jesse Lange, winemaker and general manager at Lange Estate Winery in Dundee, Ore., takes a sample of Pinot gris fermented entirely in the winery's new concrete vessel.

Discovering best alfalfa genetics for Northwest

By HEATHER SMITH THOMAS
For the Capital Press

Farmers in Washington, Oregon and Idaho grow a lot of alfalfa hay for dairies and for export. Alfalfa is an important part of Washington state's \$539 million hay industry, grown on more than 400,000 acres throughout the state — most extensively in the irrigated Columbia River Basin.

Some is exported around the world, mainly to China, Japan, Saudi Arabia and the United Arab Emirates.

Steve Norberg, regional forage specialist and irrigated cropping systems specialist at Washington State University, is leading a two-year, \$250,000 effort to discover genetic areas — called molecular markers — that will enable plant breeders to create better alfalfa varieties. This study is funded by USDA's National Institute of Food and Agriculture Alfalfa and Forage Research Program.

"Quality is crucial, especially when hay prices are low. Top-quality dairy hay is always worth more," said Norberg. "We're looking for genes that can be bred into traditional alfalfa varieties, making them more digestible, with less fiber. Dairy cows must eat a lot to produce milk, and less fiber means more nutrition and less waste."

The idea is to provide breeders with another tool to breed for higher-quality alfalfa. They recruited several specialists, including a geneticist, USDA Agricultural Research Service scientist Long-Xi Yu.

"We'll be using his expertise to evaluate DNA and look for genetic markers of all the varieties we test," Norberg said.

The researchers are pulling 150 different varieties from the USDA-ARS National Plant Germplasm



Courtesy Photo

A small harvester is used to collect alfalfa samples. Researchers are looking for ways to improve alfalfa varieties.



Steve Norberg

System Temperature-adapted Forage Legume Genetic Resources

Program at Pullman, Wash.

"These are from all around the world. We're also looking at another 50 commercial varieties from 4 commercial seed companies that are cooperating with us, one of which

is an organic alfalfa seed supplier," Norberg said. The conventional seed suppliers are three of the four largest alfalfa breeders in the U.S.

"We've selected varieties from around the world that have fall dormancy," he said.

In the Pacific Northwest

climate, alfalfa must go dormant for winter. Within the dormant varieties the researchers are looking for those that produce the highest quality.

They will plant those 200 varieties next spring at three locations — Prosser, Wash.; Union, Ore.; and Twin Falls, Idaho, which have different climates and elevations.

Participants in the project are WSU faculty members Don Llewellyn, a regional livestock specialist, and state forage specialist Steven Fransen; University of Idaho forage specialist Glenn Shewmaker; Oregon State University forage specialist Guojie Wang; and University of Wisconsin rumen nutritionist David Combs.

Next summer, the team will sample the plants and look for genetic markers that denote lower fiber and better digestibility.

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