

# The world's wine industry is adapting to climate change

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In this May 8, 2018 photo, the Failla Oregon winery is shown near Salem, Ore. From South Africa's drought-stricken vineyards, to France's noble chateaus, to sunny vineyards in Australia and California, the wine industry is taking action to protect their livelihoods amid rising temperatures and more dramatic weather variations. The Failla winery, based in the Napa Valley, recently bought 80 acres (32 hectares) in the Van Duzer Corridor and opened a winery nearby in Oregon. (AP Photo/Andrew Selsky)

When an Oregon valley famed for its wine heats up under the afternoon sun, Pacific Ocean winds rush through a dip in the mountains, cooling the grapes in Jeff Havlin's vineyards.

The Van Duzer Corridor, the lowest point in Oregon's Coast Range, has become a go-to place for wineries and vineyards hedging their bets against climate change. Winemakers and vineyard owners in a 95-square-mile (246-square-kilometer) section of the corridor have applied to become the newest American Viticultural Area, with the wind its predominant feature.

"When the temperature drops, you need a jacket in August," said Havlin, who on a recent afternoon was driving a utility vehicle through his vineyards.

From South Africa's drought-stricken vineyards, to France's noble chateaus, to sunny vineyards in Australia and California, growers and winemakers say they are seeing the effects of climate change as temperatures rise, with swings in weather patterns becoming more severe.

So they are taking action, moving to cooler zones, planting varieties that do better in the heat, and shading their grapes with more leaf canopy.

As areas once ideal for certain grapes become less viable, causing earlier harvests and diminished wine quality as grapes ripen faster, once-iffy sites like the Van Duzer (pronounced van DOO-zer) Corridor are coming into their own.

Northern California's Petaluma Gap, which like the Van Duzer Corridor sucks in ocean breezes, was designated one of America's newest viticultural areas in December. Receiving an American Viticulture Area designation allows winemakers to emphasize the unique characteristics

of their wine, determined by climate, geography, soil and other factors.

"Even though we have those heat waves just like Napa and Sonoma, we still have the cool breeze in the afternoon and the cooler temperatures at night and the fog in the morning," said Ria D'Aversa, director of ranch operations at McEvoy Ranch, a Petaluma Gap vineyard.

The area's slogan: "From wind to wine."

California winemaker Ehren Jordan said: "People would have looked at you like you had three heads if, 30 years ago, you told someone you were going to grow wine grapes there."



In this Aug. 10, 2016, file photo, is a bottle of Runner Duck wine, that is produced on the Vergenoegd wine estate on the outskirts of Stellenbosch, South Africa. From South Africa's drought-stricken vineyards, to France's noble chateaus, to sunny vineyards in Australia and California, growers and

winemakers say they are seeing the effects of climate change as temperatures rise, with swings in weather patterns becoming more severe. So they are moving to cooler zones, planting varieties that do better in the heat, and shading their grapes with more leaf canopy. (AP Photo/Schalk van Zuydam, File)

His Failla winery, based in the Napa Valley, recently bought 80 acres (32 hectares) in the Van Duzer Corridor and opened a winery nearby. The corridor now has a half-dozen wineries and at least 17 commercial vineyards, with more on the way.

Grapevines can tolerate heat and drought, and dry farming is traditionally practiced in parts of Europe. But the past four years have been the planet's hottest on record, and more warming is expected.

Even minor weather variations that occur vintage to vintage can change the grapes' sugar, acid and tannin content, affecting the wine's taste and characteristics.

Familia Torres, a major wine producer based in Spain with wineries in California and Chile, bought land 4,000 feet (1,200 meters) high in the Pyrenees foothills as an investment in cooler climates.

Average temperatures at the company's vineyards have risen 1 degree Celsius (1.8 Fahrenheit) over 40 years, with the result that harvests are now about 10 days earlier than 20 years ago, company president Miguel A. Torres said in an email.

Torres called climate change a "very serious worldwide problem" for winemakers and said that, beyond changing viticulture practices, they should also try to reduce their greenhouse gas emissions.

Severe drought in South Africa's Western Cape caused a 15 percent drop in the grape harvest, officials announced in May, saying wine prices will likely go up as a consequence. A predicted long-term drying trend has serious implications for South Africa's wine industry, said Wanda Augustyn of VinPro, which represents the nation's wine producers and stakeholders.

"In the longer term, producers will have to look at quality, drought-resistant vines which produce more flavor, acidity and intensity, but have lower water needs," Augustyn said.

Winemakers are starting to set up in Brittany, France's northwesternmost region, which previously was undesirable because of Atlantic wind, rain and lack of sunshine.

These days, vineyards are even planted as far north as Sweden.



In this photo taken Monday, May 21, 2018, workers trim leaves on Pinot Noir vines in the Azaya vineyard of the McEvoy Ranch in Petaluma, Calif. From South Africa's drought-stricken vineyards, to France's noble chateaus, to sunny vineyards in Australia and California, growers and winemakers say they are seeing the effects of climate change as temperatures rise, with swings in weather patterns becoming more severe. They are moving to cooler zones, planting varieties that do better in the heat, and shading their grapes with more leaf canopy. (AP Photo/Eric Risberg)

Greg Jones, one of the world's authorities on climate change and wines, will be there this summer as a keynote speaker at the VitiNord wine conference, which will examine cooler-climate wine production. Sixteen cool climate regions warmed by 2.52 degrees Fahrenheit (1.4 Celsius) from the late 1800s through 2015, Jones noted at an earlier conference.

"If things keep going the way they're going, then we have some real challenges," Jones said. "If you're growing grapes in a given environment today with what we have going on out there, you should be trying other varieties in small numbers to see how they perform."

While the warming trend is pushing some hotter wine regions out of optimum temperature range, it has made places like Oregon more suitable, particularly for pinot noir, a finicky, thin-skinned grape.

When the pinot noir pioneers arrived in Oregon from California in the 1960s, they had to contend with shorter growing seasons, more frost, winter freezes and more rain during harvest time, Jones said. They adjusted their farming techniques, and the climate became milder.

Now, "we're in the sweet spot," Jones said in his office in Linfield College in McMinnville, Oregon, where he is director of wine education and a professor of environmental studies.

But eventually, if the trend continues, that perfect intersection between the weather and the grape clones being used today will fade.

Willamette Valley Vineyards, just south of Salem, Oregon, is already preparing for that.

The winery began growing grapes in the cooler Eola-Amity Hills, northwest of Salem, in 2007. It is also grafting different root stocks onto vines to produce pinot noir and chardonnay clones that perform better in longer, hotter growing seasons and that go deeper into the soil, making them more drought-resistant.

"When you plant, you won't get your first crop for four years, and your first wines in six years. And you won't know if it's a really great site for maybe 20 years," said winery director Christine Collier Clair. "So when planting, you shouldn't be thinking about what's good for me now. You need to look pretty far out."

As she spoke, customers enjoyed glasses of wine on a deck with a view of vineyards budding in the spring sunshine, the forested mountains of the Coast Range beyond.

"It's our goal to keep this winery going for centuries to come," Clair said. "We've been on this property for 37 years, and we want to be a winery that has sustained, just like some of the French chateaus have been there since the 1600s."

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