

\$3.5
BILLION

Economic losses across Europe from storms that dropped pingpong-ball-sized hail on Bordeaux vineyards in June
Source: Aon

Too Hot for Pinot Noir

WATCH THIS TEMPERATURE-SENSITIVE GRAPE FOR THE EARLIEST SIGNS OF HOW CLIMATE CHANGE IS ALTERING THE WINE INDUSTRY.

THE PINOT NOIR grape, which goes into some of the world's most expensive and seductive red wines, is finicky, affected by the subtlest shifts in heat, cold, sun and rain. The best of this varietal comes from cool agricultural spots such as Burgundy in France, Oregon and coastal California in the U.S., and parts of New Zealand. With average global temperatures predicted to shoot up another 2 degrees Celsius by midcentury, though, does the grape's future lie in even chillier locales?

Yes, but not quite yet. So far, warming has been mostly good news for wine producers in cool regions, according to climate scientist Gregory V. Jones, who has been tracking the effects of global warming



In the 2004 movie *Sideways*, the oenophile character Miles is asked why he so loves pinot noir: "It's a hard grape to grow, as you know. Right? It's, uh, it's thin-skinned, temperamental, ripens early. It's, you know, it's not a survivor like cabernet, which can just grow anywhere and, uh, thrive even when it's neglected."

on viticulture and wine for almost three decades. "Forty years ago, Oregon's Willamette Valley didn't get enough sun and heat to ripen grapes every year," he said in a seminar at Oregon's annual International Pinot Noir

Celebration in July. Harvest dates in many winegrowing regions are two to three weeks earlier than they were two decades ago, according to Jones, a professor at Southern Oregon University.

For pinot noir, the climatic niche is narrow. Average growing-season temperatures need to be from 57 to 61 degrees Fahrenheit (14 to 16 degrees Celsius). By 2030, Oregon and Burgundy will be near the upper limit, Jones predicts.

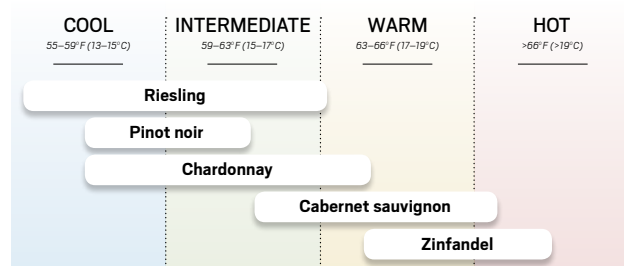
Weather that's too hot boosts sugar in the grape, which translates into more alcohol and overripe flavors, and lowers acidity, making wines taste dull and flat. A warming climate threatens the spicy, silky pinot style that wine lovers prize.

Can producers adapt? Harry Peterson-Nedry of Chehalem Wines in Newberg, Oregon, picks some grapes earlier, adjusts acidity in the winery and sometimes adds water to reduce alcohol. He's eyeing higher-elevation, north-facing slopes for future pinot noir vines. Other producers are planting tempranillo grapes, which are more heat tolerant.

Meanwhile, investors are already hunting for land in places once thought too cool. In 2013, Treasury Wine Estates Ltd., owner of the Penfolds label, put money into Tasmania, the island south of Australia that's begun producing elegant pinot noirs.

IN THE ZONE

Each variety of grape thrives in a specific temperature range, and pinot noir's niche is narrow.



Growing-season average temperature tolerances. Source: Gregory V. Jones

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