THE HYPE AND HOPE OF HYBRIDS

IN THE FACE OF CLIMATE CHANGE, HYBRID GRAPE VARIETIES ARE POSITIONED AS THE GREAT HOPE OF WINE, BUT IN THE EYES AND GLASSES OF THIRSTY CONSUMERS, WILL THEY LIVE UP TO THE HYPE?

WORDS
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Wine has been around for centuries, and throughout time, it has adapted and evolved with both nature and fashion. But environmental changes seem to be quite rapidly progressing, and with such climatic shifts and revised conditions come a plethora of considerations on how we most suitably can continue to cultivate and create vine and wine.

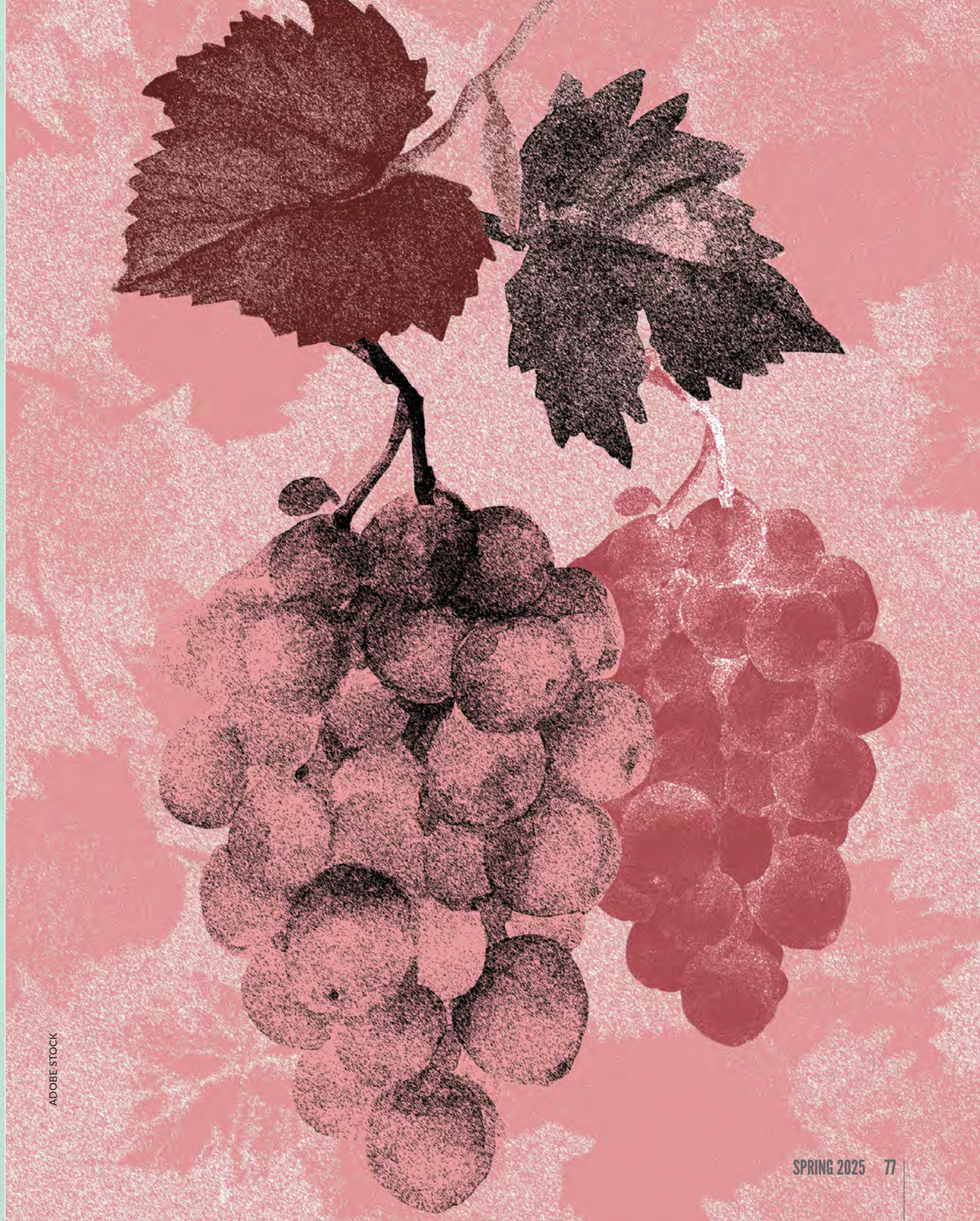
In partial answer to this call, and in response to climate change and resulting disease pressure in the vineyards, today's winemakers are ushering in a new era with hybrid grape varieties at the fore. But is the wine world ready to swap Sauvignon Blanc for Seyval Blanc or Pinot Noir for Baco Noir?

The reality is that wine drinkers might not have a choice. According to a March 2024 study in *Nature Reviews Earth & Environment*, 70 percent of the world's winemaking regions could become unsuitable for growing traditional wine grapes if global temperatures exceed two degrees Celsius above the preindustrial average.

Viticulture has always left grape growers at the mercy of Mother Nature, so in the face of climate change, forward-thinking researchers and vintners are looking for a more reliable way forward.

Many winegrowers are pinning their hopes on hybrid grapes and their unique ability to better withstand environmental stresses, such as drought and temperature variances, and disease.

"I think this is the solution, the climate is changing everywhere," says Vanessa Hoffman, a winemaker who now works with hybrids at Knapp Winery in New York's Finger Lakes wine region.



ADOBE STOCK

"Hybrids are the answer. People look at them as something different, but really Cabernet Sauvignon was created to adapt to a climate and an area."

Many believe that hybrid grapes are vital to the future success of wine production and consumption.

WHAT'S THE FUSS ABOUT?

Let's start with a basic definition: A hybrid is simply the offspring of two grape varieties that belong to different species. Often, it includes one *Vitis vinifera*, also known as the European wine grape or common grape, parent and another vitis partner, such as *labrusca* or *riparia*, although there are non-vinifera-based hybrids as well. Hybrids can occur spontaneously in nature, but today, many are intentionally created by researchers and vine breeders.

A hybrid is considered a cross-pollination of grapes, although not all crosses are hybrids—it is possible to crossbreed two varieties of the same species, such as Cabernet Franc and Sauvignon Blanc, both Vitis vinifera, which created Cabernet Sauvignon.

Generally speaking, Vitis vinifera grapes make the wines consumers are most familiar with: Chardonnay, Cabernet and Merlot, to name just a few. But depending on where and the conditions in which they're grown, vinifera vines can be more prone to diseases, susceptible to cold damage or not able to withstand significantly fluctuating temperatures.

Grapes native to North America—*Vitis aestivalis*, *Vitis rotundifolia*, Vitis labrusca and Vitis rupestris—are hardier than their European counterpart but have on their own typically been considered less favorable for wine production. Compared to vinifera grapes, which have been cultivated for centuries for the purpose of wine production, these hybrids where not, and therefore don't typically have the optimal acid, tannin or flavor components that we associate with "fine wine" production.

However, as the opportunity presented to fuse the flavor profile of Vitis vinifera with resilient American vines, the best of both worlds opened up: wine that tastes more like what we consider "fine wine" and a crop that is far less susceptible to weather events and disease.

"Not only is the climate getting hotter, it's also getting more humid, which creates disease issues," says Stephen Taylor, sales manager at Bully Hill Vineyards. The Finger Lakes winery has worked with hybrids since the mid-20th century.

"We don't know what climate change will do," says Taylor. "Every season feels different; the only consistency is inconsistency, so you want flexible and disease-resistant grapes."

As wine regions warm and become more humid, they become more prone to vine disease, making hybrids a great solution for both existing warmer climates and areas where growing temperatures are a concern.

"Some hybrids, such as Frontenac and Baco Noir, originally developed for cold regions, are now growing in California," says Joseph Wiens, director of winemaking at Wiens Cellars in Temecula. "They are vigorous and fruitful in warm climates and often have better disease resistance.

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They also tend to ripen earlier, meaning they can be harvested earlier, before the occasional late-season heat waves."

HYBRID HISTORY

Hybrids first happened spontaneously in North America in the 1700s, when some vinifera that settlers planted naturally pollinated with a native grape. The result was the Alexander grape, named for the gardener who discovered it. In subsequent years, more spontaneous hybrids like Isabella and Catawba cropped up.

In 1852, William Valk, a Long Island doctor, became the first to purposely create a hybrid, crossing Black Hamburg, a vinifera variety, with a native labrusca grape, resulting in the hybrid Ada.

Around the same time, American vines made their way across the pond to largely be used in gardens. However, they unwittingly brought with them phylloxera, a devastating grapevine pest, which destroyed the majority of vinifera vines.

To bounce back, vintners ultimately grafted vinifera onto the rootstock of labrusca, which is resistant to the pest. A few maverick winemakers chose to cross-pollinate the two and created hybrids. But in 1935, France banned hybrids from commercial winemaking, a regulation—and corresponding inferior perception—that stayed in effect and spread to many other European countries into the 2000s.

According to Hoffman, the hybrids developed 50 to 100 years ago weren't created to make high-quality wine. It was more simply about survival. Today, hybrids are intentionally designed with quality in mind, but the old hybrids persist in the mentality of the wine world.

"A huge problem we're facing is the reputation of hybrids due to the first generation being not great tasting," says Luisa Slotwinsky, assistant winemaker at Thomas Niedermayr in Alto Adige, Italy. The winery is focused entirely on hybrid or PiWi grape varietals; a type of hybrid, PiWi is an abbreviation of the German *Pilzwiderstandsfähige Reben*, which means fungus-resistant vines.

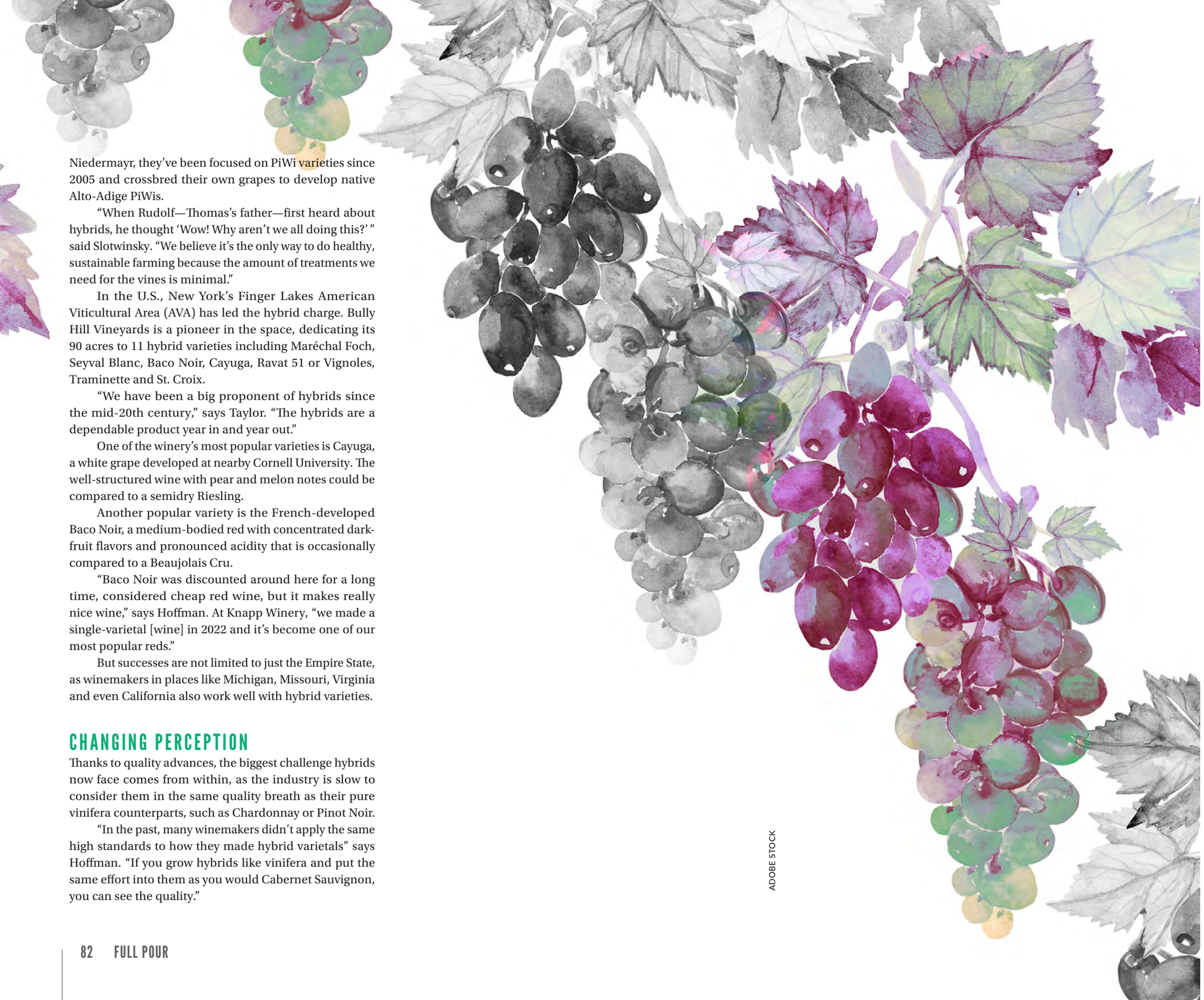
NEXT-GEN HYBRIDS

In Europe, Germany has taken the hybrid lead, developing PiWi varietals like Regent, Solaris, Souvignier Gris and Cabernet Blanc. They were approved for use in German wine in the 1990s, and more than 50 different PiWi varieties are available today, although only about three percent of German vineyards are planted with them.

"Producers need to believe in the new products," says Dr. Marc Dreßler, professor of business administration and entrepreneurship, viticulture & oenology at the University of Ludwigshafen. "In Germany, where consumers predominantly buy by variety, PiWis require a similar sales approach. Producers that marketed PiWi wine as 'new,' 'robust,' 'new sensory profiles,' etcetera, have won customers."

In France, not only is the ban on hybrids off, but the Institut National de la Recherche Agronomique (INRA) ResDur breeding program aims to develop hybrid varieties that retain regional character. Even the iconic Champagne region came around with the adoption of Voltis, the first hybrid variety approved for use there.

In Italy, the Emilia-Romagna and Trentino-Alto Adige regions are actively exploring hybrids as well. At Thomas



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Niedermayr, they've been focused on PiWi varieties since 2005 and crossbred their own grapes to develop native Alto-Adige PiWis.

"When Rudolf—Thomas's father—first heard about hybrids, he thought 'Wow! Why aren't we all doing this?' " said Slotwinsky. "We believe it's the only way to do healthy, sustainable farming because the amount of treatments we need for the vines is minimal."

In the U.S., New York's Finger Lakes American Viticultural Area (AVA) has led the hybrid charge. Bully Hill Vineyards is a pioneer in the space, dedicating its 90 acres to 11 hybrid varieties including Maréchal Foch, Seyval Blanc, Baco Noir, Cayuga, Ravat 51 or Vignoles, Traminette and St. Croix.

"We have been a big proponent of hybrids since the mid-20th century," says Taylor. "The hybrids are a dependable product year in and year out."

One of the winery's most popular varieties is Cayuga, a white grape developed at nearby Cornell University. The well-structured wine with pear and melon notes could be compared to a semidry Riesling.

Another popular variety is the French-developed Baco Noir, a medium-bodied red with concentrated dark-fruit flavors and pronounced acidity that is occasionally compared to a Beaujolais Cru.

"Baco Noir was discounted around here for a long time, considered cheap red wine, but it makes really nice wine," says Hoffman. At Knapp Winery, "we made a single-varietal [wine] in 2022 and it's become one of our most popular reds."

But successes are not limited to just the Empire State, as winemakers in places like Michigan, Missouri, Virginia and even California also work well with hybrid varieties.

CHANGING PERCEPTION

Thanks to quality advances, the biggest challenge hybrids now face comes from within, as the industry is slow to consider them in the same quality breath as their pure vinifera counterparts, such as Chardonnay or Pinot Noir.

"In the past, many winemakers didn't apply the same high standards to how they made hybrid varietals" says Hoffman. "If you grow hybrids like vinifera and put the same effort into them as you would Cabernet Sauvignon, you can see the quality."

Wines from Knapp Vineyards, Bully Hill and Thomas Niedermayr are proof that hybrids can make good wine, but it takes care and attention to achieve such results.

"There's been a lack of really high-quality PiWi and hybrid wine because a lot of winemakers didn't plant them in the best vineyards or put enough attention to them in the cellar," says Slotwinsky. "But we're committed to showing what these varietals have and their true potential."

But as anyone who has attempted to disrupt an industry knows, it isn't easy. It takes time, education and an openness to try new things, both for producers and consumers.

Winemakers willing to try hybrids might find initial cost savings, a long-term solution for increased sustainability and a hedge against climate change.

"A lot of the wineries in Finger Lakes are accepting of hybrids," says Taylor. "The affordability of the grapes allows winemakers to experiment and try new things."

However, while hybrids might offer wine growers a way to stay profitable as the climate changes, ultimately, if the consumer doesn't buy into them, it won't matter.

"We're seeing that people are more open to hybrids, but it depends on the market," says Slotwinsky. "In markets with a long wine tradition like France and Germany, it's hard to convince people, but in places like Finland people have been very open to trying PiWis."

While younger generations might be drinking less wine, the good news is that they're willing to try new things, including hybrids.

"Customers in their 20s, 30s and 40s are very open to trying things in our tasting room," says Hoffman. "They are looking for unique varietals they can't get everywhere."

Additionally, once consumers are educated about the sustainability reasons behind hybrids, they're often even more excited and willing to try these new varieties.

Wine is a living, breathing and changing entity, and hybrids are a natural evolution as winemakers continue to work with the land to make the best wine possible today and for generations to come. There is hope for transition to wider acceptance and adaptation of such varieties for the future, as the practical need for forward-thinking viticulture is clearly there and hybrid-based wines have certainly improved. But the question remains: Will it be enough for the makers and drinkers to follow? Grab a glass of Chambourcin to sip while we wait and see. *FP*