

**WINEENTHUSIAST**

# The Divisive Impact of Brettanomyces in Wine

BY KATHLEEN WILLCOX



*Illustration by Rebecca Bradley*

Winemakers will tell you that Brettanomyces is either the root of all evil, or amazing yeasts with something beautiful to share with the world. Brett can also be a Jekyll and Hyde: an asset one moment, a destructive force shortly thereafter.

Confused? You're not alone.

Brettanomyces, also known as “Brett,” is a complex, resourceful organism that scientists and winemakers have just begun to understand. **First isolated** in 1889 by a scientist at Kalinkin Brewery, it was identified in wine in the 1930s. Brett is both anaerobic and aerobic, which means it can thrive with or without oxygen. Typically, it enters wineries on the skins of grapes, through barrels or via fruit flies. Once it’s there, it can hang around indefinitely.

When it makes its way into a wine, Brettanomyces produces compounds that alter the aromas and flavors, primarily through volatile phenols. Most labs that test for Brett activity will measure levels of 4-ethylphenol and 4-ethylguaiacol.

## **The Brett is Beautiful Camp**

Brett’s aromas can range from barnyard, bandage, bacon and heavy metal to even that of a sweaty horse saddle. Advocates say that these components add complexity to certain wines. Brett can also bring roses, jasmine and musk to the party.

“Fermentation is a transformation,” says Chris Howell, winegrower at **Cain Vineyard & Winery** in California’s **Spring Mountain District**. “We are moving from simple fruit, to something far more complex and savory.”

Howell says that Cain wines that develop Brett follow a natural evolution set in motion on the vines. Its grapes sourced from the benchlands of **Napa Valley** will rarely, if ever, support a fermentation by Brettanomyces. Yet, in the same cellar, with the same native fermentation methods, Brett finds a “happy home” in Cain Vineyard grapes, grown on Spring Mountain.

“And when that happens, the wine is always more complex,” says Howell. But is it better?

“It’s not about better or worse,” he says. “Wine is more than grapes, and it’s not a manufactured product, but a transformation of what grew in the vineyard.

“Our experience of wine is sensual and sensuous. Smell alone can evoke memories and emotion. Perfumers understand that, as with color, no particular odor is intrinsically good or bad. It’s all a matter of context and experience.”

Howell likens the negative reputation of Brett in wine to the notion popularized by Louis Pasteur in the mid-19th century that **malolactic fermentation** “spoiled” wine.

“It took nearly three generations of enologists to rediscover the importance of malolactic fermentation in France, and it took even longer for winemakers in California to accept it,” says Howell.

“Saying you only want wines without Brett is like saying you only like pre-packaged, sliced American cheese,” he says. “I mean, that’s fine, but it’s pretty generic. Wine should be diverse, unpredictable, mysterious. Isn’t that why we all love it so much?”

It’s not just progressive New World winemakers that embrace Brett. Some well-regarded Old World winemakers, like Lebanon’s **Chateau Musar**, have built their reputations in part due to the distinctive aroma and flavor characteristics that Brett “infections” deliver.

## The “Brett’s O.K.” Group

Winemaker René Barbier Meyer, whose family winery, **Clos Mogador**, elevated the **Priorat** region of Spain, has come to appreciate Brett, but with some reservations.

“For me, terroir is the expression of a place, and to find the terroir of a wine, it is difficult if the aromas and palate show too much fruit, wood or Brett,” says Barbier Meyer. “We need the right balance, and that includes for me light aromas of fruit, wood, fermentation, a bit of Brett, but in the right measure.”

In 2010, Barbier Meyer began to experiment with Brett when he made a wine only from local elements. He used **biodynamic** pesticide “teas” in the vineyard made from herbs, and aged the wines in amphorae made from local clay. It didn’t go well.

“Brettanomyces appeared, and the aromas it evoked made it unbalanced, and I didn’t release it,” he says. “We could have controlled it with sulfur, but that isn’t made locally. Although it was a commercial failure, I didn’t abandon the idea of making wines that are as natural and evocative of the vineyard, which can include Brett.”

To allow for a curated expression of Brett, he monitors levels closely. He finds one of Brett’s aromatic molecules, 4-ethylguaiaicol, more acceptable than another, 4-ethylphenol. He’ll often take action if the latter’s levels spike. He says that wines with 4-ethylphenol tend to feature “horse sweat” aromas, while 4-ethylguaiaicol offers an herbal aroma, like geranium or cypress.

Grape variety also makes a difference.

“I find it interesting to have some Brett in certain whites, because they can contribute complexity,” says Barbier Meyer. “In rosés and light reds like Grenache, it can also enhance the wines and make them more interesting.”

Daniel Brennan of **Decibel Wines** in Hawke’s Bay, New Zealand, characterizes Brettanomyces as a “bad bug in the winery,” and a “**fault** that masks fruit and is not terroir.” But he’s opened his cellar door a crack to its presence.

“Anyone who thinks it is not in their cellar somewhere is kidding themselves,” says Brennan. “If you don’t take action when you find it in your wines, you’re deranged or lazy. That said, a hint of Brett isn’t always horrendous.

“My 2016 Gimblett Gravels Malbec had a Brett barrel in the mix, and because I make small volumes, I can’t afford to just lose a barrel. I treated the barrel, then cross-flowed the wine to ensure microbiological stability.”

In other words, the acceptable level he detected wouldn’t change. The wine, he says, sold “very well.”

## **The Haters**

Some winemakers stand in firm opposition to Brett, not just for what they see as its annihilation of a wine’s proper bouquet and palate, but because of its unpredictability.

“I believe in minimal intervention and not being dogmatic, but Brett is a flaw,” says William Allen, winemaker at [Two Shepherds](#) in Windsor, California. “It’s a negative bacteria, and you can’t dial it up and say, ‘Hey, I just want a barnyard brand of Brettanomyces.’ Once it’s in the bottle, it can evolve and is therefore uncontrollable in terms of what it does to aromatics.”

Allen monitors microbial levels in all his wines. If he finds a miniscule amount of barnyard flavors in say, its Carbonic Carignan, a “porch pounder” that should be consumed within a few months, he may let it go. But if it’s in his Syrah, which has a naturally [high pH](#), or one of the wines destined for a longer-term bottle program, he’ll eliminate the Brett through sterile filtration.

Some of the world’s most traditional and well-regarded regions require all of their producers to spurn Brett’s mercurial microbial embrace.

In Bordeaux, for a wine to receive [Appellation d’Origine Contrôlée](#) (AOC) certification, generally considered a guarantee of quality, it must have no Brett because of its “uncertain and unpredictable evolution.” A subtle, classic Bordeaux wine is overwhelmed by its more aggressive odors, says Marie-Catherine Dufour, director of the technical department of the [Conseil Interprofessionnel du Vin de Bordeaux](#).

“The typical stable, horse sweat and leather aromas of Brett exceed the classic AOC aromas of Merlot, Cabernet Sauvignon and Cab Franc, which are cherry, raspberry, prune, black current and also violets,” she says.

Is there Brett in your glass? Maybe. Wine is always evolving. As more wine lovers explore flavors and embrace minimal-intervention wines, Brett, and the jasmine, musk and manure aromas that come with it, will likely come along for the ride.

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