



DR. LOOSEN

Thoughts on Climate Change

From Ernst Loosen

In Germany, and the Mosel valley in particular, climate change has so far been a mostly positive thing for wine growers. In the past, this northern climate of ours was often far too cold, even for Riesling. Up until the late 1980s, we struggled to reach an average natural ripeness of 8 to 10% potential alcohol in the fruit. These days, the average is closer to 11%. This has given us the chance to make ripe, well-balanced dry wines without the need for botrytis to increase the must weight.

Even in good years, the fruit was often just barely ripe. And there was always the risk of heavy rain or an early frost, which could reduce the crop significantly. My grandfather's generation was happy if they got three or four ripe vintages in a decade. And they had to accept that three to five vintages would be complete disasters, with sometimes no marketable crop at all.

Everything seems to be happening three to four weeks earlier now. Fifty years ago, we started the harvest in late October or early November. Now we usually start at the beginning of October and even earlier in warmer vintages. But the growing seasons start earlier, too, including budbreak and flowering. So we are still getting the 100 to 120 days of hang time we want to give us fully ripe flavors.

Botrytis is also coming earlier, which is not at all helpful when the fruit has not reached a certain minimum ripeness (72 to 75° Oechsle). In the past, botrytis normally came late and concentrated very ripe fruit to make extraordinary sweet wines. When it comes too early, botrytis only concentrates the high acidity and green flavors in the unripe fruit, causing what we call "sour rot."

It's not climate change that's affecting us adversely these days, it's the erratic, unpredictable changes in weather. We're getting cooler, wetter weather in spring and summer; violent, unpredictable storms; and more devastating hail storms. These extreme weather conditions make it difficult to plan vineyard work and harvest decisions.

Our regional climate is definitely getting warmer, and we're harvesting earlier, but our fruit is still not overripe. The warmer conditions are giving us potential alcohol levels that are 1.0 to 1.5% higher than in the past, but it is still a struggle to achieve 12.5% potential alcohol (without botrytis) in all but the finest vineyard sites. But we're happy about where we are now. Nobody wants to go back to the sour, unripe vintages of years like 1978, 1980 and 1984. Those were horrible, difficult years that put a lot of growers out of business. And the wines were hard, thin and acidic. What would we do with such wines today?

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One thing we are losing, however, is Eiswein. The general warming trend has definitely reduced the quantity of Eiswein we have been able to produce. More and more often we don't get any at all in a particular vintage.

Rather than overripeness, we're more worried about keeping acidity, which is the structural backbone of Riesling. We still have large diurnal temperature variations, giving us cool nights that help retain acidity. But for certain wines, like Riesling Kabinett, we have been moving to cooler, higher elevation sites in order to retain the bright, fresh acidity that defines that style. Average must weights for Kabinett have increased over the past 30 years, but only by about one degree of potential alcohol (from 9–9.5% to 10–10.5%). But this is a manageable change that results in wines that are slightly sweeter than in the past, but with more intense aroma and flavor.

I can't predict where we will be in another 50 years, and I recognize that the global long-term climate trends are cause for serious concern. But at least for now, the warming climate has been beneficial for us growers in the Mosel valley. The weather patterns are changing, but the components — total rainfall, sunshine hours, average annual temperatures — are not that different than in the 30 years since I took over the estate. It's the distribution of those components throughout the year that is getting more erratic and less predictable.

So, all in all, climate change is not yet such a huge risk for us here in northern regions where we still have plenty of water and cool nights. There's no need for hysteria, and I find it a bit ridiculous that some people are already suggesting that we will soon need to rip out our Riesling to plant Syrah or whatever. When we start to see average must weights in the 13.5 to 14% range on a regular basis, then we will have to think seriously about how much further we can go with Riesling. But there are still a lot of viticultural techniques we can use to adapt our traditional varieties to the changing climate. In addition to higher-elevation sites, for example, there's the very simple idea of hanging a larger crop to slow down the ripening. We can also adjust our canopy management to provide more shading of the fruit zone, which also helps slow ripening.

We have gained valuable experience with warmer climate conditions through our Eroica collaboration with Chateau Ste. Michelle in Washington state. The climate there is much warmer and sunnier, and with far less rain than the Mosel. There we learned quite clearly that the dogma that says "lower yields are always better" is simply not true. In warm conditions, a higher crop level allows for longer hang time, which is needed to develop aromatic ripeness without too much sugar ripeness (i.e. high potential alcohol). Low yields are actually counterproductive because they only result in high must weights that often arrive before the aroma and flavor are fully developed. This is not at all what we want for our growing portfolio of dry Rieslings, or for the traditional Kabinett and Spätlese styles that we want to continue.

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