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Technical letter of Nick Goldschmidt - February 2024 **nick@goldschmidtvineyards.com**

Firstly I would like to thank all of those who have supported GV over the years which have led to our award as best International Winemaker USA for 2023. Thank you all so much and see the attached. This has included 8 x 100 point wines from 2023 reviews which I am very proud and the other winemakers who have helped achieve this

Secondly the focus wine for this first letter is Yoeman. Please see the story attached and the reviews. 95 points and best value and best Holiday wine over \$50. There are still 100 x 6 packs left of this great great wine

https://www.youtube.com/watch?v=61_8cUyTBdY&list=PLbAS2mG9pzZPV4VwUldP1vB3DuHtH7vk1&index=31

I would like to start by saying for people that know me I am always the eternal optimist. The industry is currently complaining how tough it is out there. I think that when it gets tough the opportunities that arise are amazing. I am not 100% sure what they are yet, but I have some certain ideas that I am implementing. For me grapes and wine are a labor of love. I love what I do, and I will persist even in the wake of bad news. That's the value function in several models of action: we are more likely to do things we value or love. Yes, we have a choice but I choose to continue to do what I love. Bringing great quality and value to you all. Thank you for being a friend of Goldschmidt wines and enjoy my technical update once again!

The technical letter describes the current state of the harvests where I work and then focus on ripening curves.



Marlborough Sauvignon Blanc 2024 February 2024

Harvest 2024

Just a quick update to begin the technical letter on what is going on in the grape growing regions that I'm involved in.

Firstly, I've just returned from New Zealand where the crop load is going to be significantly down from the previous last two years. We had inclement weather during flowering, and hence we have many small berries. Interestingly, I made a comment on one of my videos that I don't actually think we will have bunch closure because the number of large berries is per cluster relatively small.



In Australia, the yields are slightly down. White wine is holding its own in terms of price, but red wine has gone down in value. Again, a hangover from the Chinese

embargos. There has also been disease pressure on red grapes combined with the fact that some red grapes will not be picked. I don't think we'll get a real essence of what is going on in the industry.

Chile is a bright spot - the bulk market being very active with strong demand from China, especially for red wines. The outlook for Chile is quite rosy with improved supply outlook for the year ahead with grape prices starting to increase. Still a great country for quality to price ratio. Great Cabernet in Maipo! Harvest is starting the latest in recent memory and over two weeks behind last year. As of today we have only been picking sparkling wine grapes.



Argentina's bulk market has been relatively quiet, but it is a very difficult country in which to do business. They are also going through Summer when people seem to drink less Malbec, but I am sure that consumption will start to increase once we head into the Fall. Last night March 2nd we also received a massive hail storm which is a bit of a set back once again

<https://www.youtube.com/watch?v=xDUZ9-iS55w> Hail v an egg. Not good!



British Columbia in Canada; for those who have not read it, it has been devastated once again by severe frost. Last year the Bud mortality rate was between 50 and 55% but by all accounts this year will be 90%, therefore most wineries will not actually harvest anything in 2024.

In this photo you can see the three buds. The black one is the primary and because it is black it is dead.



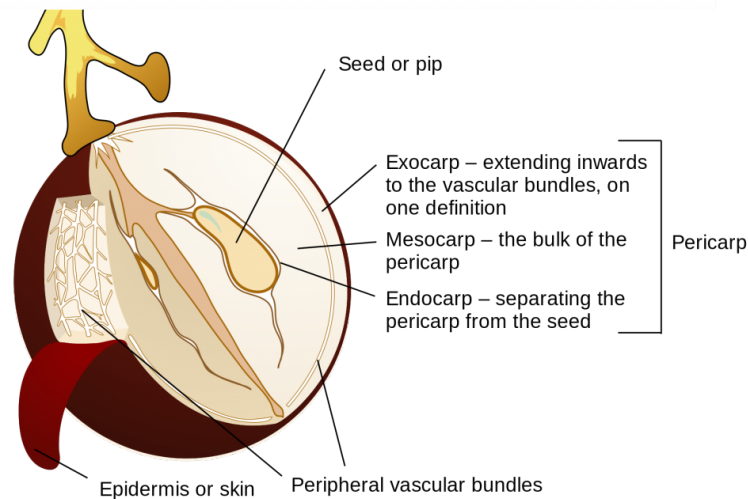
Here in the North Bay - we are delighted in the amount of rainfall that we once again received. This is really the third year in a row that we have had our reservoirs fill up early in the season. Temperatures have been a little warmer at night than I would've anticipated but all things are looking good. A photo with it all. A freshly pruned vine, tons of grass and a full lake at the Staircase vineyard yesterday. Secondly a little old vine Zin for you



Ripening

In our last letter, I spoke about extraction on skins and how we make site specific Cabernet. If you would like a copy of that, please reach back out to me. In this technical letter, I would like to discuss ripening.

The main attribute that we talk about in terms of ripening is Sugar. Everybody in the wine industry has heard of the term Brix. It is actually a metric term meaning 10 brix is 100 g per liter 20 brix is 200 g/l. Other countries use other forms of measurement, specific gravity is used in Europe, or Baumé being the other main measure. I have never been able to get my head around specific gravity, but Baume basically as a measurement of potential alcohol. Not to distract, but yeast have become more efficient. When I came into the industry, we could take brix and multiplied by 0.58, but today we are more inclined to multiply by 0.61. Meaning the yeast can convert sugar at a much higher rate to alcohol than the past. This is why Baume tends to be a relatively innocuous measurement.



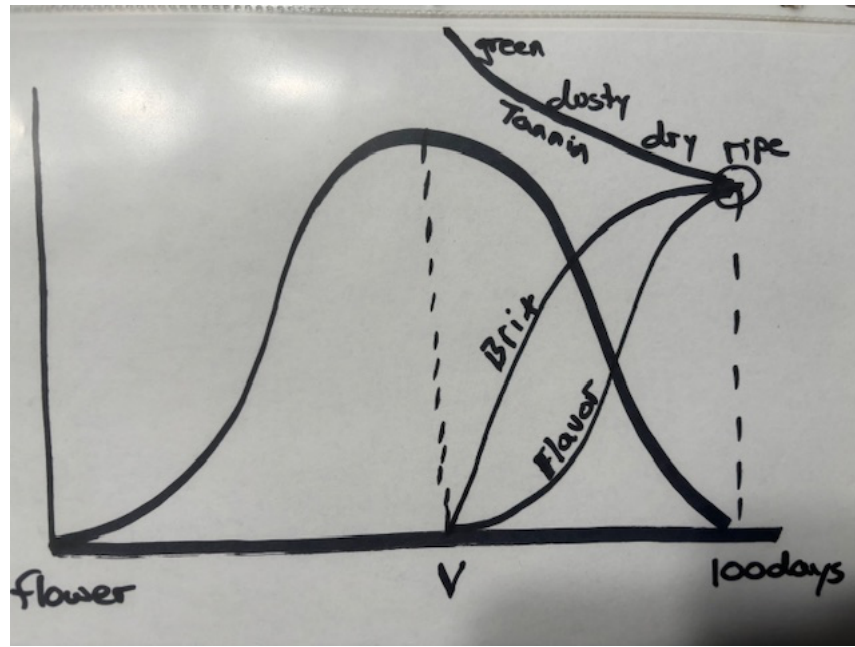
The next thing that we look at in terms, of ripeness is tannin. Particularly with reds we think about tannins moving from green to dusty to dry to ripe to raisin. Obviously we do not want to get to raisin, nor do we want to have green or dusty tannins. This can only be judged by chewing the grape skin. You've seen me on my YouTube channel. First I put the berry in my mouth and spit the pulp out. Then I chew the skin. Spit out the skin and then spit again looking at the color. **In the above chart it is what they call the vascular bundle which is what we are tasting or when you hear me talk, I use the word vacuoles.**

While I am doing this, I am trying to assess not only the ripeness of the tannin, but the quality and amount of tannin. My goal has been to harvest at lower alcohol, but with the same tannin maturity. That means that we have had to do far more work in vineyard to be able to reach great maturity at lower sugar.

The third thing that we discuss is flavor. Flavor is much more difficult to describe in as it is much more site specific. When I think about Alexander Valley, I am looking for raspberries, red cherries, boysenberry and blueberries in terms of flavor. I do not want to get to the overripe characteristics that we associate with Napa. In Napa I am looking for blueberry, black cherry and black plum. I believe that Napa Valley handles more black fruit because the pH is higher, sugar is higher and therefore acid is lower so you get this sweetness. In Alexander Valley pH tends to be lower and acidity slightly higher so the fruit remains in its red fruit zone.

Therefore, it seems if I get two or more black fruit, it means that I am likely going to have more alcohol which I do not want to do. I believe that I can make better wine with lower alcohol from the Alexander Valley than I can from Napa.

This is the curve I first drew about 20 years ago. The 100 days from flowering to harvest is what Bordeaux used to do. It is still held as the standard to measure against. The V stands for Veraison and the 100 days is the point of harvest



And Finally

I really shouldn't be upset by anything these days. I am 61 and so I guess it is bad to get worked up at my age but I care and so feel sometimes I have to step up. I guess this is why I have been a regular speaker at Unified Grape and Wine Symposium put on by American Society of Enology and Viticulture. Sometimes you need some maturity in the system. As we know older guys maybe a little slow but we make up for it in knowledge.

There was an article written by a particular group asking that everybody that talks about Organics to be certificated. That was an interesting philosophy until all these other ideas popped up. Sustainability, Regenerative Farming, Sun Culture, Fish Friendly Farming, Permaculture and the list will continue to get bigger.

I would like to offer up that the folks that have jumped through all the hoops to be certified Organic are now trying to protect their “sacred cow”. I talked to a friend of mine in New Zealand who I respect dearly on this matter and also has an MW (certified haha) but I do respect. He said their Regenerative program has **taken their soil Organic Matter from 2.5% to 5.5% in 3 years. This means they have added 150 t/ha/year of carbon to the soil that would have gone into the atmosphere. Added to that 300,000l of water/ha has now been absorbed and so reducing irrigation requirements by 70%. In turn they have also reduced sulphur and copper use by 60% creating much better outcomes for their vineyard workers and beneficial insects. They have also planted more than 500 permanent diverse trees, shrubs and herbaceous plants that provide shade and shelter for their people and support populations of symbiotic flora and fauna above and in ground that are 40% more diverse. Within these biopods they grow food for their people. They only use naturally derived sources for fertilizer and invasive insect control, they use no residual herbicides, and 90% of their methods to control invasive fungal diseases and weeds are from nature. Any synthetic chemicals are used in a way to protect nature and their people and no residues remain in the environment or in their grapes if indeed these chemicals are ever used. They have reduced fossil fuel use by 65% over traditional organic vineyards.**

There are complex environmental factors in vineyards that affect the vines, health and productivity. The final outcome results from human’s management methods, the climate and the vineyards make up, which involves factors above in on and under the vines. Each variable can affect the vine directly.

Two of the big influences that have received more attention than the past is the microbial community, and how the vine responds to increase in temperatures due to climate change. Moving more to organic and regenerative farming, the measurement of these microbes has become very important. More microbes mean we are becoming more successful.

These microbes directly affect how many or how much nutrient is available in the soil for the vine. Microbial communities respond to environmental changes such as temperature. As we change the vines environment we are changing vine associated microbial communities.

With that we are also changing Wine Style. The microbes are at risk of change in the response to climate change. The main yeast that we have in the vineyard and the winery is *Saccharomyces cerevisiae* and it can be isolated in different regions from around the world. Thus microbiological communities now have a place alongside, traditional components of terrior, such as soil, topography, and climate

Soils are more than dirt and their fertility sustains life which is driven by soil biology. There is a huge range of bacteria, fungi and invertebrates. Soils grow 90% of all the food calories we eat and contain the largest levels of diversity in earth, including for example, useful bacteria that produce known antibiotics. Soils contain more carbon than the atmosphere and plants combined. Losing soil health, therefore means losing food and biodiversity and means the amount of carbon dioxide in the atmosphere will increase.

Classically, measuring by diversity, has relied on taxonomic experts, counting large plants and animals that are visible to the naked eye, but we know that large plants and animals only represent a tiny fraction of overall soil by diversity. Recently there has been dramatic increase in accessibility to DNA sequencing technologies for monitoring biodiversity. We can extract DNA and estimate not only the total biodiversity in the soil, but also capture aspects of biodiversity from the surrounding ecosystem. Just like supermarket barcodes there are specific for products, these DNA barcodes tend to have a specific DNA sequence for different species. In the soil however there could be 26 1/2 million bar codes.

There are more organisms in a kilo of soil than there are humans on the planet. In one kilo of soil they could be 12,000 species!

Yeast and bacteria are more greatly influenced by human management. This has a large bearing on fermentation properties and wine style. The take-home message here are positive if you are a grower who is keen to try and change soil biodiversity, then the choice of management approach may help you do this.

In Conclusion

Yeast and bacteria have a huge influence on the ability of the vine to take up nutrients. We can add yeast and bacteria to soil but nobody will do it because if you do then you need to add a marker to the cell. If you add a marker it then become a GMO (genetically modified organism). Secondly the many different farming approaches can influence the build up of yeast and bacteria in the soil. On a recent trip to Europe I took these photos of Organic vineyards. I would like you to look at these organic vineyards and then the very last vineyard with 100% herbicide. What is the difference? There is not a weed in sight on either of these. The key is to farm without brown earth. I am sure when people think organic they are thinking it is good for the environment. When you disk you are releasing 80% of the carbon right into the atmosphere.

Farming Regenerative maintains the carbon and builds organic matter allowing many microbes to bloom, dampen the effect of global climate change and allow better penetration of the rainfall

Rioja organic vineyard



Ribera del Doro organic



Saumur Organic



Sancerre Organic



Non Organic in Spain. The first one is using herbicide as you can see and the second is regenerative. No brown dirt



These are other options. The one on the left is from Chile where they use a French plow under the vine. Mechanical weed removal. The one on the right is totally old school with 100% herbicide. This system leads to less air to the roots, easy compaction of the soil and 0 organic build up.



If you have any questions or comments please send to

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