

Winemaker Trial

Hye Meadow Winery: Macerating Piquette at 24, 48 and 72 Hours

Looking for something to rival the hard seltzer craze, Hye Meadow Winery assistant winemaker Connor Roberson decided to trial an old European style of winemaking.

Stacy Briscoe



Stacy Briscoe is a freelance wine writer for multiple publications. Stacy has a Bachelor of Arts degree in English-language literature, holds a WSET Level II certificate and is continuing with the WSET program. Outside of wine writing, she's also a contributing editor for independent publisher She Writes Press/Spark Press.

TRIAL OBJECTIVE: The objective of the trial is to evaluate differences in chemistry and organoleptic qualities of Montepulciano Piquette (pomace rehydrated in water and fermented again) after pressing off at 24, 48 and 72 hours.

TRIAL DESCRIPTION: Montepulciano from Diammante Doble vineyard in the Texas High Plains was fermented and pressed off. The pomace was split into three small fermenters, and water was added to equal levels across the lots. The pomace was allowed to soak for 24 hours, after which Brix was measured to determine potential alcohol. A simple syrup solution was added to increase potential alcohol to 4.5% ABV. The 24-hour lot was then pressed off, and all lots were subsequently inoculated. To ensure a strong fermentation, Fermmaid O was added at a rate of 90 g/hL. After 24 and 48 hours the 48-hour and 72-hour lots, respectively, were pressed off. All pressed liquid went into a stainless steel drum to finish fermentation at cellar temperature (between 59° and 60° F). After fermentation completed, the lots were filtered with an inline 5-micron cartridge filter. Five gallons of each lot were then kegged and carbonated to 30 psi. The kegged product went into 16 oz. cans for consumer trials, as well as for evaluation of organoleptic qualities as the product ages.

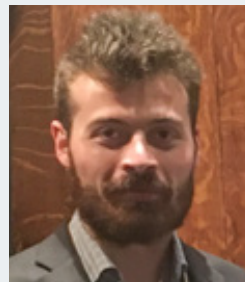
Lot 1: Montepulciano skins — soaked in water for 24 hours

Lot 2: Montepulciano skins — soaked in water for 48 hours

Lot 3: Montepulciano skins — soaked in water for 72 hours

TRIAL CONCLUSION: There are no major chemical differences between the three lots, but color is lighter in the 24-hour piquette versus the 48- and 72-hour piquettes. This makes sense since there was more time for anthocyanin extraction, as well as alcohol and a heat spike in the latter two trials—all of which aided in extraction. One issue we ran into was getting an accurate initial Brix reading as our final alcohol was closer to 10 percent rather than the intended 4.5 percent.

Connor Roberson is the assistant winemaker at Hye Meadow Winery, located in the Texas High Plains AVA. He graduated from Cornell University in 2018 with a degree in viticulture and enology. During that time, he took part in product development projects, ranging from yeast strain trials for cider production to the fermentation of maple syrup. While in school, Roberson also gained hands-on winery experience, working harvests at Au Bon Climat and Qupé in California's Central Coast. After graduation, Roberson was "coerced" by a fellow Cornelian to work a harvest down in Texas and in 2019 joined the winemaking team at Hye Meadow Winery.



Winemaker's Post-Mortem

For those who are unfamiliar, can you describe what "piquette" refers to?

Roberson: Piquette refers to a French peasant wine. Laborers were given the pomace, which would be soaked in water to extract any remaining sugar, color, acid, etc. Fermentation would then be allowed to finish. I learned from a buddy of mine that I worked with in Walla Walla that the etymology comes from the French word "piquer," which means to prick or prickle, hence our decision to carbonate.

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Why were you interested in studying the piquette process? Was there any reason you chose to experiment with this process on Montepulciano grapes over any other grape variety?

Roberson: With the explosion of hard seltzer, we were curious as to whether we could create a similar product that was more “wine-like” while still being easy drinking. As for the choice of Montepulciano, we were at the end of harvest when we first learned of piquette, so it was our only option remaining.

Describe how you set up the trial.

Roberson: There was very little anecdotal information, let alone scientific literature, to work with. This trial was definitely a “try it, see what happens and adjust from there” situation.

We set up the trial using three 55-gallon fermenters. We split up the pomace amongst the bins, filling them up to about 6 inches from the top. Then we added water to reach the top of skins, which was approximately 25 gallons. We rehydrated Rosé yeast according to the manufacturer’s instructions and pitched immediately. After 24 hours, we pressed off lot 1 and added 90 g/hL of Fermaid O to all the lots. The second and third lots were pressed off at their respective timeframes.

Fermentation was allowed to finish in stainless steel drums. We let the wines settle then racked off into 15-gallon kegs. We made a small 20 ppm addition of SO₂ during the racking process. We then transferred the wines to

5-gallon Corny kegs and force-carbonated for two weeks to 30 psi. We then canned in 16-oz. cans. Thanks to Family Business Brewing in Austin, Texas for letting us use their can seamer.

What were some of you and your team’s initial hypotheses prior to beginning the experiment?

Roberson: You’re talking to the singular reclusive mad enologist from Hye Meadow Winery. You could say that our hypothesis was that extraction of color and flavor compounds would increase with an increased maceration time period. I would like to add that I’m well aware that this wasn’t the most scientific trial. In the future, I will be adding on replicates, more controlled measurements, etc., in order to improve reproducibility. There’s no point in a trial if you can’t do it again.

Did you encounter any complications during the course of the trial? If so, how did you address them?

Roberson: The biggest issue was sugar extraction from the skins. We were initially aiming for around 5% ABV, so we added enough sugar to get there. I knew there would be some sugar extracted from the pomace, but I didn’t think it would be equivalent to a bump up of 5% ABV. In the future, we’ll adjust our sugar addition down. There was another winemaker at the trial, who corroborated the nearly 5% ABV gained from the skins for their own piquette project.



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Were the results as you predicted or did anything unexpected occur?

Roberson: The three lots had some slight variations across the chemistry panel, but overall, they were very similar. Color extraction was surprisingly good, and aside from the greater sugar extraction yielding a higher alcohol, everything was within the margins of what we were expecting.

What was the reaction from your team? What was your opinion of the various lots?

Roberson: The reaction was favorable from the tasting room staff at Hye Meadow Winery. That being said, none of the lots stood out as being better or worse. Honestly, my opinion on which is my favorite changes every time I try them. If my arm were being twisted, I would say that the 48-hour maceration is consistently the one I go to drink.

What was the impression of the guests at IQ who tasted through your trial?

Roberson: The initial impression definitely varied. Some guests hear that it's piquette, so they assume that it's a [poorly made] natural wine and will be a volatile acid or Brettanomyces bomb. Others got really excited because they've been trialing their own piquette projects so were curious what we had done. I think that the vast majority who tasted through were pleasantly surprised. Some groups like the freshness of the 24-hour maceration; others liked the increased complexity in the 48-hour lot. There were some who preferred the 72-hour lot but not many.

Do you plan to do a follow-up piquette trial? If so, will you use the same or different grape?

Roberson: We are definitely going to do a follow-up trial; there's actually a lot I would like to trial: various alcohol levels, increasing acidity, adding gum arabic for increased body, adjusting carbonation levels, as well as trying different varieties, such as Picpoul, Arinto, Refosco and maybe even Nebbiolo. The beauty of piquette is that no one has preconceived notions about how it should taste, so the world is our oyster. If we do end up going to market with it, we would also need to evaluate shelf stability and adjust current practices or adopt new techniques to ensure a consistent product.

What were some of the winemaking lessons you learned during the course of this experiment?

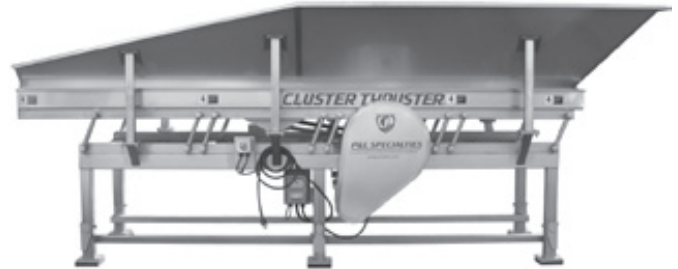
Roberson: Write everything down! The smallest detail can mean the difference between replicating a trial and figuring out what went wrong. I also learned about long choke lines for dispensing carbonated beverages; otherwise, you have massive loss due to extensive foaming as the product comes out of the keg. [WBM](#)

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