



DRY FARM WINES

NATURAL  
WINE

FACTS

presented by DRY FARM WINES



DRY FARM WINES

# NATURAL WINE

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*“Wine is one of the most civilized things in the world and one of the most natural things of the world that has been brought to the greatest perfection, and it offers a greater range for enjoyment and appreciation than, possibly, any other purely sensory things.”*

-Ernest Hemingway



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- Wine has been around since at least the Paleolithic time period. Evidence from that era shows that it was used for medicinal and health purposes as well as for enjoyment.
- Unlike other food and beverages, wine bottles do not require a nutrition label or an ingredients label. This is because wine labeling falls under the authority of the Alcohol and Tobacco Tax and Trade Bureau (TTB) rather than the FDA.
- For wines above 14% ABV, the actual alcohol percentage can be 1% greater or lower than stated on the label. For wines at 14% ABV or below, there is a 1.5% variance allowed on the label. US wines average 14-17% ABV.
- There are five 5oz glasses of wine in each bottle of wine (standard bottle = 750ml = 25.4oz = five 5oz glasses)
- Grapes are the highest value fruit crop in the U.S. valued near \$5 billion.
- Grapes are grown and wine is made in every state in the United States.
- On average, 600 new wines are released every day.
- Only 236 people have passed the Master Sommelier Exam since its inception in 1969.
- Though alcohol is known to be toxic, many scientific studies actually correlate drinking wine with improved health. There are studies that correlate wine and improved heart health, a lower risk for diabetes, stress reduction, and a longer life. A lot more research is needed to validate these findings, but there is no questioning that there is something about wine that is good for us.
- The types of bacterial species that live in the mouth can greatly affect our ability to sense wine flavors. That may explain why brushing your teeth right before enjoying a glass of wine can make the wine appear dull or off. You've just killed off a sizable portion of the microbes in your mouth responsible for releasing aromas.



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- A teaspoon of soil has more bacteria in it than there are humans on the planet. Just like humans need bacteria to keep us alive and healthy (we have 10x as many bacteria in us as human cells!), so do plants. Plants can't directly absorb all the nutrients they need. Bacteria break down nutrients into forms the roots can consume.
- One study showed that certain chemicals sprayed in farms increased pathogenic microbes and decreased beneficial microbes within the soil.
- The amount of pesticides sprayed on vines has grown 26-fold in the last 50 years.
- Grapes now have among the highest doses of synthetic pesticides of any crop.
- Monsanto's Round-Up is the most common herbicide used in U.S. Vineyards today. It has also been linked to numerous cancer cases worldwide.
- Naturally-farmed organic/biodynamic wineries spray no pesticides in any stage of the winemaking process.
- In one study, organic farming produced a 12% increase in total biodiversity by increasing plant and insect diversity.
- Biodynamic farming is a form of alternative agriculture drawn from the ideas of Rudolf Steiner. Biodynamic wineries look at their farms as a single, living organism and structure their farms around astrological and lunar cycles that are believed to optimize the whole living system.
- As of 2016, Germany is the leading country for biodynamic farming, accounting for 45.1% of total hectares.
- Conventional winemakers often rely on using mechanical machinery, such as harvesters, that beats the vine with rubber sticks to drop the grape. Natural winemakers choose to hand pick their grapes, a process that is much gentler and natural for the vine.

*"It is the wine that leads me on,  
the wild wine that sets the wisest  
man to sing at the top of his  
lungs, laugh like a fool—it drives  
the man to dancing... it even  
tempts him to blurt out stories  
better never told." -Homer*





“Wine is sunlight, held together by water.” -Galileo

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## DRY FARMING & IRRIGATION

- Dry farming relies only on natural rainfall for growing grapes. This is easy in regions of Europe like Bordeaux and Burgundy where rainfall is frequent. In most regions in Europe, irrigation is actually illegal!
- For over 10,000 years of grape growing, dry farming was how grapes were grown. Irrigation practices for grape farming were only introduced in the 1960's.
- It is crucial to have healthy soil that holds moisture. This starts with proper tillage. By tilling, you form a dust mulch that seals the water into the ground, and the only way it can get out is by capillary action through the vine's roots. The dirt actually becomes a sponge, holding the moisture, which is released slowly through the vine.
- Dry farming is shown to save 16,000 gallons of water per acre annually.
- Another key benefit of dry farming is that it produces higher quality grapes and consequently better tasting wines. Irrigating grapes makes them larger and dilutes their flavors (think a hydroponically grown tomato vs. one you grow at home in your garden).
- Dry farmed vines need to be planted further apart. Irrigated vines can be planted much closer to each other (aka, more profitable).
- Irrigation encourages roots to stay near the surface where there is water. Their roots usually only grow 2-3 feet deep. Dry farming, on the other hand, requires roots to dig deeper to search for its water, often up to 50 feet underground.
- Irrigating grapes results in higher sugar levels at the time of harvest. This leads to higher alcohol levels in wine and other unhealthy high-sugar byproducts in fermentation.
- Because dry farming produces lower crop yields (less profit), it's not common in the US. Less than 1% of U.S. vineyards are dry farmed.
- Currently dry farming only accounts for less than one percent of California's \$43 billion agriculture industry.

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- Natural wine is quite simple. It's fermented grapes. That's it. Grapes that come from a healthy vineyard already have everything they need to become wine, including native wild yeast.

- The FDA approves 76 different additives for use in winemaking. This includes substances such as ammonium phosphate, fish bladder, casein, and polyvinyl-polpyr-rolidone (PVPP). Would you ever go to the grocery store and buy some polyvinyl-polpyr-rolidone for dinner?

- 38 of these approved additives are only considered "GRAS", an FDA acronym for Generally Regarded As Safe.

- 51% of all US wine is manufactured by just three giant wine conglomerates.

- Top selling U.S. approved additives used by the wine industry include "Mega Purple", a coloring agent. On average, 10,000 gallons of this syrupy goop is added to about 25 million bottles of wine per year - even expensive wines. And yes it causes purple teeth!

- Conventional wine producers often kill indigenous yeasts (using heat, SO2, and filtration) and instead

use genetically-modified commercial, lab-bred yeast strains that have been designed with specific flavors and speed up production.

*Sidenote: Before 1974, all wines were made with native yeast. Today, most US wines are made with genetically modified commercial yeasts.*

- While yeast in wine carry out the majority of fermentation, lactic acid bacteria (the probiotics found in live yogurts) also contribute by carrying out malolactic fermentation. This is when the naturally occurring malic acid in grape juice is converted to lactic acid, which changes the texture and flavor of the wine.

- Acetic acid bacteria in wine ferment ethanol, producing acetic acid. This gives the wine different levels of acidity.

- California produces close to 90% of all American wines. This is due to the diversity of soils and climates throughout the state.

- The name of the game in the modern, conventional winemaking world is quantity and cost-effectiveness, not quality or nutrition.



"Wine can be a better teacher than ink, and banter is often better than books." -Stephen Fry





“In wine, there is health” - Pliny the Elder

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## SULFITES IN WINE

- It is impossible to make a completely sulfite-free wine because wine yeast produce sulfur dioxide (SO<sub>2</sub>) during the fermentation process.

*Sidenote: Sulfur becomes sulfite when combined with oxygen. So any sulfur in wine eventually becomes sulfite.*

- The level of sulfites in wine is measured in “PPM, parts per million”. In the US, conventional wines can contain up to 350ppm. Natural winemakers use little or no sulfur, resulting in less than 40ppm.

*Sidenote: Dried fruits such as prunes and raisins usually have between 500 ppm up to 2,000 ppm!*

- By the current USDA Organic Standard, any wine, foreign or domestic, must contain only naturally occurring sulfites to be marketed and sold as an “organic wine”.

- Adding sulfites is a source of controversy in the winemaking world. Winemakers often add SO<sub>2</sub> to sterilize and preserve their wines. We feel (and many experts agree) that wines with less sulfites taste more alive. They have more soul and personality.

- The earth naturally contains sulfites, as do many other foods such as eggs and vegetables. Sulfites also exist in our bodies naturally!

- Sulfites are not carcinogenic or toxic. They’re more like peanuts. Some people are allergic. These people lack the digestive enzyme sulfite oxidase and therefore can’t metabolize sulfites. If you are allergic, you already know.

- Sulfites have antioxidant and antibacterial effects on the wine.

- All wines with over 10ppm sulfites must say “Contains Sulfites” on the label. This includes nearly all wines.

- White wines usually have more sulfites than red wines.

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- Fructose and glucose are the two main sugars found in grapes, and they are present in wines that are not fully fermented.
- Fructose and glucose are commonly left present in commercial wines to appeal to the U.S. consumer's sweet palette. Sugar in wine can be as high as 300g/L.
- Fructose is not metabolized well in the human body and is a major contributor to insulin resistance and type 2 diabetes.
- Multiple studies have shown that people who consume sugar on a daily basis have a much higher risk for cancer.
- A wine is "dry" when the yeast fully ferments all the available sugar into alcohol, leaving behind no residual sugar.
- Grapes harvested later in the season are sweeter in taste. This is due to the grape vine increasing its sugar content in the fruits. From an evolutionary perspective it does this to encourage animals to eat the grapes and consequently spread the seeds.
- The sweetness of U.S. wines is measured in degrees Brix. It is the measure of sugar mass percentage within a solution. So if you have a 100g aqueous solution with 25 grams of sugar in it, then it will have a value of 25 degree Brix.
- Winemakers sometimes add sucrose to wine before fermentation to boost the alcohol content. This is known as chaptalization.
- Tannins and acidity have the abilities to mask the taste of sugars.
- The only way to know the sugar content in wine is to lab test it.



*"Wine makes daily living easier, less hurried, with fewer tensions and more tolerance."*

*-Benjamin Franklin*



*“Artists and poets still find life’s meaning in a glass of wine.”* -Joy Sterling

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## NATURAL WINE

- For a wine to be considered “natural”, it must be farmed organically and/or biodynamically.
- All natural winemakers share a passionate respect for nature and care deeply for their land, most of which has been passed down for many generations.
- Natural wines are dry farmed.
- There are only about 500 winemakers in the world that follow natural, organic practices.
- Nothing is added to natural wines during production. This includes no chemical additives for aroma, color, flavor, or texture enhancement.
- Natural wines contain living microorganisms that can survive in bottles for hundreds of years. In June 2008, Professor Dr. Jurg Gafner of the Agroscope Wädenswil Research Institute in Switzerland isolated six living microorganisms from a bottle of wine dating back to 1895.
- There is minimal intervention in the vinification and aging in natural wines
- Natural wines currently make up less than 1% of the market in the U.S.
- There is minimal to no use of the following: filtering and fining, use of new oak, addition of sulfites, and chaptalization.
- Only wild native yeast are used during fermentation.

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- We curate the world's best natural wines that are organic or biodynamically-farmed, dry farmed, and contain no additives.
- All our wines are lab-tested for the highest standard of health, including being sugar-free, mycotoxin/mold-free, low alcohol, low sulfites, and paleo/keto-friendly.
- We test every wine to verify it is at or below 12.5%. Low alcohol wines are healthier, more natural, and better tasting.
- Our wines are lab tested for fructose and glucose, the two main sugars found in wine. All of our wines contain less than 1g/L of total sugar, making them statistically sugar-free.
- Ethyl alcohol is carb-free, so since the carbs in wine come from the sugar content and our wines are sugar-free, they are also statistically carb-free.
- All of our wines are tested for the mycotoxin Ochratoxin A and meet the E.U. standard for screening at less than 2 parts per billion. For

context, OCA in coffee is allowed in the E.U. up to 10 parts per billion. There is no required testing for OCA in the United States even though OCA is a known carcinogen.

- Mark Sisson, Dave Asprey, Dom D'Agostino, Robb Wolf, Abel James, JJ Virgin, Katie Wells, Chris Kresser, and many more of the world's health leaders drink and endorse DFW.
- Since our wines are statistically sugar free, the calories in our wines only come from the alcohol content. So depending on the alcohol content, a 5 ounce glass of our natural wine would contain between 90 - 105 calories.
- Wines can have naturally occurring sulfites up to 75ppm, so our wines will never exceed 75ppm. Most wines we represent are below 50ppm..
- Our wines currently come from 13 countries worldwide and we are adding more every month!
- No US wines meet our strict health standards.

*"Wine cheers the sad,  
revives the old, inspires  
the young, makes  
weariness forget his toil."*

-Lord Byron



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## DRY FARM WINES

From our hearts with love and gratitude, we wish you high health, abundance, and joy!

Please let us know any way we may be of service.

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