

8th Edition

# Wine



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## Wine





# Wine

8th Edition

### by Michelle Grant, PhD, Mary Ewing-Mulligan, and Ed McCarthy



#### Wine For Dummies®, 8th Edition

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### Introduction

ine is the intersection between science, art, and culture. In each glass, there are centuries of history and hours of blood, sweat, and tears. We love wine not only for its seemingly infinite spectrum of tastes, but most importantly for the experiences it helps us to create. We want you and everyone else to enjoy wine too — regardless of your experience or budget.

We will be the first to admit that wine's commercial trappings — the ceremony, the fancy language, the paraphernalia — don't make it easy for regular people to enjoy wine. You have to know strange names of grape varieties and foreign wine regions. You have to figure out whether to buy a \$20 wine or an \$8 wine that seem to be pretty much the same thing. You usually even need a special tool to open the bottle when you get it home. All of this may be the most investment you've ever made in a mere beverage!

While the process of buying, storing, and pouring wine may never get easier, you don't have to let the complications stand in your way. With an open mind and willing palate, you can discover as much as you want and engage as much as you want with wine. Like many people who will open this book, we started out knowing little to nothing about wine. We benefited from years of tasting wines, asking questions, gaining important mentors, and learning from our mistakes over and over again. We want to help you feel more comfortable around wine, and want this book to be your guide. Ironically, what will *really* make you feel comfortable about wine is accepting the fact that you'll never know it all — and neither will we! There's just too much information, and it's always changing. So, sit back, grab a glass, and rest assured that you're in good company as the wine world (and the wine in your glass) evolves.

### About This Book

The first edition of *Wine For Dummies* was published in 1995, with several editions that followed. There was no time better than now to release an eighth edition of *Wine For Dummies*, which includes new (to the book) countries and regions, updated price points, and the latest vintage information. It also offers a deeper look behind the scenes, including modern considerations about wine in

restaurants, bars, and sommeliers (find out what they are in Chapter 20). Some of our favorite highlights of this edition include:

- >> New information on the history and evolution of wine, including the migration patterns of *Vitis vinifera* and their impact on modern winemaking (Chapter 2).
- >> Inclusion of sparkling, dessert, and fortified wines in their relevant country chapters to ease your frame of reference and help commit each specialty's homeland to memory.
- >> Separate chapters for Spain (Chapter 7), Germany (Chapter 8), Portugal (Chapter 9), central, eastern, and southeastern Europe (Chapter 10), Africa (Chapter 15), the Middle East (Chapter 16), and Asia (Chapter 17), offering more detail on the grapes, the laws and labels, and the most important wines to know.
- >> More focused (and color) maps to serve as helpful reference points.
- >> A chapter on the science of food and wine pairing (Chapter 18), as well as some of our favorite pairings to try at home or on your travels.

We wrote this book primarily as a reference. You don't have to read it from cover to cover for it to make sense and be useful to you. Simply turn to the section that interests you and dig in. Note that sidebars, which are shaded boxes of text, consist of information that's interesting but not necessarily critical to your understanding of the topic. We italicize many non-English or special words at least the first time they appear, drawing your attention to terms that may be specific to a particular country, region, or established theme in the wine industry. We offer pronunciation guides for some of the most commonly used words in Appendix A.

Finally, wine is a truly global subject and different countries use different methods of measurement. We reflect this variety within the text. Remember that 1 liter equals approximately 2 pints, 1 milliliter (ml) equals approximately 0.03 ounces, and 1 gram (g) equals approximately 0.04 ounces. Temperatures are given in both Fahrenheit (°F) and Celsius (°C) throughout.

### **Foolish Assumptions**

We assume that you picked up this book for one of several reasons:

- >> You know little about wine but want to learn more.
- >> You do know something about wine, but you want to understand it better, or with more complexity.

>> You're already very knowledgeable but realize that you can always discover more.

You are not a dummy, otherwise you wouldn't be reading this book to learn more about wine. We hope that selecting this book means you don't take yourself too seriously and can move past the wine mumbo jumbo to get to the real stuff that matters. A casual, yet professional approach drives our tone throughout the book, which is after all, about a beverage that's meant to be enjoyed!

### Icons Used in This Book

The pictures in the margins of this book are called *icons*, each drawing your attention to different types of information.



REAL DEAL

A bargain's not a bargain unless you really like the outfit. The wines we mark with this icon are bargains because we like them, we believe them to be of good quality, and their price is low compared to other wines of similar type, style, or quality. You can also interpret this logo as a badge of genuineness, as in "This chablis is the real deal."



Some issues in wine are so fundamental that they are worth committing to memory. This symbol draws your attention to these critical points of information.



TECHNICAL STUFF

This icon is a bit like the 4-year-old who insists on knowing "Why?" Where you see it, feel free to skip over the technical information that follows unless you're interested. Wine will still taste just as delicious.



Advice that will make you a wiser wine drinker or buyer is marked by this bull's-eye so that you won't miss it.

TIP



WARNIN

There's very little you can do in the course of moderate wine consumption that can land you in jail — but you could spoil an expensive bottle and sink into a deep depression over your loss. This symbol warns you about common pitfalls.



WORTH TH

Unfortunately, some of the finest, most intriguing, most delicious wines are made in very small quantities. Usually, those wines cost more than wines made in large quantities — but that's not the only problem. The real frustration is that those wines have very limited distribution, and you can't always get your hands on a bottle even if you're willing to pay the price. We mark such wines with this icon, and hope that your search proves fruitful.

### **Beyond the Book**

As if all the great information in this book weren't enough, you can go beyond the book for even more information! Check out this book's online Cheat Sheet by going to www.dummies.com and searching for this book's title. You can also download a PDF of the maps featured in this book at www.dummies.com/go/winefd8e.

### Where to Go from Here

We recommend that you go to Chapter 1 and start reading there. But if you don't have time because you're about to head out to a fancy restaurant, then begin at Chapter 21. If you already have bottle in hand or wine in glass, and want to know more about what you're about to sip, turn to the relevant country chapter. Of course if you're considering making your own wine or the story behind what may be in your glass, Chapter 3 may be what you need.

In other words, start wherever you wish, closer to the beginning if you're a novice and closer to the middle if you know something about wine already. On the journey of wine appreciation, *you* get to decide how far to go and how quickly — and you get to choose the route to get there. Pleasure is your final destination!

# Getting Started with Wine

### IN THIS PART . . .

Understand how wine grapes grow and identify the most important varieties.

Delve into wine's rich history and find out how it got here. Become familiar with the concept of *terroir*.

Take a sneak peek at the process of winemaking.

Discover how to taste and describe wine.

- » Discovering why grape variety is important
- » Understanding how grapes grow
- » Observing grape characteristics and performance in the vineyard
- » Learning who's who in the worlds of white and red grapes

# Chapter **1**What Is Wine?

hat is wine? Wine is an alcoholic beverage made from the fermented juice of grapes. While wine can be made from many other types of fruit, this book focuses on wine made specifically from the Vitis vinifera species of grapes.

Most wine marketing highlights the pleasurable, fun aspects of wine: the suspense of the first sip, the bonds strengthened with friends and loved ones over a good bottle, and the memories that connect us as people.

If you work in wine or know anyone who has ever made it, then you know that there are countless hours of blood, sweat, and (often) tears in every bottle. Behind the label, wine is in its most basic form an agricultural product. It is fermented grape juice, processed and packaged as a breathing link between the earth and its people.

In this chapter, we dive into the world of grapes, tracing a vine's life cycle and highlighting key aspects of vineyard management that can impact a winemaker's ability to harvest grapes and make different types of wine. We conclude the chapter with important facts about the most popular grapes to know and the wines they make.

### Understanding the Importance of Varieties

Grapes are the starting point of every wine. The grapes that make a particular wine dictate the genetic structure of that wine and how it will respond to everything the winemaker does to it. Think back to the last wine you drank. What color was it? If it was white or amber, the odds are that it came from white grapes. If it was pink or red, the wine likely came from red grapes. Did it smell herbal or earthy or fruity? Whichever, those aromas came mainly from the grapes. Was it firm and tannic or soft and voluptuous? Most of what you will remember is due in large part to the grapes, with a nod to both mother nature and the winemaker.



The specific grapes that make any given wine are largely responsible for the sensory characteristics the wine offers — from its appearance to its aromas, flavors, alcohol, tannin (a substance that exists naturally in skins, seeds, and stems; refer to Chapter 4 for more details), and acid profile. How the grapes grow — the amount of sunshine and moisture they get, for example, and how ripe they are when they're harvested — is also a factor and can emphasize certain grape characteristics over others. So can winemaking processes, such as oak aging. Each type or *variety* of grape reacts in its own way to the farming and winemaking techniques that it faces. By *variety*, we mean the fruit of a specific type of grapevine: the fruit of the cabernet sauvignon vine, for example, or of the chardonnay vine. Discover more about winemaking in Chapter 3, and about the different varieties later in this chapter. Parts 2 through 5 of this book reveal how different varieties thrive in different wine regions, and how some regions have become known as the best places for wines from those varieties.



The term *variety* has scientific meaning. A variety is a subdivision of a species. Most of the world's wines are made from grape varieties that belong to the species *vinifera* — itself a subdivision of the genus *Vitis*. This species originated in Europe and western Asia. Other distinct species of *Vitis* are native to North America. You can find out more about *Vitis vinifera* and the spread of winemaking in Chapters 2 and 3.

Grapes of other species can also make wine. For example, the concord grape, which belongs to the native American species *Vitis labrusca*, makes concord wine and grape juice and jelly. Non-*vinifera* wines often receive less appreciation compared to wines made from *Vitis vinifera* grapes because they are typically perceived as having less complexity, more inconsistent quality, and a sweeter, fruitier flavor profile, which many wine connoisseurs associate with lower-tier wines, particularly due to the historical dominance of European *Vitis vinifera* grapes in the wine industry. However, there is a growing interest in exploring diverse grape varieties and high-quality non-*vinifera* wines produced by skilled winemakers.



### A VARIETY OF VARIETIES

Snowflakes and fingerprints aren't the only examples of nature's infinite variety. Within the genus *Vitis* and the species *vinifera*, as many as 10,000 varieties of wine grapes exist. If wine from every one of these varieties were commercially available and you drank the wine of a different variety every single day, it would take you more than 27 years to experience them all!

Not that you would want to. Within those 10,000 varieties are grapes that can make extraordinary wine, grapes that tend to make very ordinary wine, and grapes that probably shouldn't be turned into wine at all. Most varieties are obscure grapes whose wines rarely enter into international commerce.

An adventuresome grape nut who has plenty of free time to explore the back roads of Spain, Portugal, Italy, and Greece might be able to encounter only 2,000-plus different grape varieties (over five years' worth of drinking) in their lifetime. The grape varieties you might encounter during your normal wine enjoyment probably number fewer than 50.

### Living Life as a Vine

Most wine education focuses on winemaking in the cellar: fermentation vessels, different types of fermentations, yeasts, and so forth that can influence the final flavor profile, texture, and more in a wine (find out more about these in Chapter 3). Less attention is paid to what happens to grapes before they enter the cellar. Like any other plant, the grapevine has a life (and often mind) of its own.

### The life cycle of a vine

The typical life cycle of a vine happens in phases according to the seasons of the year and location on the globe. See the color section of this book to discover the life cycle of a vine, which is described in more detail here:

Winter pruning: Up to 90 percent of a vine's previous growth can be removed to prepare it for the coming season. The goal of this step, carried out while the vines are in a dormant state, is to guide the vine's future production, limiting the number of clusters (also known as thinning, which packs nutrients and energy into fewer grapes, thereby concentrating sugars and aromatic and phenolic compounds), maximizing sun exposure, and ensuring high-quality fruit.

- 2. **Spring bud break:** After a winter of dormancy, small buds begin to swell and unfold, revealing the first signs of green growth. This critical step tells winemakers that fruit is on the way, but is in a fragile, not fully formed state. Frost and hailstorms can be serious threats during this phase, permanently damaging new shoots if temperatures are too extreme.
- **3. Spring flowering:** Surviving buds develop numerous small flowers, each with the potential to turn into an individual berry (since grapevines are also magical enough to self-pollinate).
- **4. Summer fruit set:** As the temperature increases, the tiny, pollinated flowers shed their petals and small, green berries (all grapes start out green, even if they may later become red, blue, or purple) form with seeds at the end of each stem. The fruit set stage gives the winemaker an early sign of potential crop yield. Mid-season, encouraged by the sun's heat, the clusters of green berries begin to show pigmentation and develop more sugar and ripeness. Referred to as *veraison*, some clusters begin to turn red, purple, or bluish in color.
- **Fall harvest:** Sugar continues to increase (and acidity decreases, marking the importance of this inverse relationship in finished wines as well) as the grapes remain on the vine and exposed to sunlight. This is where the fun begins for winemakers as they taste and test the grapes for sugar content (referred to as *brix*), determining the exact day or moments when to pick grapes and transport them to the winery. Check out Chapter 3 for details of what happens when the grapes reach the winery.



Each *vintage* (growing season) has a different story to tell based on the conditions of the vine, the soil, the climate, and more. Leading up to the many decisions the winemaker will face at the time of harvest, the approach to vineyard management can play just as important of a role as the winemaking itself.

### Pests and other vineyard concerns



WARNING

If you think that humans are the only species that love grapes and the wines that come from them, then think again! Vineyards (and wineries) can be havens for a range of pests and diseases that can permanently damage if not eradicate entire plots if not identified and/or treated immediately. Some of the most common pests include:

- **>> Grapevine moths:** These can eat different parts of the plant, with larvae feeding on everything from flower buds, blossoms, and grapes.
- >> Leafhoppers: As the name implies, these hop from leaf to leaf, nibbling away as they go and leaving white and yellow patches that render the leaves incapable of achieving *photosynthesis* (the process by which plants, algae, and bacteria turn light energy into chemical energy in sugar form).

- >> Mealybugs: These typically make their homes inside vine trunks, then venture onto grapes where they infect berries with their egg sacs.
- >> Phylloxera: The most infamous pest of them all is by far the historic villain of the wine industry. *Phylloxera* is a sap-sucking insect that feeds on the roots of grapevines. See Chapter 2 for more information on phylloxera and its devastating impact on *Vitis vinifera* in the late 1800s.
- >> Roundworms: These pests infiltrate and feed on the area around and inside the vine root.

In most cases (outside of phylloxera and roundworm, that require resistant root-stock to truly combat threats; see Chapter 2), vineyard-generated remedies and insecticides can help winemakers prepare for the worst of pests. But in addition to pests, winemakers must stay vigilant about other potential diseases affecting vines and grapes. The most common include Powdery Mildew (a fungus attacking both the vine and the grapes), Downy Mildew (another fungal disease resulting in oil spots and patches that prevent full photosynthesis), Pierce's Disease (spread by glassy-winged insects called sharpshooters and European sap-feeding insects that inhibit water flow), and various forms of rot. *Botrytis cinerea*, when manipulated with precision by winemakers, is the one exception to unwanted diseases that results in delicious, dessert-style wines. See Chapter 6 for more detail on *Botrytis cinerea* and the process for making wine with "botrytized" grapes.

## **Exploring Grape Character and Performance**

Grapes grow on vines and are made into wine. But what makes some grapes better for winemaking than others? We like to think of the grape universe, if you will, as being defined by two main attributes, which we informally call character traits and performance factors. *Character traits* are the characteristics of the fruit itself—its unaltered flavors that are driven by genetics alone. *Performance factors* refer to how the grapevine grows, how its fruit ripens, and so forth.

### Appreciating a grape's true character



Skin color is the most fundamental distinction among wine grapes. Every grape is considered either a white variety or a red (or black) one, according to the skin color of the ripe grapes. A few red-skinned varieties are further distinguished by having red pulp rather than white pulp, but almost all red varieties have white pulp. Within the white and black categories, each grape variety has its own hue.

### THE ROUTE TO RIPENESS

When grapes are not yet ripe, they contain high amounts of acid and very little sugar — which is true for any fruit — and their flavor is tart. As ripening progresses, they become sweeter and less acidic (although they always retain some acid), and their flavors become richer and more complex. Their skins get thinner, and even their seeds and stems ripen. In red varieties, the tannin in the skins, stems, and seeds becomes richer and less astringent. The stage of ripeness that the grapes attain before being harvested is a big factor in the style of a wine that is totally driven by the winemaker's discretion. For more on flavors and pairing with food, see Chapter 18.

Individual grape varieties also differ in other ways:

- >> Aromatic compounds: Some grapes (such as muscat; see Table 1-1 later in this chapter) contribute floral aromas and flavors to their wines, for example, while others contribute herbaceous (think sauvignon blanc; read more on this superstar later in this chapter) or fruity notes. Some grapes have neutral aromas and flavors and, therefore, make fairly neutral wines.
- **>> Acidity levels:** Some grapes are naturally disposed to higher acid levels than others, which makes for crisper, leaner wines.
- >> Thickness of skin and size of the individual grapes (called *berries*): Black grapes with thick skins naturally have more tannin than those with thin skins. The same holds for small-berried varieties compared to large-berried varieties, because their skin-to-juice ratio is higher. More tannin in the grapes translates into a firmer, more tannic red wine.

The composite character traits of any grape variety are fairly evident in wines made from that grape. For example, cabernet sauvignon grapes tend to have thicker skins and smaller berries compared to merlot grapes, contributing to higher tannins and higher sugar. Due to the higher sugar content in cabernet sauvignon grapes, the resulting wines often have higher alcohol levels.

### Understanding a grape's performance factors

How a particular grape variety performs in the vineyard is vitally important to the grape grower because the vine's growth patterns determine how easy or challenging that variety will be to cultivate in a particular site. Considerations include:

>> How much time a variety typically needs to ripen its fruit. In regions with short growing seasons, early ripening varieties do best.

### THE MARRIAGE OF GRAPEVINE AND SOIL

One key factor in grape performance is the soil of the vineyard. Over centuries, some classic compatibilities between grape varieties and types of soil have become evident: chardonnay in limestone or chalk, cabernet sauvignon in gravelly soil, pinot noir in limestone, and riesling in slatey soil. At any rate, these are the soils of the regions where these varieties perform at their legendary best. Soil affects a grapevine in several ways: it provides nutrition for the grapevine, it can influence the temperature of the vineyard, and it's a water-management system for the plant.

A safe generalization is that the best soils are those that have good drainage and aren't particularly fertile. An extreme example is the soil — if we can call it that — of the Châteauneuf-du-Pape district in France's Rhône Valley (see Chapter 6): it's mostly just stones. The wisdom of the ages dictates that the grapevine must struggle to produce the best grapes, and well-drained, less fertile soils challenge the vine to struggle, regardless of the grape variety.

- >> How dense and compact the grape bunches are. In warm, humid conditions, dense bunches can have mold and mildew problems.
- >> How much vegetation a particular variety tends to have. In fertile soils, a vine that's disposed to growing a lot of leaves and shoots can have so much vegetation that the grapes don't get enough sun to ripen.



The reasons some varieties perform brilliantly in certain places (and make excellent wine as a result) are complex. The amount of heat and cold, the amount of wind and rain (or lack of it), the slant of the sun's rays on a hillside of vines, and the presence of water bodies are just a few of the factors affecting a vine's performance. In any case, no two vineyards in the world have precisely the same combination of these factors or *terroir*. We describe the history and concept of *terroir* with more detail in Chapter 2.

### **Grape royalty**

Bees have their queens, elephants have their matriarchs, and humans have their royal families. The grape kingdom has nobles, too — at least as interpreted by the people who drink the wine made from those grapes. *Noble* grape varieties (as wine people call them, possibly inheriting this term from King Louis the XIV of France who once created a list of grapes to claim his country's economic and artistic superiority) have the potential to make great — not just good — wine. Every noble grape variety can claim at least one wine region where it's the undisputed

champion. The wines made from noble grapes on their home turf can be so great that they inspire winemakers in far-flung regions to grow the same grape in their own vineyards. The noble grape might prove itself noble there in its own way, too.

Classic examples of noble grape varieties at their best are:

- >> Cabernet sauvignon in Bordeaux, France (Chapter 6)
- >> Chardonnay and pinot noir in Burgundy, France (Chapter 6)
- >> Chenin blanc in France's Loire Valley (Chapter 6)
- >> Nebbiolo in Piedmont, Italy (Chapter 5)
- >> Sangiovese in Tuscany, Italy (Chapter 5)
- >> Riesling in the Mosel and Rheingau regions of Germany (Chapter 8)
- >> Syrah in France's northern Rhône Valley (Chapter 6)

### Who's Who in White Grapes

This section includes descriptions of the white *vinifera* varieties whose wines are most popular in today's global industry. These wines can be varietal wines or place–name wines that don't mention the grape variety anywhere on the label (a common practice for European wines). These grapes can also be blending partners for other grapes, in wines made from multiple varieties. We discuss these wines broadly in order of their importance.

### Chardonnay

Chardonnay is considered an elite grape variety thanks to its role in producing some of the greatest dry white wines in the world and the greatest sparkling wines — white Burgundies, in the first case, and champagnes (where it's usually part of a blend), in the second case. Today, it also ends up in a lot of everyday wine. The chardonnay grape grows in practically every wine–producing country of the world for two reasons: it's adaptable to a wide range of climates, and the name *Chardonnay* on a wine label is a surefire sales tool.

Traditional chardonnay winemaking involves using oak barrels to ferment the juice or age the wine, and the oak influences the wine's taste. The process can bring smoky, toasty flavors to the wine and diminish the wine's fruitiness. But many chardonnays these days are either unoaked or made in such a way that the oak influence is minor. See Chapter 3 for more on oak.