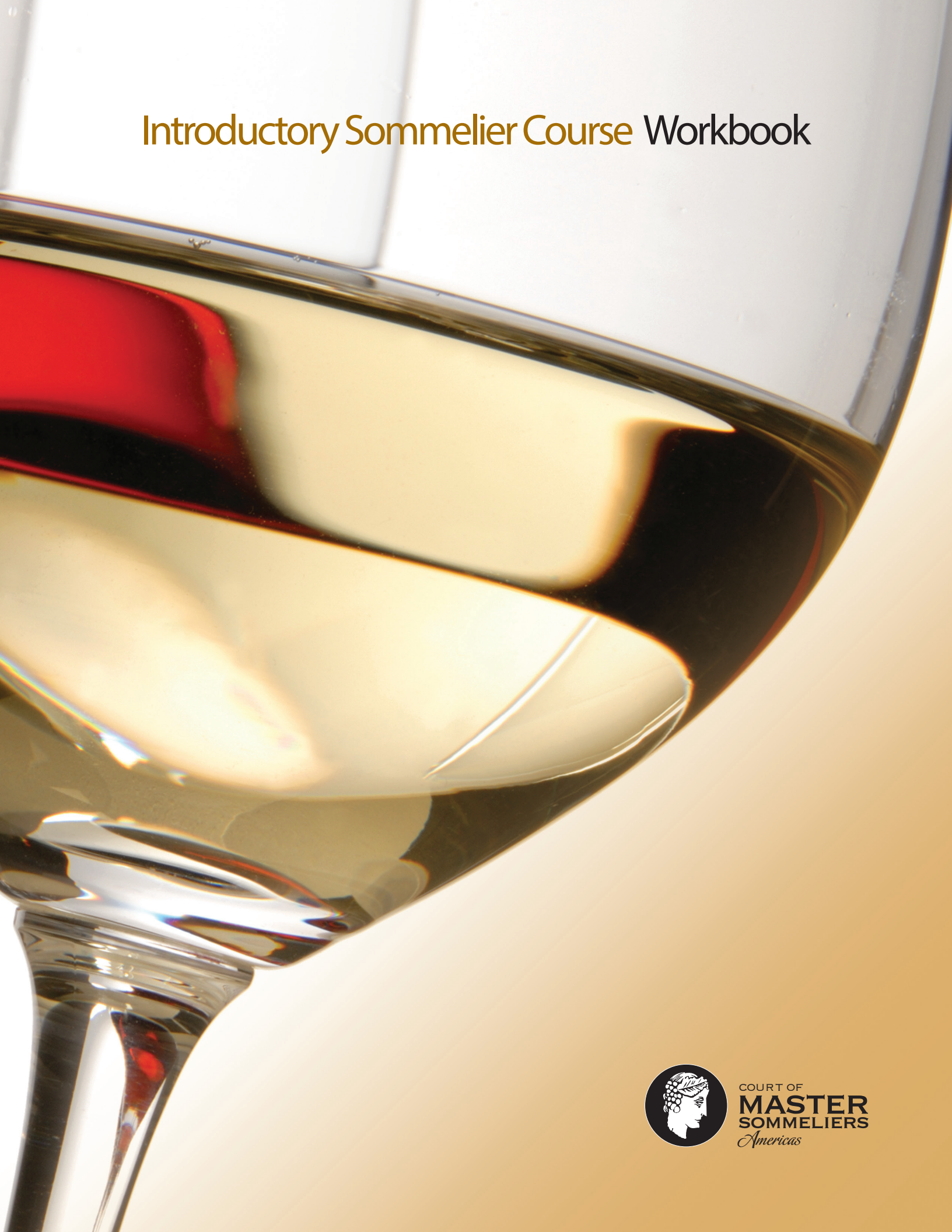
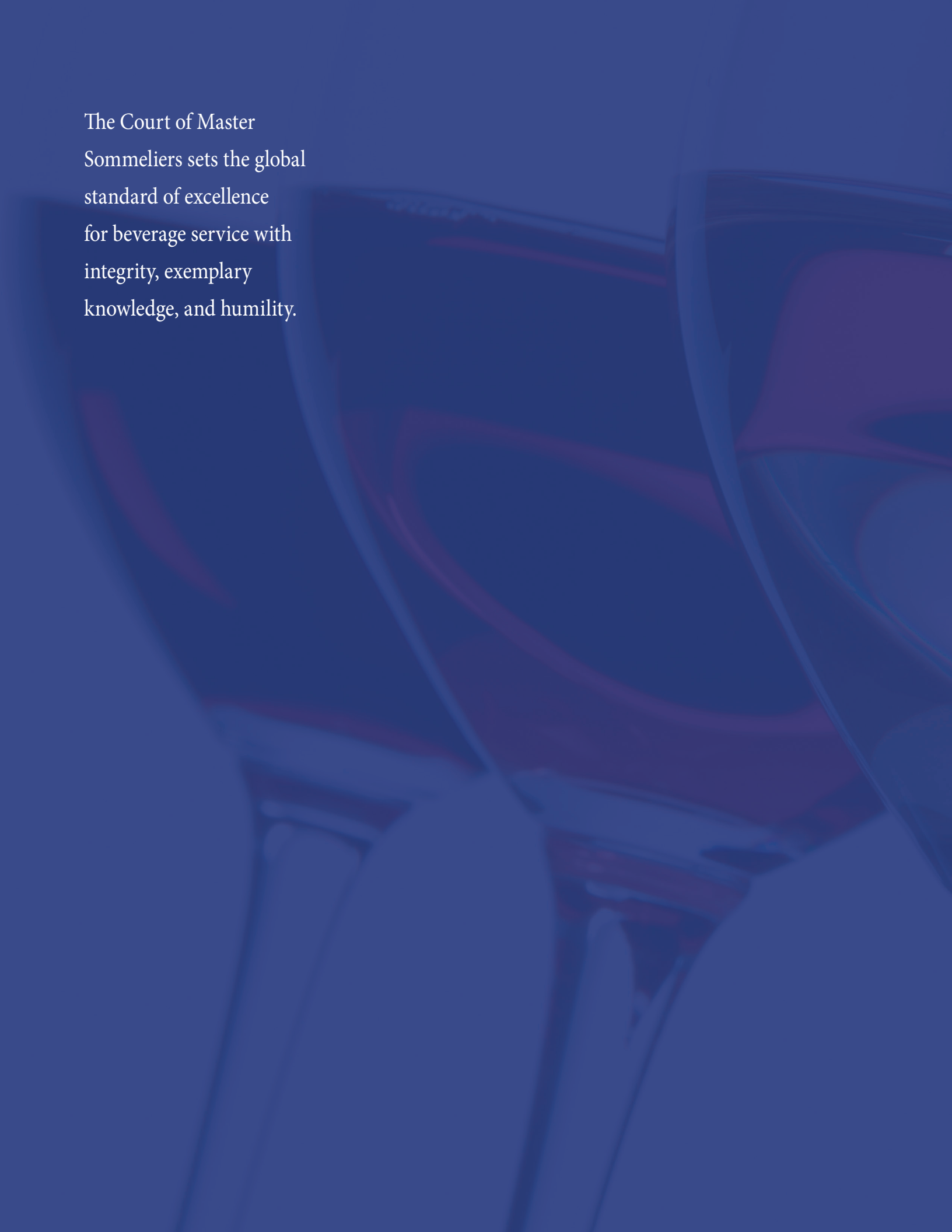
Introductory Sommelier Course Workbook



COURT OF
MASTER
SOMMELIERS
Americas

The Court of Master Sommeliers sets the global standard of excellence for beverage service with integrity, exemplary knowledge, and humility.



Our Mission

The Court of Master Sommeliers elevates the quality of beverage service throughout the hospitality industry with our peerless credentials. We expand the rich heritage of our organization through mentorship, rigorous preparation and examination. We chart the course for current and future Master Sommeliers worldwide.



What Is a Sommelier?

A sommelier has traditionally been understood to be a wine steward in the dining room of a restaurant. Recently, sommeliers have branched out to engage in many other activities in the beverage alcohol industry. The Court of Master Sommeliers focuses on skills and knowledge necessary for success when working on a restaurant dining room floor.

Why Become a Master Sommelier?

Becoming a Master Sommelier entails more than acquiring a title and a certification. It is also the pinnacle of achievement in the sommelier's craft, and a testament to one's knowledge, tasting ability, capacity for providing outstanding service, and general professionalism as an industry leader. Acquiring these capacities and attaining expertise at the highest level is not a short-term undertaking but rather a journey. The journey begins here.



Introduction to the Course

This course is the first step in becoming a Master Sommelier. The Introductory Course is given over a two-day period by a team of Master Sommeliers. Students receive an intensive review on the world of wine and spirits, training on proper wine service and learn the Deductive Tasting Method.

Philosophy of Curriculum

Our philosophy revolves around the three, mutually reinforcing pillars of study. Theoretical knowledge informs one's ability to taste wines discerningly by building an understanding of the factors that determine their characteristics. Similarly, tasting experience reinforces theoretical knowledge by providing memorable examples of how differences in climate or production techniques result in significantly different wine styles. Moreover, gains in theoretical knowledge and growth of an extensive inventory of tasting experiences can contribute to improved service, as these will inform practical decisions regarding — for example — appropriate glassware or proper serving temperature.

Theoretical Knowledge

This course provides fast-paced instruction regarding the essential aspects of the world's major wine regions.

The Deductive Tasting Method

Students are introduced to the Deductive Tasting Method. They are then offered the opportunity to practice the method with fellow students and Master Sommeliers in six tastings over the course of two days.

Service, Salesmanship, and Hospitality

The Court of Master Sommeliers service standards are demonstrated and reviewed.



Introduction to This Workbook

This workbook is intended to aid students in their preparation for the Court of Master Sommeliers Introductory Course. It also serves as guide to follow along during the class itself and becomes a useful tool for future study.

Each region or subject covered follows a similar format.

Learning Points Each section begins with a list of points a student should take away from the subject.

Factors of Production Each section will follow a similar format so the student will learn the most important aspects or factors of a wine-growing area or topic.

- Historical background
- Location/ geography
- Climate
- Topography/aspect
- Soil
- Grape varieties planted
- Viticultural practices
- Vinification practices
- Harvest
- Yearly weather / vintage variation
- Terroir
- Regional wine law

Quiz Questions A short quiz follows each section to ensure all important points were learned and is a chance to test your knowledge in preparation for the exam at the end of the Introductory Course.

How to Prepare for the Introductory Course
Advance preparation is imperative to getting the most out of this course and for success on the exam. Reading each section and taking each quiz is a great place to start. Use Guildsomm.com for additional reading and details.
The course is taught by Master Sommelier instructors that will bring color, clarity, and perspective to these subjects.

Introductory Course

Program Schedule — Day One

Welcome and Introduction
Philosophy of Curriculum
Viticulture and Vinification — Theory
Break
The Deductive Tasting Method — Tasting Flight One — Tasting
The Basics of Food and Beverage Pairing — Beverage Service
France
The French Paradigm — Understanding European Wine Law
Burgundy
Bordeaux
Lunch
Deductive Tasting Flight Two
Champagne and World Sparkling Wines
Loire Valley
Alsace
Rhône Valley
Break
Deductive Tasting Flight Three
Service, Salesmanship, and Hospitality

Your Course Instructors:

Introductory Course

Program Schedule — Day Two

Italy
Germany and Austria
Spain and Portugal
Break
Deductive Tasting Flight Four
North America: The United States
South America and South Africa
Australia and New Zealand
Lunch
Deductive Tasting Flight Five
Break
Fortified Wines and Sweet Wines with Tasting Flight Six
Beer
Sake
Cider
Spirits
Break
Examination
Results and Reception

Your Course Instructors:

Table of Contents

The Core Lectures

Viticulture 7
Vinification 18
The Deductive Tasting Method 25
The Basics of Food and Beverage Pairing 41

France

The French Paradigm — Understanding European Wine Law 48
Burgundy 50
Bordeaux 69
Champagne and World Sparkling Wines 82
Loire Valley 91
Alsace 99
Rhône Valley 104

Europe

Italy 111
Germany 131
Austria 141
Spain 145
Portugal 154

The New World

North America — The United States 160
South America 175
South Africa 184
Australia 188
New Zealand 200

World Wines and Beverages

Fortified Wines and Sweet Wines 207
Beer 222
Sake 225
Cider 228
Spirits 231

Service, Salesmanship, and Hospitality

Court of Master Sommeliers Service Standards 245
Demeanor of the Professional Sommelier 252

Deductive Tasting Journal 255

Day One





Viticulture
The Art of Vine Growing

Learning Points

The first steps in learning and understanding wine take us to the vineyards to learn how and where grapes are grown and the factors that influence resulting differences in wine flavor. There is a vast amount of important information in this section that we will apply to all subsequent topics in this course.

After studying this section, a student should be able to:

- Utilize the "Factors of Production" list for every region or subject discussed in this course to better understand the most vital aspects
- Adopt cause-and-effect analysis to consider how all of the factors act as causes leading to specific effects in the style and quality of finished wines

Viticulture

Viticulture is the art — and science — of vine growing. Many factors determine where vines can be grown to produce grapes suitable for fine wine. Moreover, specific viticultural conditions and practices will affect the character and quality of finished wines. Some of these factors are associated with natural conditions, whereas others are human in origin, resulting from decisions made by growers in vineyards. The list of factors below can be used as a guide or outline. We will address each of these factors to understand their role and then apply them to the regions we study.

Factors of Production:

- Location/geography
- Climate
- Topography/aspect
- Soil
- Grape varieties planted
- Viticultural practices
- Vinification practices (in the next section)
- Harvest
- Yearly weather/vintage variation
- Terroir
- Regional Wine Laws which can influence all of these factors
- Historical background historical influences that shape a wine region, which can be among the most important factors

Location/Geography

The first factor to discuss is where the vineyard — or potential vineyard — is located.

- Site Selection: Where exactly will the grapes be grown?

- Goals: What are the specific goals of the winemaker or owner of the winery? Is it large scale production or a small boutique winery?

The decision of where to plant the grapes will be directly influenced by the initial goals, in concert with regional wine laws and financial considerations.



- Regional Laws: As we will discover in future sections of this course, wine laws are very specific to each country, region, and sub-region, with differences that can hold important implications. Some wine regions are extremely strict regarding which vines can be planted in particular places, whereas others are more open and flexible.

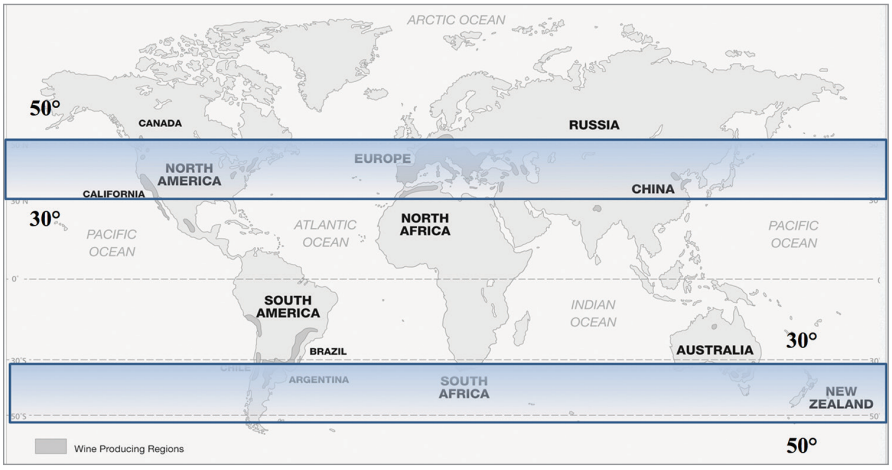
- Financial Considerations: Planting a vineyard or starting a winery costs a good deal of money regardless of location, yet costs vary dramatically from region to region. Prime real estate in the Napa Valley or Burgundy would provide a new enterprise with strong initial credibility, but also would prove to be extremely expensive. By contrast, establishing a vineyard and winery in a less famous region could make for a slower start in terms of reputation, but involve much lower land costs.

Climate

The climate of a particular region directly determines whether grapes can be grown at all and strongly influences which varieties can thrive. Most importantly climate determines wine style.

- 30°– 50° Most grapes varieties thrive in temperate climates. Most vine growing occurs between the 30º and 50º latitudes in the Northern and Southern hemispheres. However, grapes can be grown in extreme climates above and below these latitudes lines can be accomplished.

Latitudinal Zones of Wine Growing



- Describing Climate — Large to Small When discussing climate, we can begin by looking at the "big picture," or the macroclimate, of an entire wine region. As we consider a particular vineyard, we would be looking at the mesoclimate. Once we get down to a single row vines or even a specific vine, we are describing a microclimate.

- Climate Definitions There are many patterns of weather and climate across the globe, but when considering viticultural areas, several specific climate types are important.

  - Continental A climate characterized by strong annual variation in temperature due to the lack of proximity to significant bodies of water with moderating influences. Hotter summers than in maritime climates, often with cold winter temperatures that can be extreme.

  - Maritime A climate influenced by a large body of water such as a sea or ocean. Marked by mild temperatures that can fluctuate from year to year, causing vintage variation.

  - Mediterranean Summers are hot and dry, aside from the immediate coastal areas. Along the coasts, summers are mild due to proximity to cold water currents, but storms can also result as a consequence.

  - High Desert Summers are generally hot and dry. Daytime temperatures are high, but dramatic drops are often experienced overnight.

- Temperature Definitions We can further define or describe the above climate definitions as:
  - Cool
  - Moderate
  - Warm
  - Hot

Important Factors That Affect Climate

Once you know the basic definitions of climate types, it is important know various factors that can influence or alter them.

- Diurnal Shifts The difference between average daytime high and nighttime low temperatures. This can affect the ripening of grapes and the balancing of acidity and sugar.

- Sunshine Hours The number of sunshine hours a vineyard or wine region receives in a given vintage year or growing season

- Threats Forces of nature can be potential threats to vineyard health and viability.

  - Frost or Freeze Can be a hazard in both spring and fall. Winter freezing can cause damage if severe and can kill vines outright. In the spring, frost can damage or freeze and kill delicate buds or flowers, preventing the vine from setting grape clusters.

  - Hail Can shatter grapes on the vine

  - Strong Winds Can blow vines over or blow buds and flowers off the vine, preventing grapes from growing

Climate Moderators

These can have a strong influence on climate by warming or cooling it.

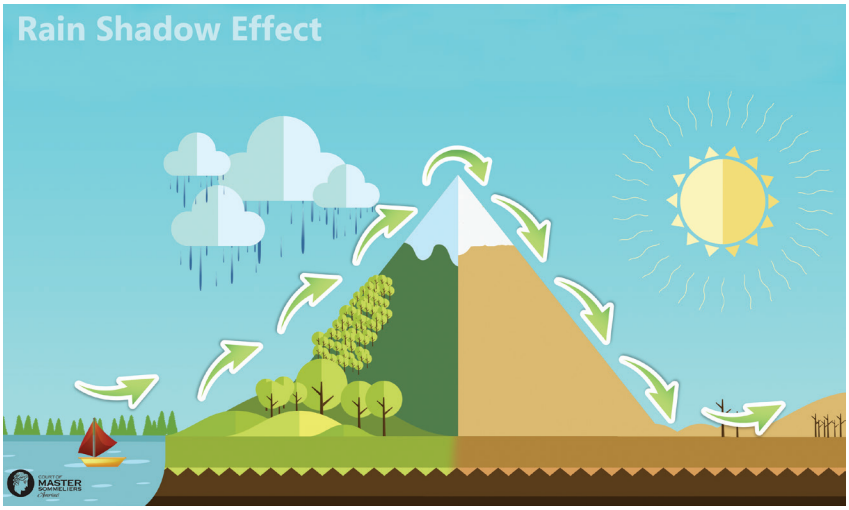
- Bodies of Water Can warm or cool a wine region
  - Rivers
  - Lakes
  - Oceans

• Mountains Can protect a wine region from surrounding weather or climate influences

– Rain Shadow A dry area on one side of a mountain opposite the wind, rain, and generally poor weather. There are many important wine regions in the world that exist in rain shadows.

Which wine regions of the world have climates that are heavily influenced by one of these factors?

You will find many examples of rain shadows in the wine regions of the world. Note them here when you find them!



– Altitude/Elevation With every 100 meters of rise in elevation, temperatures drop by approximately one degree. In warm to hot wine-growing regions, increased elevation provides cooler temperatures that help to slow grape ripening and produce more balanced wines.

– Wind Depending on the direction from which winds originate, wind can cool a growing region (if originating from over cool ocean waters, for example) or lend warmth and drier air (if originating from a desert), helping prevent mold or rot.

How do each of these factors affect how vines grow and how grapes ripen?

Topography

The surface features of a given area can have strong influences on local climate and viticulture. Some topographic elements having a strong influence on viticulture include:

• Local Elevation/Altitude As mentioned above, temperature decreases as elevation increases.

• Is the vineyard located on the slope of a hillside or on a flat valley floor?

– Steeper Hillsides Provide better drainage of soil, are often less fertile due to erosion and lower chance of frost, as cool air will fall from the upper slopes. They are harder to maintain during the growing season, and to harvest.

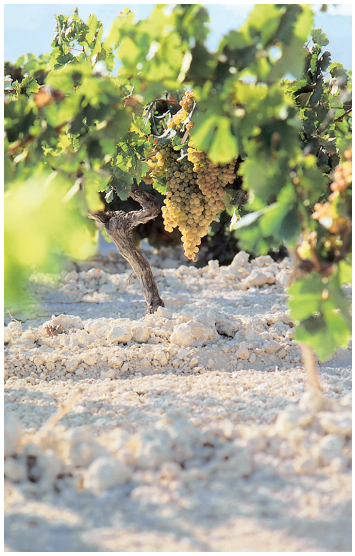
– Valley Floors Pool air, are susceptable to frost and are sometimes have overly fertile soil.

- Aspect Slopes facing the sun during much of the day are the warmest, whereas those facing away from the sun are the coolest. Either can be desirable depending on the climate of the region and on whether ripening or retention of acidity is most desired

- Proximity to Water How close is a vineyard to lakes, oceans or rivers? (see page 9, "Climate Moderators")

Soil Type

There are many different soil types in the world's wine regions. Each has different properties that affect water supply for vine growth. Vines can grow in many soil types. Many of the world's greatest vineyards are planted on very poor or infertile soils.



- Some of the important properties of various soil types are:
  - Drainage of water
  - Water retention
  - Sun reflection

- Here are examples of different soil types. As you learn about the various wine regions of the world, note which wine regions are known for specific soil types and which grapes grow best in them.
  - Granite
  - Limestone/chalk
  - Marl
  - Schist
  - Clay
  - Sand
  - Silt
  - Gravel

Grapes: A Look from the Inside Out

Let's take a closer look at a grape, its parts, and what each contributes to wine.

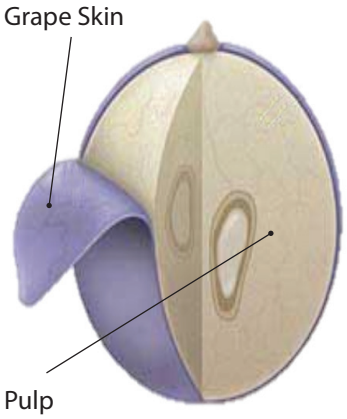
- Skins

  - Tannins Lend structure, but also astringency in red wines

  - Color Provides an intensity and hue from molecules located in the skins of grapes that are different for each grape variety

  - Flavor The most important aromas and flavors are located in the skins of the grapes and are unique to each variety.

- Pulp
  - Water Majority resides in the pulp of grapes
  - Sugar Increases as grapes ripen
  - Acids Decrease as grapes ripen
  - Seeds/Pips Can produce bitter flavors if pressed



Grape Varieties: Defining Differences

- Grapes are the fruit of a vining plant of the genus Vitis.

- In the world of wine there are quite a few species of vining plants that produce grapes for wine production including:
  - Vitis labrusca
  - Vitis riparia
  - Vitis vinifera our focus

- Vitis Vinifera
  - A species native to the Mediterranean, Europe and southwestern Asia
  - The most common species for quality grape production
  - Upwards of 10,000 varieties
  - Examples:
    - White grapes: Chardonnay, Riesling, Sauvignon Blanc
    - Red grapes: Cabernet Sauvignon, Merlot, Syrah, Pinot Noir

Grape Variety: Matching Soil and Climate

- When choosing a grape variety for a specific vineyard or region there are many factors to consider. First and foremost is local wine law. What is planted and where is often dictated by local regulations.

- Other factors include:
  - Climate Compatibility Is the particular grape variety well-suited to the vineyard locale? Will it ripen? Or, conversely, is the climate too warm to produce quality grapes with natural balance?

  - Soil Compatibility Will the particular grape variety grow well in the soil type of the vineyard?

Viticultural Propagation

This is a fancy term for grape vine breeding. What follows may seem pretty technical, but these are helpful common terms for understanding vine production, certain wine types, and wine laws.

- Hybrids Are vines of two or more different species combined to produce a new variety
  - Example: Vitis vinifera x Vitis labrusca
  - Student Activity: Research an example of a hybrid.

- Crosses Are vines of the same species combined to create a new variety
  - Example: Vitis vinifera x Vitis vinifera
  - Student Activity: Research an example of a crossing.

- Clones Are identical genetic reproductions of a single vine
  - Student Activity: Research an example of a common grape variety that is known for having many clones.

Why do hybrids, crosses, and clones exist?

Why are they created?

Cause and Effect

Climate, Ripeness, and Their Connection to Wine Style

- Cool Climate
  - Grapes ripen slowly and moderately
  - Less sugar is produced
  - Acidity remains high
  - Less alcohol potential
  - Flavors are more tart and lean, less ripe and juicy

- Warm Climate
  - Grapes ripen fully
  - More sugar is produced
  - Acidity is lower
  - Higher alcohol potential
  - Flavors are more ripe, lush and juicy

In the Vineyard

Viticultural Practices

When we look at all the factors that affect vine growing, or viticulture, we need to look at specific influences that humans exert in the vineyard which affect how and where vines are planted to create balance with the topography and soil, and to maximize or even minimize growth.



- Vineyard Architecture How the vines in the vineyard are laid out

  - Vine Spacing How the vines are spaced out in rows. Some are planted far apart and some are planted very close together.

  - Vine Training Vines will continue to grow unless a vineyard manager controls the growth and basically tells the vine what to do. Vines are trained to grow in specific ways to control the vine's production of grapes, leaves, and wood.

- Yield Vineyard managers can control how much fruit the vine produces. This is measured in a few ways:
  - Tons of grapes per acre
  - Hectoliters per hectare
  - Pounds or kilos per vine

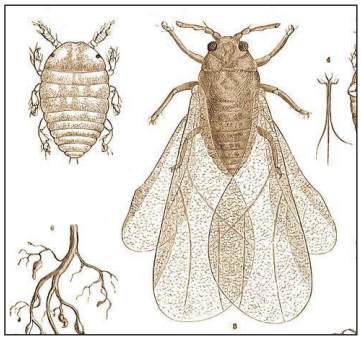
The goal is to create balance in the vineyard.

Green Harvest
A crop thinning method of dropping or cutting unripe grape bunches off the vine before harvest to decrease yields and allow the vine to focus its energy and nutrients on fewer, higher quality bunches.



Vinyard Management

There are many important aspects of managing a vineyard; here are a few key elements.



Phylloxera louse life stages.



Leaf damage from Phylloxera.

- Canopy Management Managing the growth of the vine's leaves, often to shade or expose the grape bunches or to determine the flow of air through vine rows.

- Irrigation Providing the vine with water through an array of methods. Whether this practice is allowed or not is governed by law in many European wine regions.

- Pests and Vine Disease There are many insects that live in vineyards and on vines. Some are beneficial, but some cause harm, inhibiting the vine's growth and its ability to produce grapes.

Phylloxera
This is a vine louse that destroyed a third of the world's vines beginning in the late 1800s. It was one of the greatest threats to wine production in history.

- Fertilizers The use of chemicals or organic matter to enhance the fertility of the soil and provide nutrients to the vines.

- Anti-Fungal Treatments Applications that are generally sprayed to ward off mildew and rot that can seriously compromise fruit quality.

Harvest

When and how grapes are picked from the vine is one of many factors that determine wine style and quality.

- Timing of Picking When exactly are the grapes picked?

  – Grape Maturity How ripe are the grapes at harvest? There are a few ways to determine ripeness depending on the grape variety and the goal of the winemaker or winery.

    – Sugar Ripeness Amount of sugar in the grapes

    – Physiological Ripeness Ripeness of the grape bunches in their totality, including stems and seeds

    – Tannin Ripeness Ripeness specifically associated with tannins in the grape skins and seeds

- Number of Vineyard Passes Many winemakers or vineyard managers will make multiple passes through a vineyard, picking only the ripe bunches and leaving behind the underripe grapes until they are ready.

- Method of Harvest How the grapes are harvested may be determined by the scale of production.

  – Hand Harvesting vs. Mechanical Harvesting Hand harvesting is labor-intensive and slower than harvesting by machine but can allows greater selectivity regarding the choice of grape bunches. Mechanical harvesting can be quite economical and also rapid, which can enhance quality if a crop is being grown in a hot region or is being threatened by an incoming storm. However, harvesting by means of machines that shake vines to release fruit is a much more indiscriminate technique, often resulting in grapes arriving at the winery along with leaves, pests and even animals.



  – Bin Size: Small vs. Large Harvesting by hand into small bins enables careful selection of what goes to the winery. Smaller bin size also limits the number of clusters that can be contained and, by extension, the weight of the fruit. In larger bins, greater weight can result in bursting berries or clusters at the bottom of the bin, compromising quality and conceivably beginning the fermentation process prematurely.



Photo: Kevin Judd, Greywacke Winery

Yearly Weather and Vintage Variation

Although growing grapes to make wine may be more glamorous than growing lettuce, it is important to remember that grape growing is still just a type of farming. Every growing season or vintage produces a different crop, depending upon climate and other factors associated with nature. Although viticulturists and winemakers strive for consistency, it remains true that nature directly influences the style of the wines produced from year to year, often with significant variations in quality. This is why vintages are often rated and discussed. It is important to learn which vintages are most highly regarded — or problematic — in key regions.

How do you define terroir? Put it in your own words.

Think about wines you have tasted that have a unique character or sense of place.

How did the wine get that character?

Is it definable?

Terroir

Terroir is a French concept that does not have a direct English translation. Terroir is the entire set of factors that influence the development of the vine's fruit and the characteristics the fruit will show once vinified.

Regional Wine Law

As we will discover in upcoming sections, many wine regions legislate which grapes can be grown. Additionally, the government or wine law may dictate how the grapes can be grown and even when they are picked.

Historical Background

Special circumstances or important historical occurrences have partially determined which grapes are grown in certain regions, as well as the singular styles of wines for which they have become known.



La Montagne de Corton

Viticulture

Quiz Questions

Which of the following terms refers to the climate of a single vineyard site?
a. Mesoclimate
b. Macroclimate
c. Microclimate
d. Zone

The majority of the world's vineyards are planted:
a. Between the 30° and 50° latitude lines
b. As far north and as far south as possible
c. As close to the equator as possible
d. In wind-prone areas

Which of these is not a moderator that can help warm a microclimate?
a. Wind
b. Rivers
c. Soil
d. Vine training system

Which type of climate is defined by its proximity to a large body of water?
a. Maritime
b. Mediterranean
c. Continental
d. High Desert

What is phylloxera?
a. A soil type
b. A vine louse that destroyed many of the world's vineyards in the mid-to-late 1800s
c. A hybrid
d. A species of vines

Name three positive effects of wind in a vineyard.

What is a rain shadow?

Name three wine regions of the world that are affected by rain shadows. (Come back to this question as we progress through the wine regions of the world.)

Most quality grape varieties we see today are made from which vine species?

Explain why "green harvesting" is practiced.

Vinification
The Art of Winemaking

Learning Points

After studying this section, a student should be able to:

- Know the steps and differences involved in making white, red, and rosé wines
- Understand factors winemakers consider when making decisions affecting the style and quality of finished wines
- Recognize key terms with regard to winemaking
- Understand different techniques employed in red, white ,and rosé winemaking

Keep in mind:

- Utilizing the "Factors of Production" list for every region or subject discussed in this course to better understand the most vital aspects
- Adopting cause-and-effect analysis to consider how all of the factors act as causes leading to specific effects in the style and quality of finished wines



Vinification

Once the grapes arrive at the winery the process of vinification begins. The process involves decisions and practices made in the winery by the winemaker that affect quality and style.

Vinification Factors

- Pre-Fermentation Factors
- Fermentation
- Types of Winemaking
  - White, Rosé and Red Wine
  - Sparkling Wine
  - Sweet and Fortified Wine
- Fermentation Vessels
- Aging and Maturation
- Important Vinification Terms
- Preparation for Bottling
- Packaging

Pre-Fermentation Factors

- Sorting When the grapes arrive at the winery, they are sorted to remove excess leaves, branches, damaged fruit, or other unwanted items that came from the vineyard. How the grapes were picked directly affects what comes into the winery. Sorting can be done by hand, either cluster by cluster or by selecting single grapes from clusters.



- De-stemming Involves separating the stems from the berries in the clusters. Winemakers can elect to de-stem or not as the retention of stems can alter the flavor and style of finished wines.



- Crushing Often crushing and de-stemming are performed in a single mechanized stage in the vinification process. The stems are removed and the grapes are crushed to release their juice, thus beginning fermentation. Optimally, this is a gentle process, because too much force can release unwanted bitterness and tannins from the grapes.

- Fermentation Definition: Fermentation is a chemical reaction whereby sugar from ripe grape juice plus yeast either ambient in the air or inoculated by the winemaker yields (produces) alcohol and carbon dioxide (CO_2), as well as flavors, aromas, and heat.

Fermentation

Sugar from ripe grape juice
+
Yeast (ambient or inoculated)
▼
Alcohol
CO_2
Flavors and aromas
Heat

Winemaking Steps

White Wine	Rosé	Red Wine
Harvest (red or white grapes)	Harvest (red grapes)	Harvest (red grapes)
De-stem or whole bunch	De-stem or whole bunch	•Crush •De-stem or whole bunch •Skins and seeds macerated with juice (must)
Crush	Crush	Fermentation
Press juice from skins (must) •Skin contact	Press juice from skins (must) •Skin contact limited	Press juice from skins
Fermentation	Fermentation	Aging? •None •Barrel (type and size)
Aging? •None •Lees contact •Barrel (type and size)	Aging? •None •Barrel (type and size)	Fine and/or filter
Fine and/or filter Bottle	Fine and/or filter Bottle	Bottle

Fermentation Vessel

The size, shape, and material of the container used for fermentation can directly affect the aroma, flavor, and texture of the final wine.

- Size and Shape of Vessel
  - Large: 1000+ liters called a foudre
  - Small: 225 liter called a barrique
  - Egg-shaped

- Vessel Material
  - Wood
  - Stainless-steel
  - Concrete

How does the use of each of these vessels affect the aroma, flavor, and texture of the final wine?







Aging and Maturation

When aging a wine after fermentation, winemakers have options that can enable them to alter the flavors and style in accordance with their objectives.

- Barrel Aging What does it do?
  - Evaporation Of excess water
  - Oxidation Causes color change in wine
    - White wines darken from pale yellow to gold
    - Red wines tend to lighten in color
  - Textural Changes Aging in oak softens the wine
  - Flavors Changes Flavors are imparted to the wine from the barrel
    - Vanilla
    - Oak
    - Toast
    - Spice (cinnamon, clove, allspice)
    - Coconut





Other Considerations Regarding Barrel Aging

- How Old is the Barrel?
  - New-oak barrels (or "first-use" barrels) will impart the most flavor to a wine.
  - Older (or "used") oak barrels will impart little flavor to the wine, eventually becoming essentially neutral and no longer contributing flavor or aroma by their fourth to sixth year of use. However, older barrels that are no longer imparting wood-based aromas or flavors can continue to contribute oxidative flavor and textural effects to the wine.

- Financial Considerations
  - New-oak barrels are extremely expensive. Does the style of wine to which the winemaker aspires require use of a high percentage of new-oak barrels? And if so, does the winery have the wherewithal to finance new-oak barrels for the entire production each year?
  - Alternatives such as oak chips or planks can be used for inexpensive wines that cannot support the cost of expensive barrels

- Size of the Barrel
  - Large Barrels Will impart less flavor to the wine, because a lower percentage of liquid is in contact with the barrel's wood
  - Small Barrels Will impart more flavor to the wine because a higher percentage of liquid is in contact with the barrel

How long will the wine be aged in the barrel?

What are the effects of short-term barrel aging vs. long-term barrel aging for white wines and red wines?

The flavor imparted by an oak barrel is dependent on the method of preparation, the level of toast, and the type of wood.

- Types of Oak Different types of oak impart unique flavors depending on the place of origin and climate in which the oak trees were grown
  – American Oak Often has bold, more intense flavors of vanilla, baking spices, dill, and coconut
  – French Oak Often subtler aromas of vanilla, toast, and spice
  – Other Types of Oak Slavonian (from northeastern Croatia), Hungarian



- Toast Level
  – Wine barrels are toasted on the inside during the coopering process to light, medium, or heavy levels, depending on the winemaker's specification. Increased toast level increases the amount of vanillin, spice and toast flavors that can be imparted to the wine. Light toast promotes the most extraction of wood tannin.

Important Vinification Terms to Know

What grape varieties or wines that you've you tasted show aromas and flavors of malolactic fermentation?

- Malolactic Fermentation Tart malic acid, which occurs naturally in grapes, are converted to softer-tasting lactic acid. "Malo" or "ML" is a process that occurs naturally in both red and white wines. No flavor is imparted to red wines, but ML can impart buttery or buttered popcorn flavors and a creamy texture to white wines.

What flavors and aromas are produced from carbonic maceration?

- Carbonic Maceration Tanks filled with whole berries are blanketed under CO_2 gas. Grapes begin to ferment from the inside (intracellular fermentation). Berries at the bottom of the tank are crushed and ferment normally. Unique aromas and flavors are produced. This technique is historically associated most closely with the Beaujolais region of Burgundy, France.

List grape varieties, regions, or styles of wine that employ lees contact.

- Lees Contact A winemaking decision to leave white and sparkling wines in contact with the yeasts that produced the fermentation. Over time autolysis occurs. This is when yeast cells die and release flavor components into the wine, giving additional richness, creaminess, and texture.

  Lees contact is often used in cool-climate growing regions for the purpose of deriving more expressive aromas and flavors from the grape varieties that are rather subtle in these respects. After fermentation, yeast cells expire and settle to the bottom of the tank or barrel. This accumulated material is known as lees. When wine is left in contact with the lees for an extended period of time, the process is called "sur lie aging." The decomposing yeast cells impart additional aromas and flavors to the wine with which they are in contact. These aromas can include:

  – Bread dough
  – Yeast
  – Toast
  – Subtle white flowers
  – Nuts (blanched almonds, pine nuts, peanut shells)

- Must Adjustments Must is unfermented grape juice. Depending on the climate, grape must may require adjustment to create balance in the juice and—consequently—the finished wine.
  – Chaptalization The addition of sugar to must to increase the final alcohol content of the wine
  – Acidification The addition of tartaric acid to increase the acidity of the must to achieve improved balance in the resulting wine

What climates, regions or styles of wine would use or need chaptalization vs. acidification?

Preparation for Bottling

Once the wine is fermented and aged, it needs to be prepared for bottling.

- Fining Utilized to clarify the wine for attractiveness. This can be done by cold stabilization — a process that causes tartrate crystals to precipitate out of the wine at a very low temperature (25ºF).

- Filtration The wine is passed through a series of filters to extract yeasts and other microbes, providing stability and assuring that the wine does not re-ferment.

- Packaging Wine can be packaged in many different types of containers, such as:
  – Bottle
  – Tetra Pak©
  – Keg
  – Can

- Closures Most fine wines are sold in bottles, and wineries have several closure options, including:
  – Cork and the many of variations of them
  – Screw cap
  – Glass stopper or Vino-Lok©

- Capsules and Labels Bottles are finished off with labels to identify the wines and also to enhance attractiveness and increase sales.

Make a note!
List various containers for wine you have seen in your market.

What other types of corks or closures have you seen?

Vinification

Quiz Questions

American oak barrels are generally characterized by more intense aromas of coconut and vanilla than French oak barrels.
a. True
b. False

Vinification is defined as:
a. Activities and decisions made in the vineyard
b. Dealing with pests
c. Organic farming
d. Activities and decisions occurring in the winery

Which of the following does not potentially add flavor to wine?
a. Oak aging
b. Malolactic fermentation
c. Lees contact
d. Stainless-steel vinification

What process involves intracellular fermentation of whole berries, in which sugars inside grapes are converted to alcohol in the absence of yeast?
a. Alcoholic fermentation
b. Carbonic maceration
c. Cold stabilization
d. Malolactic fermentation

In the process of fermentation, yeasts metabolize grape sugars and produce:

1.

2.

3.

Name three aromas and flavors associated with sur lie aging.

What wine region is most associated with the use of carbonic maceration?

Why is sorting grapes an important part of the vinification process?

The Deductive Tasting Method

Learning Points

Learning the Deductive Tasting Method is one of the most important parts of the Introductory Course. Students are given the opportunity to practice with instructors and fellow students over the course of six tastings in two days. We focus on classic wines from classic wine regions of the world. The Deductive Tasting Method will be put into practice throughout the course.

After studying this section, a student should be able to:

- Discuss the importance of using a consistent tasting technique
- Describe the necessary components needed for a successful tasting environment
- Describe and demonstrate the proper way to hold a wine glass
- Describe the ideal setting for evaluating a wine
- Describe and demonstrate effective techniques of smelling a wine to evaluate its "nose" or aromas
- Describe and demonstrate the most effective way of tasting a wine

Why should you use this method?

The Deductive Tasting Method requires that you taste wine with purpose and pay attention to what is being tasted. This will help develop your olfactory senses and your taste memory.

When tasting classic wines, this method will help you

- Form valuable taste references
- Improve your palate and your ability to taste (Tasting)
- Improve your ability to describe and sell wine (Beverage Service and Food and Wine Pairing)
- Help you understand classic and new wine styles and types
- Improve your knowledge of world wines and help connect which regions grow which grapes (Theory)
- Learn cause and effect or how and why a specific wine comes to taste as it does

How to Learn the CMS Deductive Tasting Method

- Master the vocabulary and format used to describe wine
- Refer to the Court of Master Sommeliers Deductive Tasting Language Chart to aid you in each tasting
- Record your impressions of each wine. These notes will help you later when referencing the wines you have tasted in this class.

The Five Criteria of Deductive Tasting

The Deductive Tasting Method is a two-step process. First, we evaluate a wine with our senses; second, we reach a conclusion as to the wine's identity based upon a reasoned deduction of our sensory evaluation.

Sensory Evaluation

1. Sight What the wine looks like
2. Nose What the wine smells like
3. Palate What the wine tastes like

Theoretical Deduction

4. Initial Conclusion Narrowing down what the wine might be, based on the sensory evaluation
5. Final Conclusion The final answer!

Evaluating the Sight of a Wine (What a Wine Looks Like)

- Tilt the glass away from you at a 45° angle
- Use a white background to clearly see details
- Evaluate in the best light possible (daylight if available)
- Hold the glass by the stem — not by the bowl
- Use a clean, well-polished glass



The process of evaluating and describing what the wine looks like is a multi-step process. Although it can be done fairly quickly, you need to assess why the wine looks the way it does. What happened in the vineyard or in the winery to make it appear one way rather than a different way?

Steps in Evaluating the Sight of Wine

1. Clarity/Visible Sediment
   - Is the wine clear or does it contain any solid matter?
   - Solids in wine often have to do with winemaking techniques or the age of the wine.
     - Winemaking Technique
       - Has the wine been filtered before bottling? Filtering will remove solids.
     - Age
       - Aged wines can precipitate sediment over time.
       - Youthful, highly extracted wines may also contain sediment, but young wines often have no sediment.

   - Scale These are the words we use to describe the clarity of a wine
     - Clear / Hazy / Turbid

We want to use the ENTIRE Deductive Tasting Method to arrive at the best possible conclusion.

Sediment and Particles in Wine

Sediment in Red Wines
- Color pigment and tannin precipitate or fall out as red wines age.
  - The presence of sediment is a primary reason to decant aged red wines.
- Sediment also can be found in young unfiltered red wines

White Wines Can Have Sediment as Well!
- Visible tartrates
  - Tartaric acid crystals sometimes fall out of solution and rest at the bottom of the bottle. They are perfectly safe to consume and are part of the natural process of winemaking.
- Tartrates are often removed before bottling by one of two methods:
  - Filtration
  - Cold stabilization

2. Concentration of Color
The intensity or depth of the wine's color

White Wines
- Color concentration can be affected by the following factors:
  - Age of the Wine
    - Young white wines are light and bright in color.
    - White wines deepen in color with age, turning gold, then amber, and eventually brown.
  - Oxidation
    - Barrel use in fermentation or aging: As wine ages in the barrel, it is exposed to oxygen through the pores of the wood staves, oxidizing the wine and deepening the color.
    - Age: Over time, wines become exposed to small amounts of air in the bottle.

Red Wines

- Color concentration can be affected by the following factors:
  - Grape Variety
    - Each grape variety is unique in the amount of color it can give to a wine. Some grapes produce naturally dark-colored wines, whereas others produce very light-colored wines.
  - Color Extraction
    - When grapes are vinified into wine, the winemaker has a hand in how much color is extracted from the grapes.
  - Age
    - Red wines lighten in color as they age. They often appear dull and have a tendency to brown.

- Scale These are the words we use to describe the concentration of color in a wine:
  - Pale / Medium / Deep

3. Color
The color of a wine can give clues as to:

- Age Although aged wines tend to be darker in hue than young ones, this can be tricky since some grape varieties have natural colors that may look aged even when youthful.
- Storage Conditions Has the wine oxidized or turned darker due to being in a warm environment?
- Possibly Grape Variety Some grape varieties produce wines with a distinct color.

As a general rule, white and rosé wines grow darker with age, whereas red wines grow lighter.

Color Scale for White Wine
These are the words we use to describe white wine color:



Straw Yellow Gold Amber

Color Scale for Red Wine
These are the words we use to describe red wine color:



Purple Ruby Garnet

4. Secondary Color and Hues
In addition to evaluating the principal color of a wine look for secondary colors. These can give an indication of age, climate and grape variety.

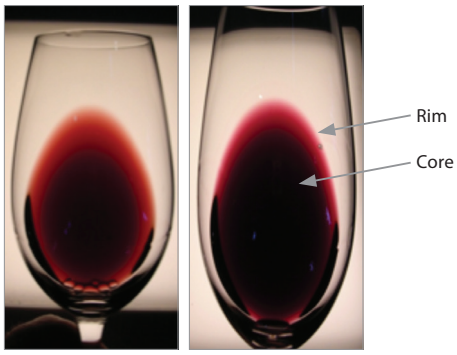
- In white wines, secondary colors to look for include:
  - Silver
  - Green
  - Copper (brassy tones)

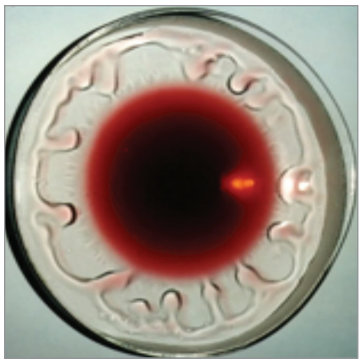
- In red wines, secondary colors to look for include:
  - Ruby
  - Garnet
  - Orange
  - Brown
  - Blue

Cause and Effect:
Think about wines you have tried that have had these secondary colors. What conditions might have caused them?

5. Rim Variation
This is the color difference between the wine at its core and the wine at its edge.

- Rim variation often indicates age. The older the wine, the more variation there is likely to be. Youthful red wines may also show a slight rim variation, with bright pink, almost fuchsia-like hues at the edge.





6. Color Extract and Staining
   - Intense extraction of color or staining of color on the glass can occur as a natural by-product of:
     – A warm climate
     – Highly pigmented grape varieties
   - Intense extraction also can occur due to choices made by the winemaker during vinification.

   - Scale These are the words we use to describe extraction and staining in wine:
     – None / Light / Medium / Heavy
     You only should mention extraction if you see evidence of it in the glass.



7. Tearing
   - Tears, sometimes called "legs," are created by alcohol and/or residual sugar in the wine reacting with oxygen in the air to create surface tension or tears on the glass.

     – Thin vs. Thick Tears
       – Thin tears that dissipate quickly or sheet on the glass rather than retaining their shape indicate a lower level of alcohol.
       – Thick, slow-moving tears often indicate a higher level of alcohol.
       – Thick tears do not necessarily indicate a heavy or especially viscous wine.

     – The shape and cleanliness of the glass can affect the perception of tears

   - Scale These are the words we use to describe tearing in wine:
     – Light / Medium / Heavy

8. Gas Bubbles
   - Some wines may retain a small amount of carbon dioxide (CO_2) when bottled, giving the wine a slight impression of spritz on the palate. Excess CO_2 can indicate a flawed bottle undergoing an unwanted secondary fermentation, but it is not necessarily a fault. It could be an indication that the wine was bottled very soon after fermentation at cool temperatures and/or bottled under screwcap.
     – Only mention gas if you actually see it in the wine.

Cause and Effect:
What would cause a wine to have heavy or light tears?

Evaluating the "Nose" or Aromas of Wine (What a Wine Smells Like)

Evaluating the aromas or smell of a wine is one of the most important aspects of the process. The human sense of smell accounts for 85% of our awareness of flavor, so while it may sound counterintuitive, wine tasting involves your nose even more than your mouth. The many aromas in a glass of wine are called the wine's "nose."



Smelling technique

- First swirl the wine in the glass while holding the stem; this helps release the aromas from the glass into the air
- Next, either take one deep sniff or a few short sniffs with your nose in the glass. Do not sniff too deeply or too rapidly; as doing so can cause your sense of smell to be overwhelmed or desensitized.
- Pause after each sniff to evaluate the aromas of the wine.

Steps in Evaluating the Nose of a Wine

1. Clean or Faulty Checking for problems with the wine

- The first step in evaluating a wine's nose is determining if the wine smells clean or faulty. Beware of the following possible flaws in the smell of a wine:

  - Trichloroanisole (TCA)/Corkiness
    - This chemical compound makes the wine smell like wet, moldy cardboard or musty old newspaper.
    - It can be caused by corks, barrels, or an entire winery that has been tainted with TCA.

  - Oxidation
    - Oxidized wines have more muted and dried-out aromas than fruit scents. They also can develop bitter flavors with continued exposure to air.
    - Oxidation is caused by age or by poor storage conditions. A wine that has been aged too long or stored poorly will undergo a breakdown of color, flavor, and aroma due to excessive exposure to oxygen.

- Volatile Acidity (VA)
  – This is a catch-all term referring to the presence of acetic acid giving a wine vinegary aromas.
  – Acetic acid is the main component in vinegar. It is produced in wine when the bacteria acetobacter (or certain wild yeasts) and oxygen are present during the fermentation process.

- Ethyl Acetate (EA)
  – EA forms from the reaction of ethanol and acetic acid. It imparts a distinct aroma of acetone or nail-polish remover

- Excess Sulfur Dioxide (SO_2)
  – SO_2 is commonly used during the winemaking process. Too much, however, can leave a wine smelling of a struck matchstick or of wet wool.

- Brettanomyces
  – This is a yeast growth that gives a wine aromas ranging from smoke, cloves, and spice to Band-Aids and manure.

- Hydrogen Sulfide (H_2S)
  – H_2S is a consequence of inadequate yeast nutrition during fermentation and can give wines unpleasant aromas of onion, rubber, or rotten eggs.

2. Intensity of Aromas How intense are the aromas of the wine upon first sniff? Are they powerful or subtle?

- Scale These are the words we use to describe aromatic intensity: Low (delicate) / Moderate / High (powerful)

3. Age Assessment How old is the wine? These are the words and descriptors we use when describing the age of a wine:

- Youthful Young, bright, primary fresh fruit aromas
- Developing Beginning to show signs of age
- Vinous Signs of age and oxidation

4. Describing Fruit Aromas in Wine These are the words we use to describe fruit aromas in wine:

- White Wine
  - Citrus Fruit Lemon, lime, orange, grapefruit, tangerine
  - Apple/Pear Green, red, or yellow apples and pears
  - Stone/Pit Fruit Peach, nectarine, apricot
  - Tropical Fruit Pineapple, mango, papaya, passion fruit
  - Melon Cantaloupe, honeydew

- Red Wine
  - Red Fruit Cherry, raspberry, red plum, cranberry, strawberry pomegranate
  - Black Fruit Blackberry, black cherry, black plum, blackcurrant
  - Blue Fruit Blueberry, boysenberry



5. Fruit Character What is the condition or character of the fruit you smell? These are just some of the words we can use to describe the fruit of the wine's nose:

- Ripe
- Fresh
- Tart
- Baked
- Stewed/Cooked
- Dried
- Desiccated
- Bruised
- Jammy/Preserves

Hint:
Start with recognizing the larger category of fruit first and then move to specific fruits. As an example, recognize citrus before specifying lemons or limes.

Reference the CMS Deductive Tasting Language Chart in the back of this book to spur your memory.

Examples of Fruit Character:

Baked apple vs. fresh green apple

Fresh strawberries vs. strawberry jam

Dried cherries vs. fresh cherries

Lemon peel and juice vs. sweet lemon curd

6. Non-Fruit Character There often is much more to a wine's aroma than just fruit character. Below is a small sample of aromas that are not part of the fruit, earth, or oak categories. Again, organize your thoughts by identifying the broader category before getting specific.

Be sure to use the Deductive Tasting Chart for reference.

- Floral Aromas
  – White Wines Yellow (daisy), white (baby's breath, jasmine, honeysuckle)
  – Red Wines Red (roses), purple (lilac, violet)
  – Other Descriptors Fresh, dried

- Vegetal Aromas
  – White Wines Bell pepper, jalapeño pepper
  – Red Wines Bell pepper, jalapeño pepper

- Herbal or Green Aromas
  – White Wines Freshly cut grass
  – Red Wines Oregano, sage, thyme

- Spices
  – White Wines White peppercorn
  – Red Wines Black peppercorn

- Animal or Barnyard

- Petrol Fuel, gasoline

- Fermentation Malolactic fermentation, carbonic maceration, lees contact

- Botrytis Honey, ginger, saffron, mushroom

- Leather, tobacco, and many, many more!



7. Earth and Mineral Character These are just some of the possible descriptors for earth and mineral character in a wine's nose:

- Earth Living earth
  – Forest floor
  – Compost
  – Mushroom/truffle
  – Potting soil
  – Freshly turned earth

- Mineral Non-living earth
  – Wet stone
  – Limestone
  – Chalk
  – Slate
  – Flint







8. Wood/Oak Oak, especially when heated over fire to form staves for a barrel, has a distinct aroma. Wine fermented and/or stored in oak has a different nose than wine that has never been in a barrel. It is important to be able to identify the aromas that come from oak before assessing more specific details such as the type of oak, the size and age of the barrels, and the amount of time the wine has spent in them.

These are some of the descriptors used to describe oak character:

- Cedar
- Toast
- Smoke
- Dried baking spices such as cinnamon, clove, allspice, and nutmeg
- Vanilla
- Dill
- Coconut
- Sawdust

Certain aromas (and flavors) can give an indication of the type and size of barrel used.

Large Barrel Less wine is in contact with the barrel; therefore little oaky flavor is imparted. However, older barrels that no longer impart wood-based aromas or flavors can continue to contribute oxidative notes and textural effects to the wine.	VS.	Small Barrel or Barrique More wine is in contact with the barrel imparting more wood-based aromas and flavors.
Older Oak Oak barrels lose the potency of flavor impact appreciably after each use. After the 4th to 6th year, the barrel is essentially deemed neutral but still has an impact with oxidative notes and textural effects.	VS.	New Oak New oak barrels (or "first-use" barrels) will impart the most pungent flavors to a wine such as: • Toast • Smoke • Baking spices • Vanilla
French Oak Tends to be subtle in aroma and flavor with notes of: • Vanilla bean • Dried baking spices • Cedar • Sawdust	VS.	American Oak Tends to be stronger in aroma and flavor with notes of: • Caramel • Vanilla extract • Dill/dried herbs • Coconut • Sawdust

Steps in Evaluating the Palate (How a Wine Tastes)

Remember cause and effect.

How to Taste a Wine for Evaluation

- Take a sip of the wine, about one ounce.
- Gargle! Swish! Cover your entire mouth with wine.
- Spit! Yes, spit it into a separate cup or designated vessel. This is important, especially when evaluating many wines in one sitting
- Focus on how the flavors evolve on your palate — especially in the wine's finish.

1. Evaluating and Describing Flavor Elements Using the same descriptors you used for the wine's nose, confirm and describe each of the following:

- Fruit flavors
- Fruit character
- Non-fruit flavors
- Earth
- Mineral
- Oak indicators
- Any new flavors that were not in the wine's nose
- Has the wine changed on the palate? If so, describe how!

2. Evaluating and Describing Structure and Other Elements on the Palate
Try to identify the following characteristics, using the suggested language.

- Sweetness/Dryness This describes the presence or lack of residual sugar in the wine.
  – How to describe:
  Bone Dry / Dry / Off-Dry / Medium-Sweet / Sweet / Lusciously Sweet

- Phenolic Bitterness (White Wines)
  – How to describe:
  Yes/No (Does the wine taste bitter?)

- Tannin (Red Wines)
  – Sensed as astringency or bitterness, tannin comes primarily from the skin and sometimes the seeds of the grape and is present in all red wines.
  – How to describe:
  Low / Medium - / Medium / Medium + / High

- Acidity
  – Focus on the salivary glands and the finish. Does the wine taste refreshing, or is it overly tart? Does it have enough acidity, or does it taste flabby and unfocused?
  – How to describe:
  Low / Medium - / Medium / Medium + / High

- Alcohol
  – Sensed as heat in the nose, throat, and chest
  – How to describe:
  Low / Medium - / Medium / Medium + / High

- Body
  – The feeling of weight on the palate
  – How to describe:
  Light / Medium / Full

- Texture
  – How to describe:
  Lean / Round / Creamy / Other Textures

- Balance
  – Do any of the above-listed elements dominate the others? If so, the wine may not be in proper balance.

- Length/Finish
  – How long do the wine's flavors stay on your palate after swallowing?
  – Do the flavors remain constant or do they change?
  – What is the quality of the finish — for example, tart, bitter, astringent, smooth, or silky?
  – How to describe:
  Short / Medium - / Medium / Medium + / Long

- Complexity
  – Refers to the number of aromas and flavors in the wine and how they react with each other
  – How to describe:
  Low / Medium - / Medium / Medium + / High

Theoretical Deduction

The Conclusion Deducing what the wine is. Here is where we take all the information we have gathered from our deductive reasoning and come to a logical conclusion.

How to Do This?

- Break it down into Initial and Final conclusions.
- Take evidence gained from the sight of the wine, its nose, and the impression it makes on your palate to form the best possible conclusion.
- Listen to yourself and use the process of deduction.
- Know markers for classic grape varieties and wine styles. (This comes with time.)
- Use benchmark wines tasted in the past as frames of taste reference. This is what we are going to do in this class.)

Initial Conclusion This is where you need to start making decisions, narrowing down the grape and where the wine comes from.

1. Possible Grape Varieties
   - Record and know the markers for classic grape varieties and styles in order to be able to identify them when you encounter them.
   - As you taste more wine and continue employing the Deductive Tasting Method, you will gain valuable experience.
   - Here are elements to look for to help you determine from which grape or grapes the wine was made:
     – The color of the wine
     – Telltale or typical aromas or flavors
     – Typical structural elements

2. Old World or New World? European or Old World wines often (but not always) exhibit different characteristics from New World wines. Although this dichotomy is certainly not foolproof, determining whether the wine comes from the Old or New World can be a useful when trying to reach an initial conclusion.
   - Why? Give reasons for why you think the wine comes from the Old or New World.
   - Giving reasons will help you remember what you have said throughout your deduction, thus helping you determine if you are on the right track toward your conclusion.
   - Do your reasons make sense based on your tasting descriptors?
   - Remember, It is all about cause and effect.

Old World Characteristics
- Dominance of earth and/or mineral character
- Dominance of non-fruit aromas and flavors
- The fruit is restrained compared to non-fruit and earth aromas and flavors
- The fruit becomes tart on the palate
- Non-fruit aromas and flavors become more apparent in the finish

New World Characteristics
- There is no dominant earth or mineral character
- Fruit aromas and flavors lead and dominate the non-fruit elements
- The fruit smells sweet and ripe, thus dominating the nose
- The fruit stays ripe or gets riper on the palate

3. Climate
- Did the grapes grow in a cool, moderate or warm climate?
- Why did you answer as you did? Give reasons.
- Do your reasons make sense based on your tasting descriptors?
- Again, remember cause and effect.

Cool Climate Characteristics
- Acidity is elevated for the grape variety
- Alcohol is more restrained
- The fruit smells and tastes somewhat tart
- The wine feels linear on the palate

Warm Climate Characteristics
- Acidity is restrained for the grape variety
- Alcohol is elevated
- The fruit seems ripe, maybe even jammy
- The wine feels round and lush on the palate

4. Possible Countries
- Classically, which regions or countries make wines like this?
- What are the logical options based on the grape varieties mentioned?

5. Age Range
- Is the wine 1 to 3 years old? 3 to 5 years? 5 to 10 years? More than 10 years old?
- Consider these elements in the wine when trying to answer that last question
  - Color
  - Rim variation
  - Youth vs. vinous aromas and flavors
  - Quality of texture and finish

Final Conclusions This is where you home in and give your final answer.
- Grape variety or blend
- Country
  - Region
  - Appellation
- Appellation quality level, if appropriate
  - Burgundy Village vs. 1er Cru vs. Grand Cru
  - German Riesling Kabinett vs. Spätlese vs. Auslese
  - Rioja Crianza vs. Reserva vs. Gran Reserva
- Vintage (be specific)
  - A final check of the color of the wine
  - Use theoretical knowledge of vintages
  - Add six months for Southern Hemisphere wines

Do all of these things add up and make sense with the wine you are tasting?

Key Clues:
For each wine pick a few of the most notable traits that make this wine different from similar wines.

This could be a combination of flavors, aromas and structural elements.

The Deductive Tasting Method

Quiz Questions

Tannin in wine:
a. Is sweet on the palate
b. Creates a mouth-watering sensation
c. Dries the palate out
d. Creates a burning sensation in the chest and throat

Acidity in wine:
a. Is sweet on the palate
b. Creates a mouth-watering sensation
c. Dries the palate out
d. Creates a burning sensation in the chest and throat

Which of the following descriptors potentially indicates oak use in a wine?
a. Apple/pear flavors
b. Leather
c. Wet rock
d. Clove and cinnamon

Sweetness in wine is due to:
a. The presence of sugar in the wine
b. Aromas of fruit
c. Aromas of earth
d. Elevated acidity

TCA or tricholoranisol in wine is due to:
a. Aging wine, which produces TCA
b. The cork being infected with TCA
c. Screwcaps
d. Extract of color

A wine would be hazy or cloudy due to:
a. Sediment in the wine
b. High alcohol
c. Sweetness
d. Being from the Old World

Match the CAUSE with the EFFECT (there may be multiple answers)

CAUSE	EFFECT
Warm climate or vintage ☐	☐ Clarity in sight
Deep purple color wine ☐	☐ Elevated alcohol in wine
Cold stabilization ☐	☐ Staining or color extraction in tears
High extraction of color ☐	☐ Elevated acidity in wine
Cool climate or vintage ☐	☐ Grape variety with high pigmentation

The Basics of Food and Beverage Pairing

Learning Points

After studying this section, a student should be able to:

- Understand the basics of food and beverage pairing
- Learn predictable food and beverage interactions
- Learn a few of the many philosophies behind finding great matches
- Understand that this is a fundamental part of being a sommelier
- Feel free to explore and experiment with new and exciting pairings

Where to Begin?

Learning about wine can be enjoyable in itself, but for many sommeliers, delving into the challenge of finding wonderful pairings of beverages and foods is even more interesting and enjoyable. The possibilities for experimentation and discovery are virtually limitless. On the food side, there are countless flavors and textures with which to work, and on the beverage side, there are hundreds of thousands of different wines — before we even get to beer, sake, and spirits. Opportunities for creativity abound, as do chances to enhance guests' experiences at the table. Enabling guests to maximize their enjoyment of wine and food and the wonderful synergies between them is among the most important components of the sommelier's craft.

First Steps

- Reference your understanding of viticulture and vinification.
- Create connections with what you know about how grapes are grown and made into wine, and about how wines have arisen historically from different regions (with different culinary traditions) around the world.
- Recall your knowledge of how to taste wine and assess structural elements.
- Apply some basic principles which we will discuss below.
- Ask: Why does a particular pairing work, and how can its success be explained to a guest?

How to Approach Food and Beverage Pairing

There are many approaches to food and beverage pairing, but a few guiding principles can provide helpful points of reference. One approach is to consider whether to build a pairing by starting with a dish and then considering promising wines, or — alternatively — to begin with a wine chosen by a guest and then seek food that will pair well with it. In either case, the guest's preference is of paramount importance.

In this section, we focus predominantly on wine and on the different characteristics of wines that are important for achieving successful pairings.

Guiding Principle #1 — Evaluate the Wine

Look at dominant elements in the pairing.

Wine Structural Elements	Wine Flavor Elements	Taste Elements
• Sweetness • Tannin • Acidity • Alcohol • Texture	• Fruit and fruit condition • Non-fruit • Earthiness • Oak influence and flavors • Service temperature	• Sweet • Sour • Bitter • Salt • Umami

Guiding Principle #2 — Evaluate the Dish
Looking at the dish as a whole or the meal in its entirety is paramount. We need to consider all the components on the plate and the preparation of each element to achieve a successful pairing.

The following are just a few examples of different food preparations, and sauces that play a role in pairing decisions. Try to imagine other foods, methods, and garnishes that come into play.

Main Ingredients How might different protein call for different wines?

- Steak
  – Lean filet mignon versus a richer rib-eye
- Poultry
  – Flavorful game birds versus subtle chicken breast
- Fish and Seafood
  – Delicate Dover sole, fattier salmon, or meatier tuna
  – Simple fresh oysters verus rich, dense lobster tail

Cooking Method How was the dish cooked?

- Raw (no cooking)
- Poached
- Grilled
- Sautéed
- Braised
- Roasted/baked

Sauces Often, the sauce is the most important element on the plate, dictating the pairing even more decisively than the main ingredient at the core of a dish.

- Barbecue
- Curry
- Béarnaise
- Butter
- Pan gravy
- Tomato

Condiments Think of dishes in which these condiments might be used and how they could affect the choice of an optimal wine.

- Butter
- Ketchup
- Soy sauce
- Hot sauce
- Mayonnaise

Sides

- Tart and sweet cranberry sauce
- Earthy mushrooms
- Creamy mashed potatoes
- French fries
- Vinegar-based salads or pickled vegetables

Textures How foods interact texturally with your palate is an important element in pairing.

- Fat
- Oils
- Butter

Guiding Principle #3 — Match the Intensity The food and beverage must roughly match one another in intensity. Delicate foods pair well with light, delicate beverages that won't overwhelm them, just as rich, intense foods call for comparably robust beverages.



Basic Principle #4 — Understand Important Interactions Certain foods have very specific, predictable reactions with our sense of taste.

- Salt In food will help reduce our palate's perception of acidity in wine. Intensely salty foods make tannins in wine feel more astringent.
- Animal Fats These fats which are found in rich, fatty meats like beef and lamb or in dairy products like cheese, reduce the palate's perception of tannins in wine. Conversely, the tannins in wine make meats and cheeses feel less rich and fatty on the palate. Remember the pairing tip that fat loves tannin — and tannin loves fat.
- Sugar In food tends to work best with sweetness in the beverage and is not limited to desserts or dessert wines. Many cuisines around the world employ base sauces that contain sugar. Beware that these types of sauces can make dry wines seem even drier or even austere.
- Spicy Heat In foods has the effect of heightening our perception of alcohol in beverages, but can be mitigated when paired with beverages that are off-dry, slightly sweet, or low in alcohol.

Name a few important sauces of different world cuisines with sweet or spicy elements.



Pairing Theories and Approaches Once you have the basic principles committed to memory, it is time to put them into practice. Successful pairings can result from different approaches, and sometimes from a combination of different ideas. Here are a few tried-and-true approaches.

- What Grows Together Goes Together Foods and wines that both originate from a particular region often pair great together.

Example: Sancerre and fresh goat cheese, both sourced from the Loire Valley of France.

Provide two examples of your own.

- Complementing This approach relies on an element in the food and a similar element in the beverage creating a synergistic pairing. The complementary elements may stem from the structure, flavor, texture or intensity of the food and the beverage. Similarly, comparable aromas or flavors in a dish and a beverage can provide a sensory "bridge" between the two.

Example Herb-crusted beef tenderloin with Chianti Classico Riserva. The herbal character of the Chianti can offer a great match thanks to the similar herbal notes of beef prepared in this manner.

Provide two examples of your own.

- Contrasting Opposites can attract! This approach uses opposing elements in structure, flavor, or texture in the food and beverage to create harmony between them.

Example: A tart beverage like a hefeweizen beer from Germany to contrast a richly textured food such as fresh burrata cheese.

Provide two examples of your own.

Classic Food and Wine Pairings These pairings have stood the test of time.
It is important to begin understand and explain why a particular pairing works.

FOOD	WINE	WHY IT WORKS
Foie gras	Sauternes	Rich, unctuous wine meets creamy, rich, salty fat
Fresh goat cheese	Sauvignon Blanc	High-acid cheese meets high-acid wine
Steak	Cabernet Sauvignon	Tannin vs. protein and fat
Sardines	Manzanilla Sherry	Salt and fish oil can stand up to stronger flavors in wine
White truffles	Barolo or Barbaresco	Earthy truffles with earthy wine
Roast chicken	Beaujolais	Soft tannins make the Beaujolais versatile with the leaner chicken
Stilton cheese	Port	Salty cheese vs. sweet wine

As we progress through the world of wine, take note of the classic pairings we discuss and give them a try to see why they work so well!

Unique Approaches and Helpful Advice from Master Sommeliers

Melissa Monosoff MS
One of my first jobs was at a high-end fish and seafood restaurant. We had an extensive wine list that of course included lots of red wine! Grapes with softer tannins such as Pinot Noir, Gamay, and Barbera do not intensify the "fishiness" of the fish oils like higher-tannin wines can. In most cases, the sauces and sides of the dish dictated the pairing. A great Pinot Noir and roasted or grilled salmon was always a favorite.

James Tidwell MS
Don't upstage the star of the show. If you have an amazing bottle of wine you want to show off, especially an older vintage (they tend to be more subtle), don't serve an intensely complex dish with it. A simple dish will allow the wine to be the center of attention.

Fred Dexheimer MS
When thinking about food and wine pairing, I've found through my experiences in all types of dining scenarios that texture will make or break the pairing. So the old rule of thumb of matching weights is hugely important! Light foods with crisp wines, charred foods with wines that see oak, and for complicated foods — more round textures in the wine. Once I have the weight of the wine and food considered, I then look at the flavor components of each — drawing from the colors of each. I look for wines with green flavors in both whites and reds, seeking the same tones in the food. Same with yellows, golds, pinks, and more tawny colors. Typically, if you work from those two platforms, you can create a great pairing experience on a very basic and simple level and build from there.

Jack Mason MS
Whenever I begin to think about ideal wine pairings for different foods, I always look to what the people that made the wine might have on their table. This is always a great reference point, and can be an incredibly helpful platform to think about what wines to pair with what you are going to eat — whether that might be Riesling with smoked meats, steak with Chianti, or Albariño with shellfish.

Jim Rollston MS
I always start to think of a food and beverage pairing by looking for flavor "bridges" between some component of the dish (hopefully a dominant one) and a flavor that I find in the wine or beverage. In my experience, the most successful pairings link flavors in the combination and create better harmonies between food and wine. After thinking about specific tastes in the dish and wine, I then consider matching the overall weight of the wine and dish, and consider "cultural" harmonies as well; i.e., "what grows together goes together," Mediterranean flavors with Mediterranean wines, French wines with French classic dishes or preparations, and so on.

The Basics of Food and Beverage Pairing

Quiz Questions

Animal fat in food can:
a. Make a wine seem more tart
b. Make a wine seem sweeter
c. Decrease the palate's perception of tannin in wine
d. Increase the palate's perception of tannin in wine

Spicy heat in food can:
a. Be inflamed by high-alcohol beverages
b. Be softened by low-alcohol beverages
c. Be softened by sweetness in beverages
d. All of the above

Salt in food can:
a. Decreases the palate's perception of acidity
b. Increases the palate's perception of acidity
c. Make food taste sweeter
d. Make wine taste more tannic

When pairing a sweet wine and a sweet food:
a. The wine should be sweeter than the food
b. The food should be sweeter than the wine
c. The food and wine should be equal in sweetness
d. This pairing does not work and should be avoided

Which of the following wines is a classic pairing with Stilton?
a. Port
b. Bordeaux
c. Burgundy
d. Manzanilla Sherry

Think of two of your favorite food and beverage pairings.
Why do they work so well?

When did you enjoy them?

France

The French Paradigm
Understanding European Wine Law

Learning Points

After studying this section, a student should be able to:

- Understand why France is so important to the wine world
- Know how the French name their wines and wine regions
- Understand the AOC system and why it was established
- List classic French grape varieties

Over the centuries, the French have produced more fine wine than any other country. Although many countries produce quality wine and have important indigenous grape varieties, French wines remain the global benchmark for quality, and French varieties are cultivated in virtually every wine-producing country across the world.

Learning about French wines may seem like a daunting task but the fundamentals are quite straightforward. The French label their wines by reference to where the grapes are grown. A specific place makes a specific type and quality of wine. The idea of place, or terroir, is fundamental in determining quality.

History and Development of French Wine Law

The Appellation d'Origine Contrôlée (AOC) system was created by the Institut national de l'origine et de la qualité (INAO) in 1935 in response to widespread fraud in the wine industry. At the time, unscrupulous winemakers were passing off inferior wines—or even ones sourced from other countries—as if they had originated from French regions or estates.

Temptations leading to this increased fraud arose from chronic wine shortages caused by successive attacks of vine disease and the lasting effect of the phylloxera epidemic in the late 1800s.

The INAO is a government-based organization that was created to restore confidence in the country's wine industry, and to define and protect the quality and authenticity of specific wines and wine regions. The system that was created was a set of detailed regulations called the Appellation d'Origine Contrôlée.

Appellation System (AOC) was created to ensure authenticity of place and typicity of style. This model became the paradigm for many other countries in the European Union.

In 1905, legislation was enacted to prevent the misrepresentation of products, and in 1923 Baron Le Roy and other producers in Châteauneuf-du-Pape banded together and created a set of rules for viticulture in their region to raise and ensure quality. These rules were adopted as a basis for the broader Appellation Contrôleé system, which laid the framework for delimiting vineyard areas and appellations.

These rules were originally intended to protect producers from dishonest competition, but by extension they became one of the first consumer protection laws guaranteeing product integrity. The system designated the places where the best French wines were made and defined how they were to be produced in the interest of quality.

This emphasis on named places is what we see on French wine labels to this day. Since French wine law regulates what grapes may be planted in specific wine regions, the grape variety is implied in the particular place's name (or

appellation). Knowing which grapes are planted in which regions requires some memorization, but is the key to learning the grapes behind the place names.



EU Standardization (Appellation d'Origine Protégée)
In 2009, a European Union wine-quality designation called the Appellation d'Origine Protégée (AOP) was put into effect with the intention of raising quality and achieving more uniform standards across all member countries. This is a protected designation of origin as a EU-wide appellation.

Two quality categories were created:
- Wines with geographic indication
- Wines without geographic indication

Many classic wine regions of the EU are still using their traditional wine label quality terminology (such as AOC in France or DOCG in Italy) alone or in conjunction with the new AOP terminology.

AOC / AOP Quality Levels

WINES WITHOUT GEOGRAPHIC INDICATION

Vin de France — 20% of all French wine
- The least restrictive designation
- High yields permitted
- No specific place of origin allowed on the label
- Variety/vintage allowed on label
- Oak chips allowed

WINES WITH GEOGRAPHIC INDICATION

IGP/Vin de Pays — 30% of all French wine
- 74 delimited regions
- Divided into
  - Regional areas
  - Departmental areas
  - Zones
- Fewer restrictions than AOC/AOP
- Hybrids allowed
- Can be varietally labeled
- 85% of fruit must originate from stated geographic region

AOC/AOP — 50% of all French wine
- The highest and most exacting designation for French wines
- Boundaries precisely defined and regulated
  - Can be a larger regional area, a small village, or even a single vineyard — often based on soil composition
- Grape or grape varieties planted are strictly regulated
- Viticultural practices are regulated
  - What is planted and where
  - Yield per hectare
  - Type of vine training used
  - Irrigation, if permitted at all
  - Degree of alcohol minimum and maximum
- Vinification or winemaking technique is also regulated
  - Aging requirements
  - Residual sugar allowance
  - 100% of grapes must come from stated AOC/AOP

France

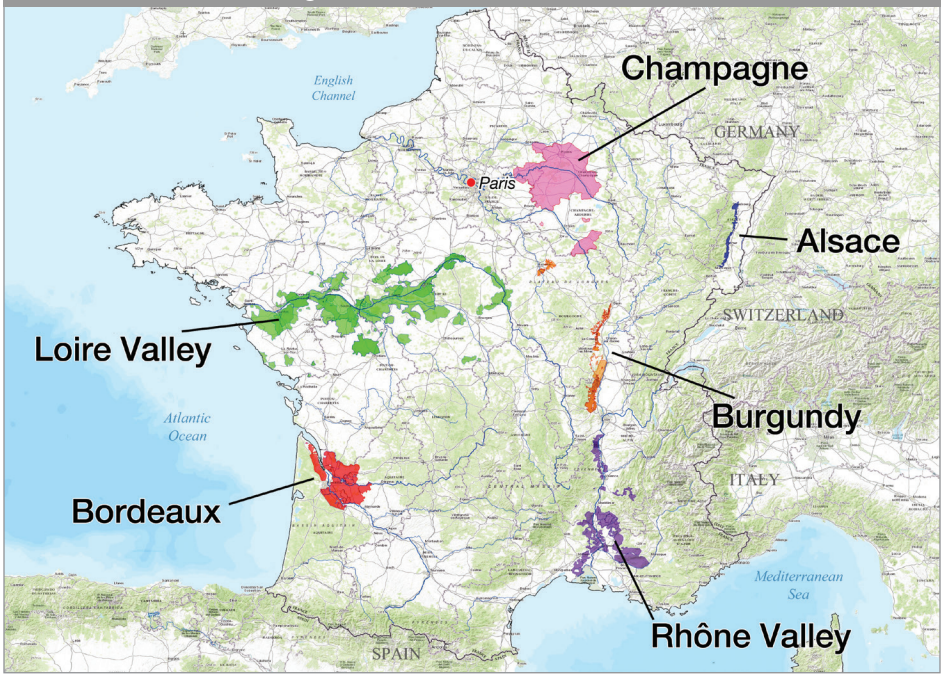
Burgundy

Learning Points

After studying this section, a student should be able to:

- Understand Burgundy from a historical perspective
- Read a wine label from Burgundy
- Know the grape varieties of the region
- Understand the basics of Burgundy's wine classification system
- Know the major AOPs of Burgundy

France — Overview — All Regions



Historical Background



For the Love of Burgundy
Burgundy is often thought of as one of the world's most difficult wine regions to understand. Even though most wines are made with one of only two grape varieties, its intricate and complex system of land ownership makes understanding the region quite difficult. Let's begin with its history to see how Burgundy came to be the way it is today.

Monastic Work
During the Middle Ages, much of the vineyard land in Burgundy was owned by the Catholic Church's Benedictine and then the Cistercian monasteries. Cistercian monks from the abbey of Cîteaux at the end of the 11th century painstakingly studied the vineyards, identifying often tiny, superior parcels that produced wines of distinct character. These vineyard plots would eventually become many of Burgundy's most prestigious appellations and produce its greatest wines. Now as then, Burgundy's vineyards are named and classified by their terroir.



French Revolution and the Napoléonic Code of Inheritance
During the French Revolution, Burgundy's vineyards were taken away from the church and the aristocracy. Many large properties were broken up and sold as smaller pieces to new owners.

In 1804, the emperor Napoléon instituted a new system of inheritance, requiring that estates be divided equally among male heirs. Named the Code of Inheritance, this system led to the fragmentation of Burgundy's vineyards, because upon the death of a parent all male children inherited equal amounts of property.

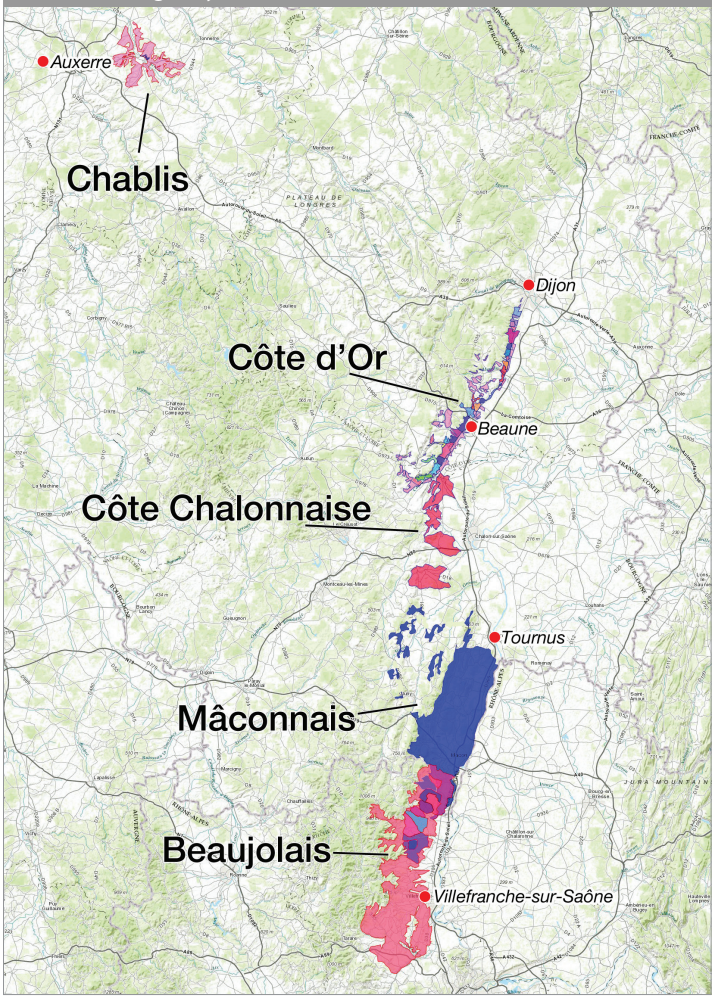
Burgundy has evolved over the past two centuries but in many ways has remained unchanged. For example, Clos Vougeot, a single, walled 125-acre (51 ha) vineyard once managed by the Cistercian monks, is parceled today into nearly 80 different plots with different owners, some of whom own only enough vines to make a case or two of wine per vintage. The AOP laws stipulate that all of these owners can use the Grand Cru Clos de Vougeot designation on their labels, even though the quality, style, price, and reputation of the different owners' wines can vary widely.

Factors of Production

Location/Geography

- Eastern/Central France near the border with Switzerland
- Broken into five sections, listed from north to south
  - Chablis
  - Côte d'Or
    - Côte de Nuits
    - Côte de Beaune
  - Côte Chalonnaise
  - Mâconnais
  - Beaujolais

France — Burgundy



Climate

- Continental

Topography/Aspect

- Rolling hills
- Côte d'Or slope
  - The best vineyards are on hillsides facing east/southeast



Soil

- Burgundy — chalk, calcareous clay, marl, and limestone
- Beaujolais — granite

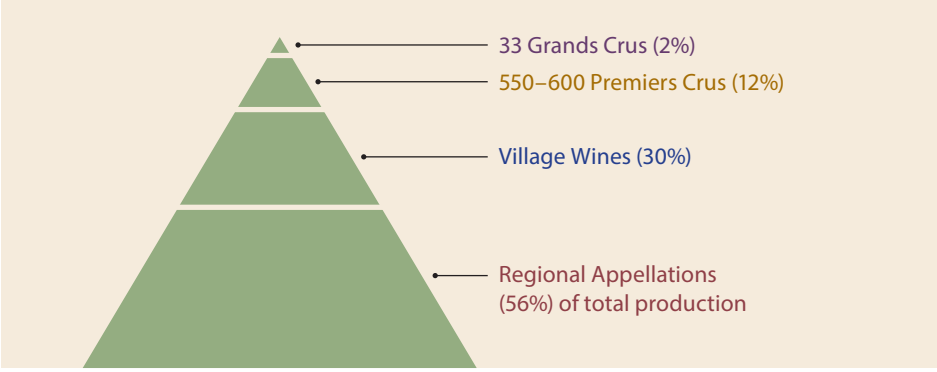
Grape Varieties

- White
  - Chardonnay (the main variety)
  - Aligoté (small plots)

- Red
  - Pinot Noir (the main variety)
  - Gamay (grown primarily in Beaujolais)

Labeling Law and Wine Classification System

Burgundy AOP Pyramid Burgundy's Appellation System is based on specific vineyard sites and their location. As the area gets smaller, quantity decreases and, in theory, quality increases.



Burgundy Wine Label Terminology

These are terms that you may see on labels. Knowing them will help you understand more about who made the wine and where the grapes were grown.

Domaines
These are grower/producers that own the vineyards they are producing wine from. The entire process from growing the grapes to aging and bottling the wine is done by the Domaine itself.

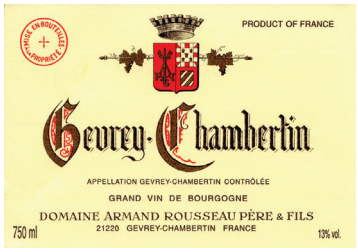
Négociants
Négociants are wine merchants who buy grapes and/or finished wines for blending and bottling under their own labels. This word rarely appears on a label.

Clos
A clos designates a plot of vineyard land traditionally surrounded with dry-stone walls. Clos Vougeot, a Grand Cru vineyard next to the tiny village of Vougeot, is the most famous example.

Monopole (Monopoly)
Parcels of vineyard land with single ownership, monopoles are less common than you might think. Most vineyards in Burgundy have multiple owners.

Reading a Burgundy Wine Label

It is important to learn how to decipher a Burgundy wine label in order to identify the type of wine in the bottle. See the examples below.



Village Wine
One hundred percent of the grapes are grown in and around the named village, in this case Gevrey-Chambertin. In a clever marketing move, many of Burgundy's wine villages have appended the name of their most famous vineyard onto the name of the village to garner more attention for the village wines. In this example, the village of Gevrey added the name of Chambertin, its most famous vineyard, and so renamed itself Gevrey-Chambertin.



Single Vineyard Premier Cru (1er Cru)
One hundred percent of the grapes that make this wine come from a specific vineyard called Lavaux-Saint-Jacques, which is located in the village of Gevrey-Chambertin. Look for the words premier cru or 1er Cru on the label.



Single Vineyard Grand Cru
One hundred percent of the grapes that make this wine come from one of the very best vineyard sites in Burgundy—Chambertin, which is located in the village of
Gevrey-Chambertin. Notice how there is no village name on the label.
A grand cru will have only the name of the vineyard on the label.

Burgundy — Sub-Regions from North to South

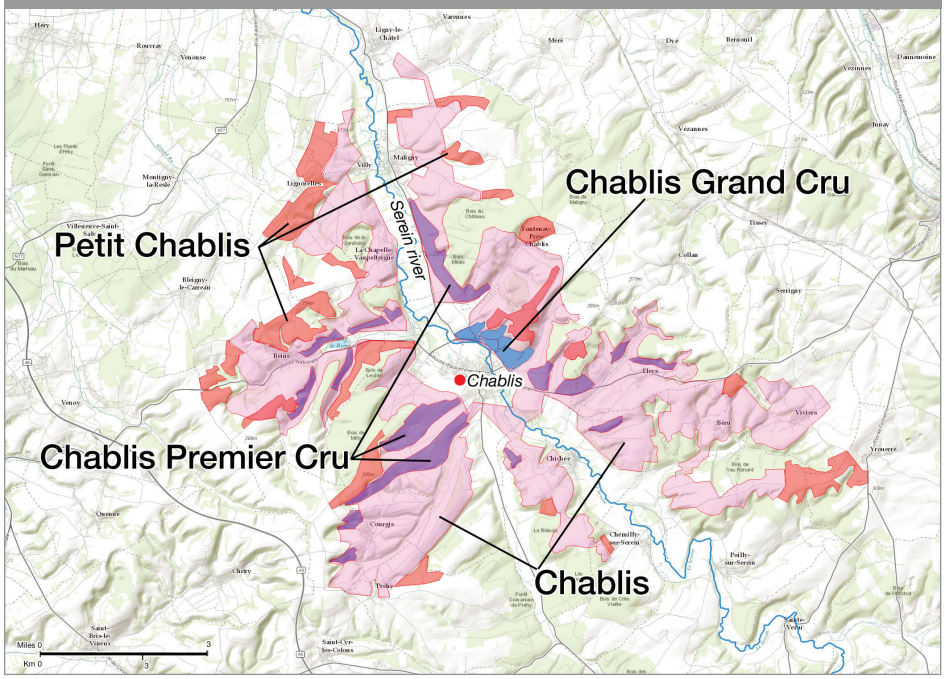


Chablis

- Location/Geography
  - 80 miles north of the Côte d'Or and closer to Champagne than to the rest of Burgundy
- Climate
  - Cool continental
- Soil
  - Kimmeridgian clay/limestone
- Grape Varieties
  - White
    - 100% Chardonnay
- Viticulture
  - Picking time is critical because of late season frosts
- Vinification
  - No oak is used with lower-tier wines but is often used with upper-tier wines
  - Malolactic fermentation is common



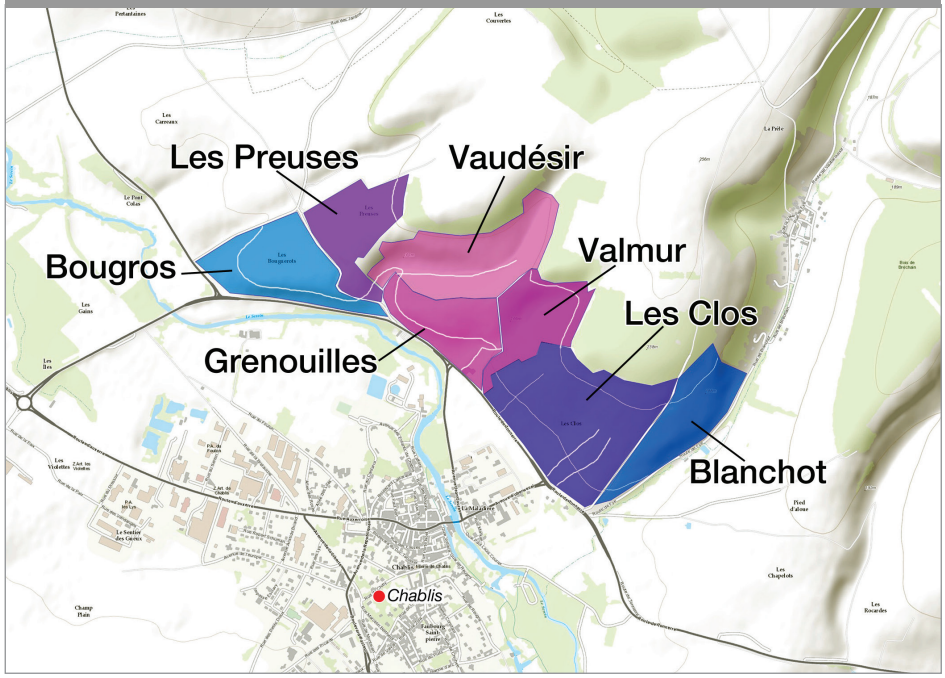
France — Chablis — Overview



Chablis AOPs

- Chablis AOP
- Petit Chablis AOP
- Chablis Premier Cru AOP
  – 40 vineyards are designated as Premier Cru
- Chablis Grand Cru AOP
  – Seven vineyard designations
  – Most have a south/southwest exposure to maximize sunshine
  – Les Clos is a top example

France — Chablis — Grand Cru

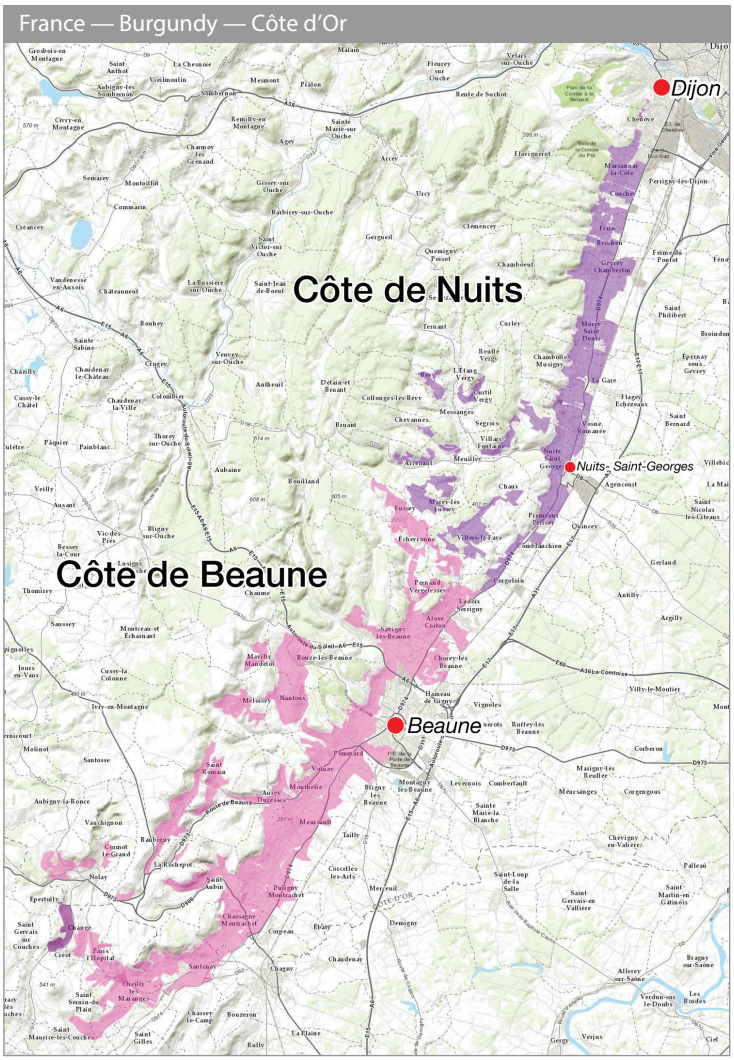




Côte d'Or

The Côte d'Or is a 30-mile-long escarpment that runs north to south, starting near the city of Dijon and ending at the village of Santenay. It contains a narrow ridge of limestone that is broken into two sections: the Côte de Nuits to the north and the Côte de Beaune to the south.

The French word côte refers to a hillside or slope. You can see from the map that the villages and vineyards of the Côte d'Or hug the hillsides. One of the primary aspects of terroir in this region is the location of the vineyard on the slopes. Soil compositions and microclimates vary depending upon exactly where the vineyard is located.



Côte de Nuits (the northern section of the Côte d'Or)

- Topography/Aspect
  - Hillsides and ridges
  - Top vineyard sites are often in the middle section of the hillside

- Climate
  - Continental

What effect does whole cluster fermentation have on the final wine?

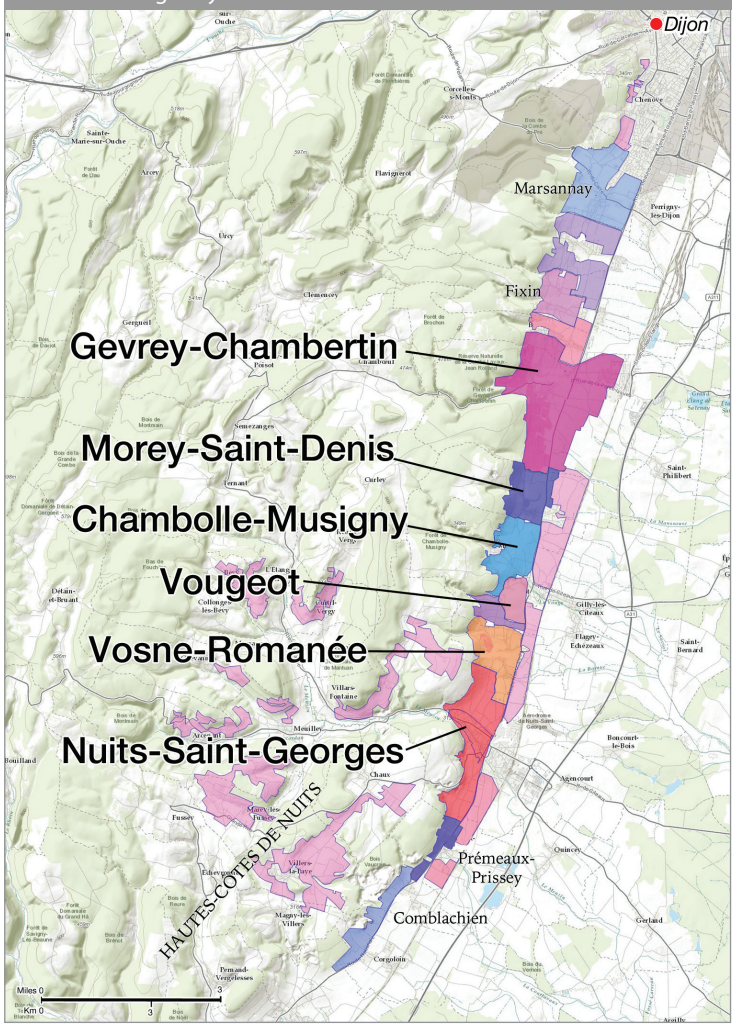
- Grape Varieties
  - Red
    - Pinot Noir

- Soil
  - Marl
  - Limestone

- Viticulture
  - Threats of frost, summer hail, and excessive rain in the fall

- Vinification
  - Use of French oak, often new
  - Some producers ferment with whole grape clusters, others completely de-stem

France — Burgundy — Côte de Nuits





Appellation Hierarchy

Regional Appellations
Bourgogne AOP
- Pinot Noir or Chardonnay from anywhere in the entire Burgundy region

Bourgogne Cote d'Or AOP
- A sub-appellation of the Bourgogne AOP for Pinot Noir or Chardonnay grown more specifically in the Côte de Nuits and Côte de Beaune areas of production.

Côte de Nuits-Villages AOP
- A general appellation for wines from five small areas in the Côte de Nuits
- Red wine (Pinot Noir) only appellation

Village AOP
- 100% of the grapes are grown in and around the named village
- There are nine villages in the Côte de Nuits. The villages in bold are highlighted on the map on page 58.
  - Marsannay
  - Fixin
  - Gevrey-Chambertin
  - Morey-St. Denis
  - Chambolle-Musigny
  - Vougeot
  - Vosne-Romanée
  - Flagey-Echézeaux
  - Nuits-Saint-Georges

Premier or 1er Cru AOP
- 100% of the grapes are grown in a specific, individually named premier cru vineyard
- If no vineyard name is on the label, the wine can be a blend of grapes from any of the premier cru vineyards in that village
- There are more than 130 premiers crus vineyards in the Côte de Nuits

Grand Cru AOP
- 100% of the grapes are grown in the named grand cru vineyard site
- 24 of the 33 grands crus vineyards in Burgundy are in the Côte de Nuits
- Here are five examples of grands crus vineyards:
  - Chambertin
  - Bonnes-Mares
  - Musigny
  - La Tâche
  - La Romanée

Top Recent Vintages of the Côte de Nuits (indicated in color)



Côte de Beaune (the southern section of the Côte d'Or)

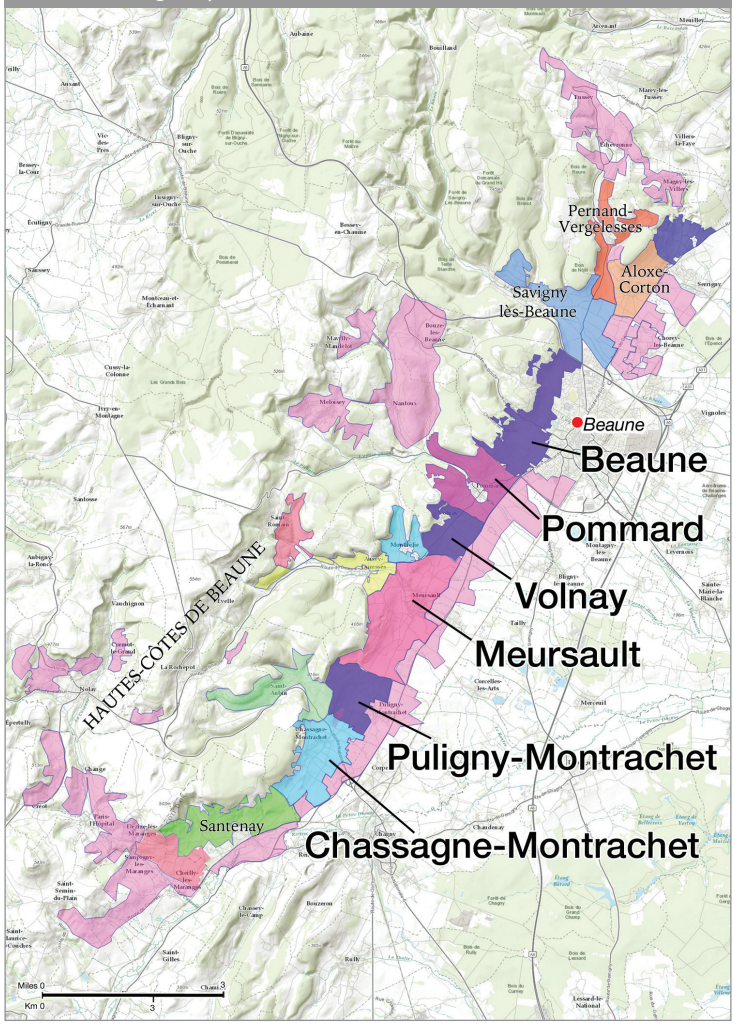
- Climate
  - Continental, with a wide range of microclimates from village to village and even vineyard to vineyard

- Soil
  - Marl
  - Limestone

- Grape Varieties
  - White
    - Chardonnay
  - Red
    - Pinot Noir

- Vinification
  - Oak, often new, is used for both reds and whites

France — Burgundy — Côte de Beaune





Appellation Hierarchy

Regional Appellation — Bourgogne AOP
- Pinot Noir or Chardonnay from anywhere in the entire Burgundy region

Village AOP
- 100% of the grapes are grown in and around the named village
- There are many named villages in the Côte de Beaune; here are some of the best-known
  - Aloxe-Corton
  - Beaune
  - Pommard
  - Volnay
  - Meursault
  - Puligny-Montrachet
  - Chassagne-Montrachet

Premier or 1er Cru AOP
- 100% of the grapes come from a specific, individually named premier cru vineyard
- If no vineyard name is on the label, the wine can be a blend of grapes from any of the premiers crus vineyards in that village
- There are hundreds of premiers crus vineyards in the Côte de Beaune

Grand Cru AOP
- 100% of the grapes are grown in the named grand cru vineyard site
- Eight of Burgundy's grands crus vineyards are in the Côte de Beaune
- Here are three examples of grands crus vineyards:
  - Corton
  - Corton-Charlemagne
  - Montrachet
  - Bâtard-Montrachet

Top Recent Vintages of Côte de Beaune (indicated in color)



Côte Chalonnaise

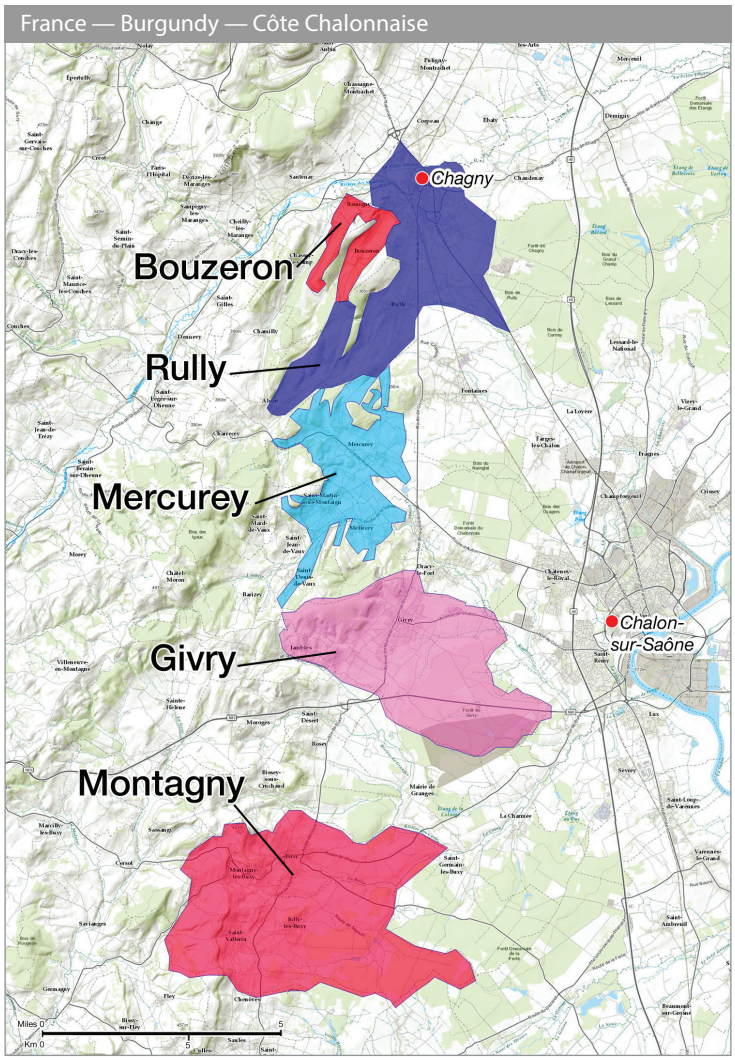
- Location/Geography
  - Directly south of the Côte d'Or
  - No hillside escarpments to protect the vineyards from east winds

- Climate
  - Continental

- Soil
  - Limestone

- Grape Varieties
  - White
    - Chardonnay
    - Aligoté (in small volume)
  - Red
    - Pinot Noir

- Vinification
  - Little to no new oak used for whites and reds



Appellation Hierarchy



There are five main villages in the Chalonnaise each with their own AOP.
There are no grands crus but many premiers crus.

- Montagny AOP
  – White wine only — Chardonnay

- Bouzeron AOP
  – White wine only — 100% Aligoté

- Rully AOP
  – White wines — Chardonnay
  – Red wine — Pinot Noir
  – Sparkling wines — Crémant de Bourgogne

- Givry AOP
  – White wine — Chardonnay
  – Red wine — Pinot Noir

- Mercurey AOP
  – White Wine — Chardonnay
  – Red Wine — Pinot Noir

These wines are generally less expensive than the wines from the Côte d'Or and often offer great value.

Mâconnais

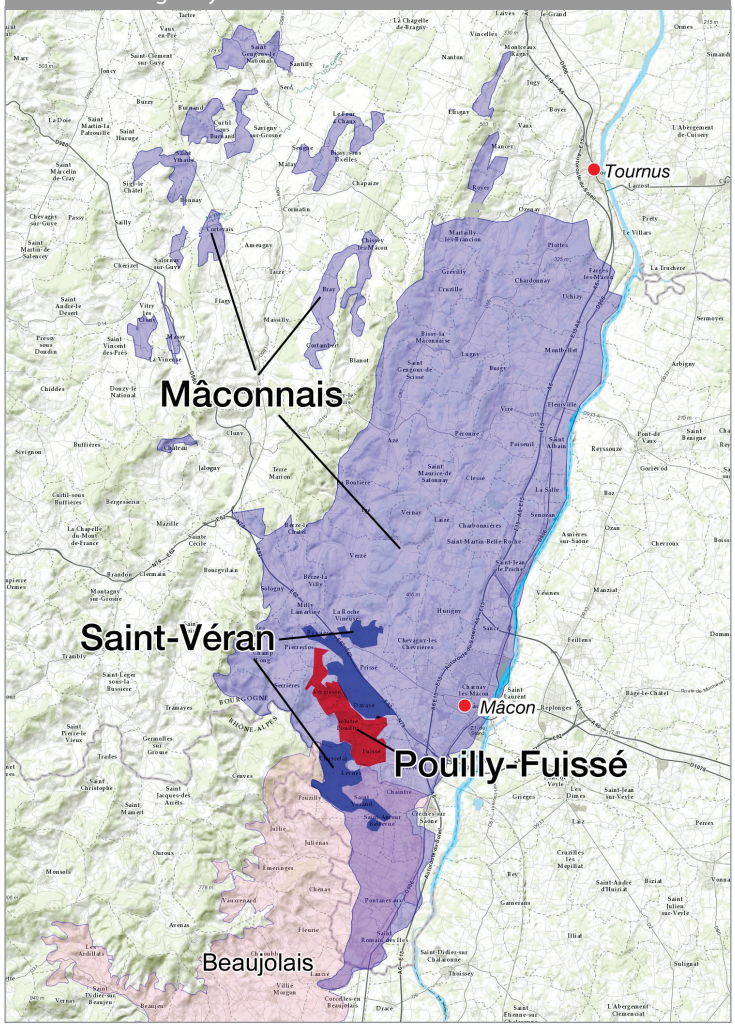
- Climate
  – Continental, but slightly warmer and drier than the more northern Burgundy regions

- Topography
  – This is a relatively large area with low-lying hills and fairly flat farmland

- Grape Varieties
  – White
    – Chardonnay
  – Red
    – Pinot Noir
    – Gamay

- Vinification
  – Mainly white wine production
  – Little use of new oak aside from the wines of Pouilly-Fuissé

France — Burgundy — Mâconnais



Appellation Hierarchy

There are no grands or premiers crus vineyards in the Mâconnais. The main villages listed below have their own AOP.

- Mâcon AOP
  – Mainly white wines only — Chardonnay

- Saint-Véran AOP
  – White wine only — Chardonnay
  – Some use of new oak

- Pouilly-Fuissé AOP
  – White wine only — Chardonnay
  – Some use of new oak
  – Generally, more expensive than other wines of the region

Beaujolais



- Location/Geography
  - South of, and slightly overlapping, the Mâconnais
  - 35 miles long from north to south

- Climate
  - Continental; but warmer than the rest of Burgundy

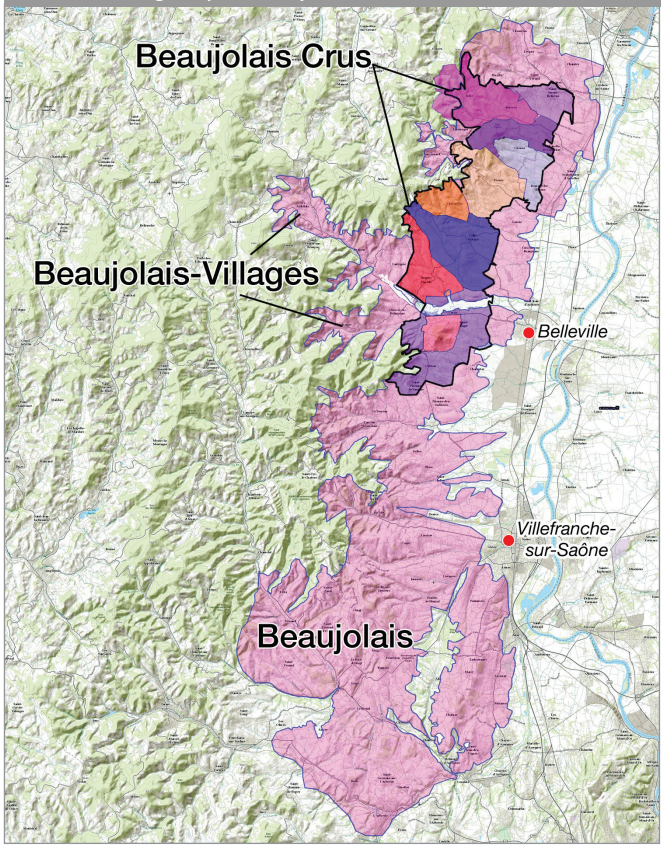
- Soils
  - Schist and granite (in the northern Beaujolais Cru villages)
  - Sandstone and clay (in the south)

- Grape Varieties
  - White
    - Chardonnay (in small volume)
  - Red
    - Gamay

- Viticulture
  - Hillside vineyards with low yields in northern Beaujolais Crus
  - Flatter plains in the south

- Vinification
  - Carbonic maceration
  - Stainless steel
  - Used or older French oak barrels

France — Burgundy — Beaujolais



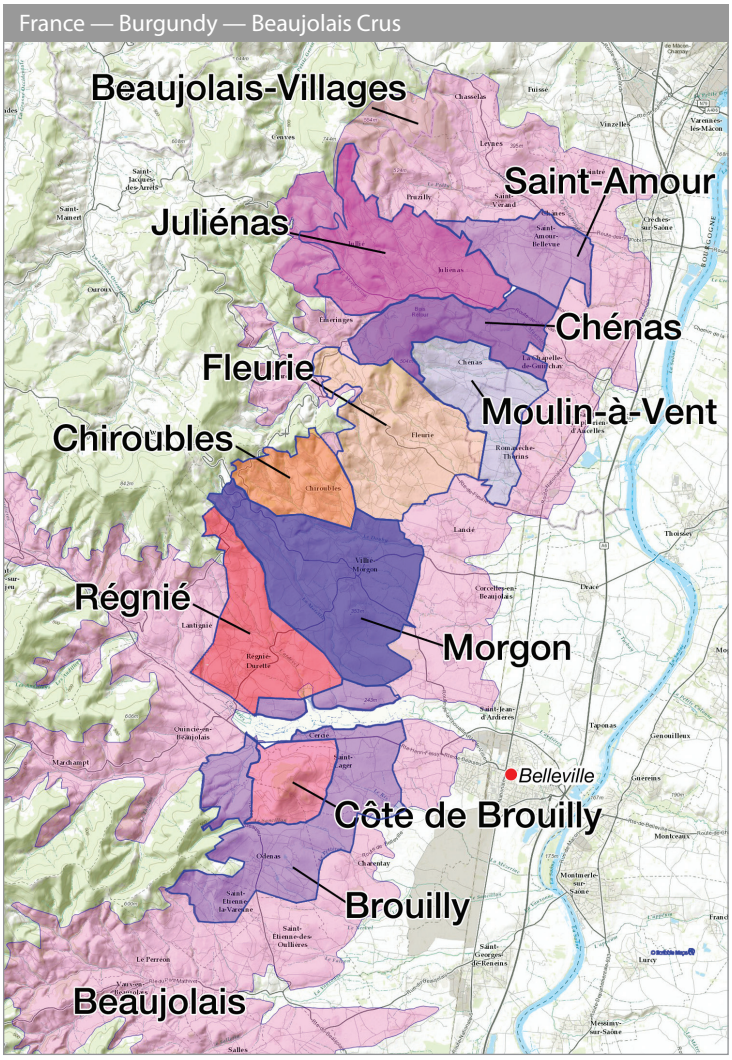
Regional Appellations and Styles

- Beaujolais AOP
  – Made from grapes grown anywhere in the region (a small proportion is white)

- Beaujolais Nouveau
  – These easy-drinking red wines are released on the third Thursday in November following the harvest. They should be drunk soon afterwards.

- Beaujolais-Villages AOP
  – There are 38 designated villages. The wines do not have individual village names on the labels and are simply designated as villages.

- Beaujolais Crus
  – These are the region's best wines
  – Ten named villages, each with its own AOP
  – Red wines only made from the Gamay grape
  – Hillside vineyards
  – Granite soil
  – Morgon AOP is a great example of a Beaujolais Cru Village



Burgundy



Quiz Questions

What is the main grape of the Morgon AOP?
a. Chardonnay
b. Gamay
c. Pinot Noir
d. Aligoté

How are the very best vineyards in the Côte d'Or designated?
a. Grands Crus
b. Classico
c. Crémant
d. Village

Which of the following is not a classic region or village for Chardonnay in Burgundy?
a. Chablis
b. Mâcon
c. Pouilly-Fuissé
d. Pommard

Which of the following is an example of a designated Chablis Grand Cru?
a. Montrachet
b. Musigny
c. Romanée
d. Les Clos

Which of the following is not in the Côte Chalonnais?
a. Mercurey
b. Givry
c. Rully
d. Chassagne-Montrachet

What were the Cistercian monks in Burgundy responsible for first doing?

How did Napoléon's Code of Inheritance affect the vineyards of Burgundy?

Describe the difference between Négociant and Domaine bottling.

Define the following in your own words and give an example for each.

a. Clos

b. Côte

c. Monopole

Match the following villages, regions, or grands crus with their primary grape variety.

VILLAGE	GRAPE VARIETY
Les Clos ☐	
Meursault ☐	☐ Pinot Noir
Pommard ☐	☐ Chardonnay
Volnay ☐	
Morgon ☐	☐ Gamay
Bouzeron ☐	☐ Aligoté
Gevrey-Chambertin ☐	
Musigny ☐	

France



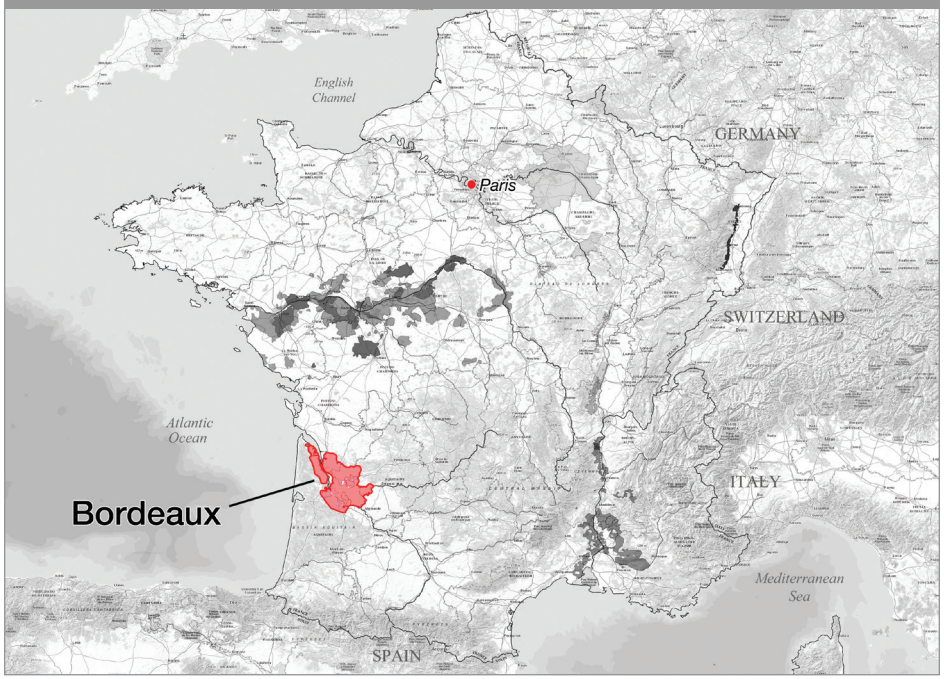
Bordeaux

Learning Points

After studying this section, a student should be able to:

- Name the primary grape varieties grown in Bordeaux
- Name the major wine regions of Bordeaux, as well as:
  – The grape varieties grown in those regions
  – The types of wine made in each region
- Understand the climatic influences in the region
- Understand the history and continuing importance of the 1855 Classification
- Recognize the five first growth châteaux
- Understand the classification system of Saint-Émilion

France — Overview — Bordeaux

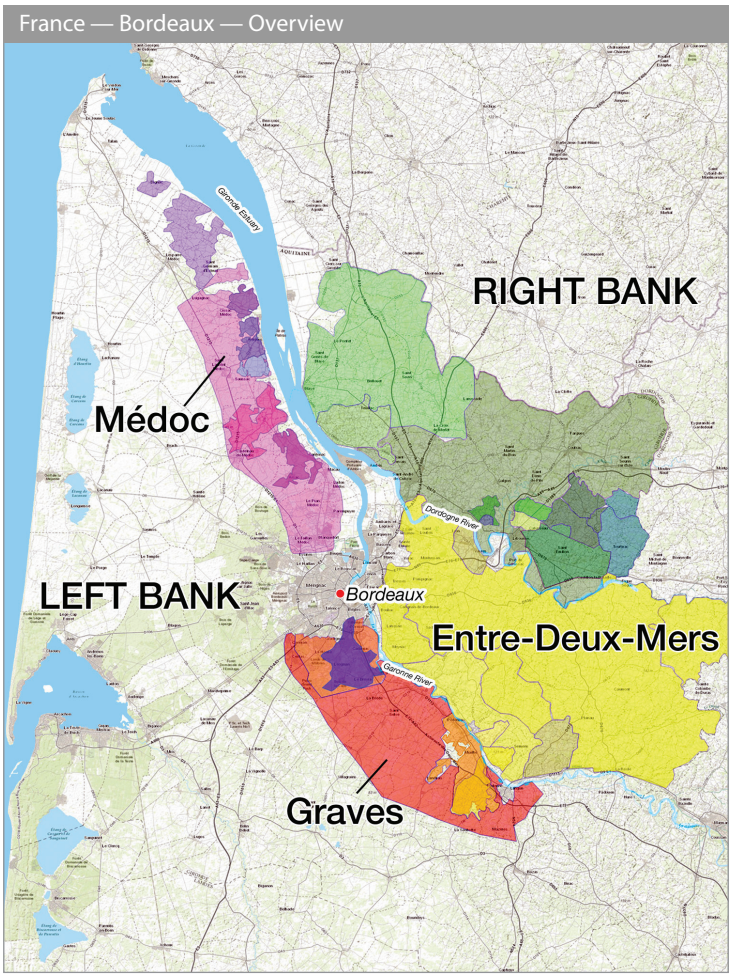


Factors of Production

Historical Background
Evidence of wine production in the greater Bordeaux region dates back to the 4th century AD. In the Middle Ages, the wine trade mostly from inland areas, boomed, with England becoming the most important foreign market. Then, in the mid-1600s, Dutch merchants looking to expand trade created a complex series of channels that drained marshes and made more land suitable for viticulture. Wines from these new vineyards soon were shipped worldwide and became famous. Both the commercial success and the international renown of Bordeaux wine is directly linked to the region's importance as a center of trade with easy access to the Atlantic Ocean.

Location/Geography
- Southwestern France, inland from the Atlantic Ocean

Climate
- Maritime
- Bordeaux is located on the 45th parallel. The climate is moderated by its waterways and its proximity to the Atlantic coast. The Gulf Stream current brings warm waters up from the Caribbean, keeping the weather mild yet humid.
- The region can suffer from rain and frost





Geography and Climate Influences

- A large pine forest along the coast to the west protects the region from harsh storms and winds from the Atlantic
- Two rivers, the Garonne and Dordogne, meet north of the city of Bordeaux and form the Gironde Estuary, which flows into the Atlantic
- These bodies of water divide the area into three sections:
  – Left Bank West of Garonne and Gironde
  – Right Bank East and north of the Dordogne and Gironde
  – Entre-Deux-Mers Between the Garonne and Dordogne

Soil

Each of the regions of Bordeaux is known for a specific soil type that is matched with the grape varieties that grow best there. Water drainage is key.

- Médoc and Graves on the Left Bank Gravel
- Saint-Émilion on the Right Bank Gravel, limestone, sand
- Pomerol on the Right Bank Iron pan under sand and clay


Gravel


Limestone


Clay

Grape Varieties

- White
  – Sauvignon Blanc
  – Sémillon
  – Muscadelle — small quantities
- Red
  – Merlot — the most widely planted
  – Cabernet Sauvignon
  – Cabernet Franc
  – Petit Verdot — small quantities
  – Malbec — allowed but rarely seen today
  – Carmenère — also allowed but rarely seen

Viticulture

- This region suffers from rain at harvest and frost

The Bordeaux family of grape varieties

Vinification
Wines from Bordeaux are usually blends of two or more of the grape varieties in the Bordeaux family

Examples of typical wine styles and blends from Bordeaux

- Red Wines from Médoc communes (left bank)
  - 70% Cabernet Sauvignon
  - 30% Merlot
  - Plus Cabernet Franc and Petit Verdot
  - These wines are usually aged in new French oak barrels

- Red Wines from Saint-Émilion and Pomerol (right bank)
  - 70% Merlot
  - 30% Cabernet Franc
  - These wines also spend some time in French oak barrels

- Dry White Wines mainly from Graves (Pessac-Léognan) on the left bank and Entre-Deux-Mers
  - 80% Sauvignon Blanc
  - 20% Sémillon
  - The majority of inexpensive white wines from Bordeaux are made without oak. Prestigious wines in the upper price tiers, however, tend to be aged in new French oak barriques.

- Sweet Wines mainly from Sauternes and nearby communes (we will cover these wines in more depth in the section on sweet wines)
  - 80% Sémillon
  - 20% Sauvignon Blanc
  - Muscadelle (small percentage)
  - Many sweet wines of Bordeaux are aged in new French oak barrels

Yearly Weather and Vintage Variation
Although Bordeaux is well protected from some of the harsher influences of the Atlantic, the region still faces inconsistent weather from year to year. Spring frosts and excessive rainfall at harvest are the biggest problems.

Student Activity: Research these vintages and note the differences in the growing year, harvest, and resulting wine flavors.

When we look at three different vintages of the same wine, we can note how vastly different the weather is from year to year.







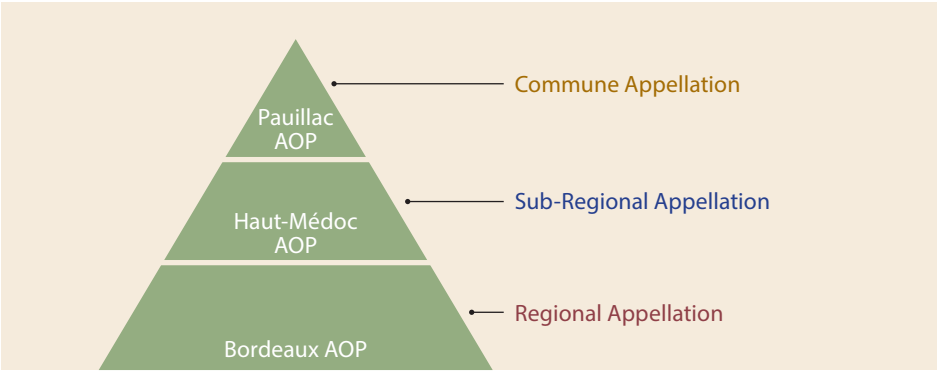
Bordeaux Appellations



Regional Appellations
- Bordeaux AOP
  - – Largest appellation in size and production
  - – Grapes can come from anywhere in the entire region
  - – An appellation for red and white wines in both sweet and dry styles

Sub-Regional or District Appellations
- These may be the highest appellations attainable in a particular locale or they may encompass a number of separate commune appellations
  - – Examples: Haut Médoc AOP and Entre-Deux-Mers AOP

Commune Appellations
- These are the smallest AOPs in each region, with generally the highest quality wines
  - – Examples:
    - – Pauillac, Margaux, Pomerol, Saint Julien, Saint Estèphe, St. Émilion



Wine styles in Bordeaux run the gamut from simple, inexpensive, unoaked whites and reds to high priced, long-lived wines aged in oak.

The Château Concept

Most vineyards in Bordeaux are not known by names attached to specific plots of land, as they are in Burgundy and most other important French wine-growing regions. Instead, Bordeaux vineyards are known by names of châteaux, the French word for castles or manor houses. Not all Bordeaux châteaux, however, are as architecturally grand as the word suggests.

A Bordeaux château is an estate under a single ownership. An important note is that the size of an estate can change over time with the sale and purchase of vineyards and land. A prime example is the fabled Château Pétrus in Pomerol, which has 50% more vineyard land today than it did fifty years ago. A château name is thus more a brand than a specific vineyard location.

Aging wine in 225-liter oak barrels (barriques) is a routine practice in Bordeaux. Larger proportions of new barrels are typically employed for the more prestigious wines — whether red or white, dry or sweet — lending aromas of vanilla, toasted cedar, and spice.



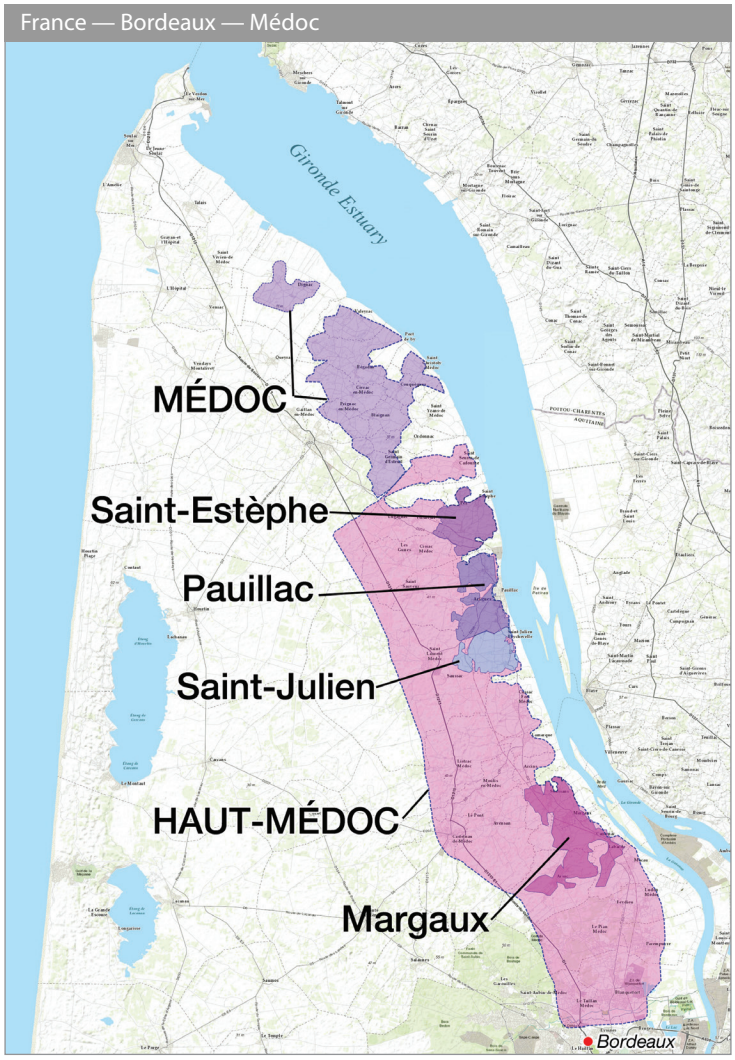
Left Bank

The Médoc
The Médoc is Bordeaux's most renowned red wine area. It was a salt marsh and pine forest until the mid-17th century, when Dutch engineers drained the marshes, discovering beds of gravel. These would become the home of the best Cabernet Sauvignon wines in France, which in turn became the benchmark for wines made with that grape worldwide. Majestic mansions, or châteaux, were built in the Médoc. These famed châteaux became synonymous with the very idea of Bordeaux wine.

Location/Geography
- North of the city of Bordeaux along the Gironde Estuary

Soil
- Gravel, with great moisture draining properties. Perfect for Cabernet Sauvignon.

Grape Varieties
- Cabernet Sauvignon – based blends
- Red wines only



Médoc AOPs

- Sub-Regions
  - Médoc AOP
  - Haut-Médoc AOP
- Commune
  - Saint-Estèphe AOP
  - Pauillac AOP
  - Saint-Julien AOP
  - Margaux AOP



1855 Classification

- Emperor Napoléon III commissioned a ranking of Bordeaux's top châteaux for the Universal Exposition in Paris. Merchants and brokers ranked 61 properties in five tiers: first growth through fifth growth. To do so, they used the historical record of the prices that each property's wines commanded in the marketplace; the higher the price, higher the ranking.
- Communes in the Right Bank were not part of this classification.
- One property in the Pessac-Léognan commune in Graves, south of the Médoc, was included, largely because the wine grown and made at Château Haut-Brion had long fetched a very high price in the market.
- This classification still stands today and remains important to many consumers, but it is NOT part of the AOP system.

First Growth Châteaux of the 1855 Classification

- Château Lafite-Rothschild
- Château Latour
- Château Mouton-Rothschild (elevated to first growth status in 1973)
- Château Margaux
- Château Haut-Brion (Graves)



Top Recent Vintages of the Médoc (indicated in color)



Graves AOP

Location/Geography
- South of the Médoc and directly south and around of the city of Bordeaux

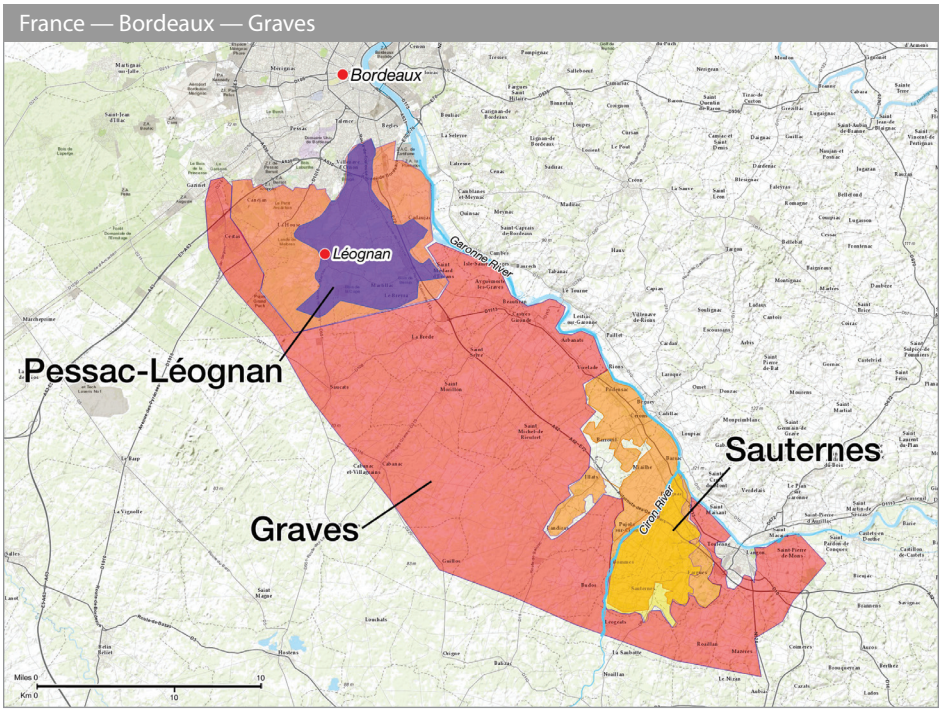
Soil
- Gravel

Grape Varieties
- White
  - Sauvignon Blanc
  - Sémillon
- Red
  - Cabernet Sauvignon, Merlot, Cabernet Franc

Sub-Regions
- Pessac-Léognan AOP
  - Geography: Northernmost part of Graves, including the most highly regarded châteaux

- Vinification
  - Dry white wines
  - Dry red wines
  - New French oak

Sauternes AOP
- Geography: Southernmost portion of Graves, bordered by the Garonne and Ciron Rivers
- Vinification
  - Botrytis-affected sweet wines
  - Oak aged, often in new French barrique





Entre-Deux-Mers AOP

Location/Geography
- Translates to "land between two seas"
- A large area between the Garonne and Dordogne rivers

Soil
- Very fertile silt

Grape Varieties
- White
  - Sauvignon Blanc
  - Sémillon
  - Muscadelle

Vinification
- Dry white wines only
- Little to no oak, stainless steel
- Red wines made in this area fall under the Bordeaux AOP appellation

Appellations
- Entre-Deux-Mers AOP

Classification System
- None

How do the fertile soils of the Entre-Deux-Mers contribute to the potential quality of the wines?

Right Bank

Saint-Émilion

Location/Geography
- Along the Dordogne River near the town of Libourne

Soils
- Proportions vary depending on the location
  - Large bed of silt, clay, and gravel
  - Limestone plateau
  - Sand

Grape Varieties

- Red
  - Merlot
  - Cabernet Franc
  - AOP for red wines only

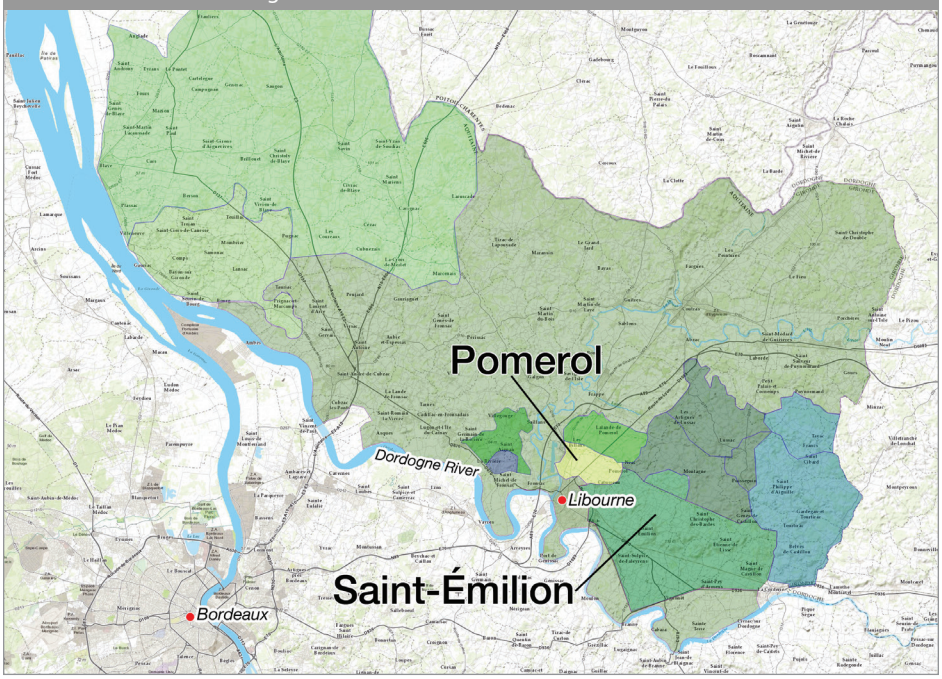
Appellations

- Saint-Émilion AOP
- Saint-Émilion Grand Cru AOP
  - An appellation, not a classification
  - Wines have an additional 0.5% alcohol and must undergo a longer aging than wines labeled Saint-Émilion AOP

Classification System

- Instituted in 1955, with a goal of revision every 10 years. The most recent revision was in 2012

France — Bordeaux — Right Bank



Saint-Émilion Classification 2012

Premiers Grands Crus Classé A

- 4 named châteaux
  - Château Ausone
  - Château Angélus
  - Château Pavie
  - Château Cheval-Blanc

Premiers Grands Crus Classé B

- 14 named châteaux

Grands Crus Classé

- 64 named châteaux



Pomerol AOP

Location/Geography
- Along the Dordogne River near the town of Libourne to the northwest of Saint Émilion
- A very small appellation, only 3 square miles

Soils
- Sand
- Clay
- Gravel
- Subsoil of iron pan and rich clay

Grape Varieties
- Red
  – Merlot and Cabernet Franc-based blends

Appellations
- Pomerol AOP
  – Red wines only

Classification System
- None



Château Petrus in Pomerol

Bordeaux

Quiz Questions

Which of the following is considered the most important grape variety in the Médoc?
a. Cabernet Sauvignon
b. Cabernet Franc
c. Malbec
d. Sauvignon Blanc

What soil in Bordeaux is most suitable for Cabernet Sauvignon?
a. Granite
b. Gravel
c. Sandy/Silt
d. Clay

In what year were the wines of the Médoc first classified?
a. 2012
b. 1855
c. 1959
d. 1953

Where is Château Haut-Brion is located?
a. Pessac-Léognan
b. Médoc
c. Pomerol
d. Saint-Émilion

Which of the following regions produces only dry, white AOP wines?
a. Pomerol
b. Margaux
c. Entre-Deux-Mers
d. Sauternes

What grape typically dominates the wines of Pomerol?
a. Merlot
b. Sauvignon Blanc
c. Sémillon
d. Petit Verdot

Next to each AOP list Left Bank or Right Bank. Then draw a line to the primary wine style. Some regions have more than one.



APPELLATION (AOP)	WINE STYLE
Margaux _____	
Pomerol _____	☐ Dry red wines
Sauternes _____	☐ Dry white wines
Pessac-Léognan _____	☐ Sweet white wines
Entre-Deux-Mers _____	

Which area of Bordeaux is best known for not having a classification of its châteaux?

Why were the wines of Bordeaux better known internationally than most other French wines?

Describe the difference between how the wines of Bordeaux and Burgundy are classified.

List the five first growths of the 1855 Classification of the Médoc.

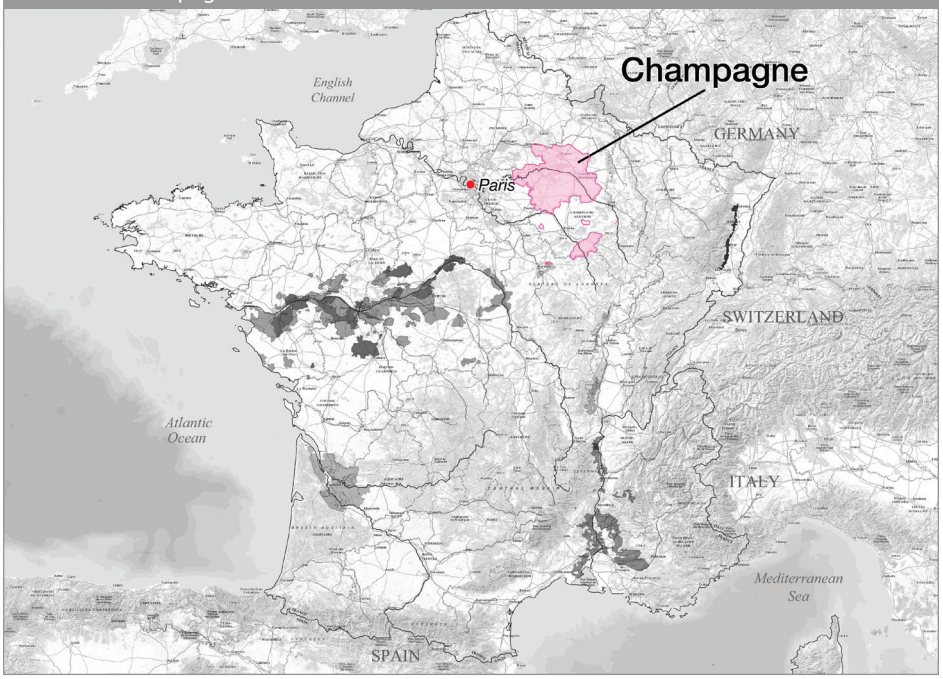
France

Champagne

Learning Points After studying this section, a student should be able to:

- Define Champagne
- Name the three grapes varieties used for making Champagne
- Name the three sub-regions of Champagne
- Know the basic steps of the méthode champenoise
- Understand French words for the steps of the méthode champenoise
- Name other methods of sparkling wine production and explain how they differ from the méthode champenoise

France — Champagne



Factors of Production

Location/Geography

- The Champagne region is located in northern France, about 90 miles northeast of Paris

Climate

- Cool continental
- Champagne hovers at the northern-most limit of vine growing
- Located at the 49th parallel, Champagne has no natural protection from the Atlantic
- With often cloudy, unpredictable weather, it is one of the coolest wine growing regions in the world



Soil
- Limestone and chalk
- Vine roots can dig deep in these soils, which provide good drainage while also retaining moisture
- The soils maintain a relatively constant temperature throughout the year

Grape Varieties
- White
  – Chardonnay
- Red
  – Pinot Noir
  – Meunier

Viticulture
- The northern location means that growers in Champagne face persistent threats of rain, frost, and hail



Vinification
- Its all about blends! Most champagne is a blend of:
  – Grapes (Chardonnay, Pinot Noir and Meunier)
  – Sub-regions, villages and vineyards
  – Vintages
- The wines of Champagne are made using the méthode champenoise, known as the méthode classique when used to make sparkling wines outside of Champagne. This very specific way of creating sparkling wine is encoded in the regional wine laws. All wines labeled Champagne must be sparkling and must use this method.

The Traditional Method of Making Sparkling Wine:
Méthode Champenoise

Step One
Making the Base Still Wine
Grapes are pressed quickly and gently to avoid retaining color from the skins of the red grape varieites (Pinot Noir and Meunier) and to prevent oxidation. The base wine is very light in color, low in alcohol and high acidity. Fermentation can occur in either stainless-steel tanks or oak barrels.



Step Two
Assemblage of the "Cuvée" — Assembling the Blend
Champagne can be a blend of grapes, vintages (seen on the label as non-vintage), regions, villages, or vineyards. The blend is made at this early stage.



Step Three
Secondary Fermentation — Creating the Bubbles
The base wine is then bottled with a syrupy mixture of yeast and sugar, called the liqueur de tirage. The bottle is sealed with a crown cap and, over time, the yeast metabolizes the sugar, creating a small amount of alcohol and carbon dioxide (CO_2) gas. The CO_2 is trapped in the bottle and creates the bubbles.



Step Four
Sur Lie Aging
After the liqueur de tirage has induced the secondary fermentation, the yeast cells gradually break down this is called autolysis. The wine is rested on the lees in the bottle (sur lie aging). By law, all Champagne must spend at least 12 months on the lees as part of the minimum 15 months of total aging required. Sur lie aging imparts aromas and flavors reminiscent of yeast, dough, and fresh-baked-bread.





Step Five
Riddling (Remuage) — Removal of Sediment Part 1
After aging, the lees must be removed from the bottle in order to have a clear wine. Each bottle is gently turned to gradually move the lees into its neck. This can be done by hand or by machine.

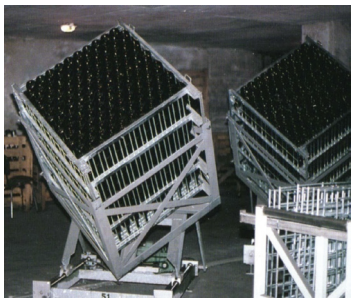




By Hand A pupitre is a wooden A-frame wine rack. It was first created by the famed widow Clicquot from her dining room table expressly for riddling champagne bottles. The rack holds 60 bottles, each of which is hand-turned. This process takes about 8 weeks to complete.

By Machine A gyropalette is a large machine that can hold 504 bottles at a time. It takes approximately 8 days to complete riddling by this machine.



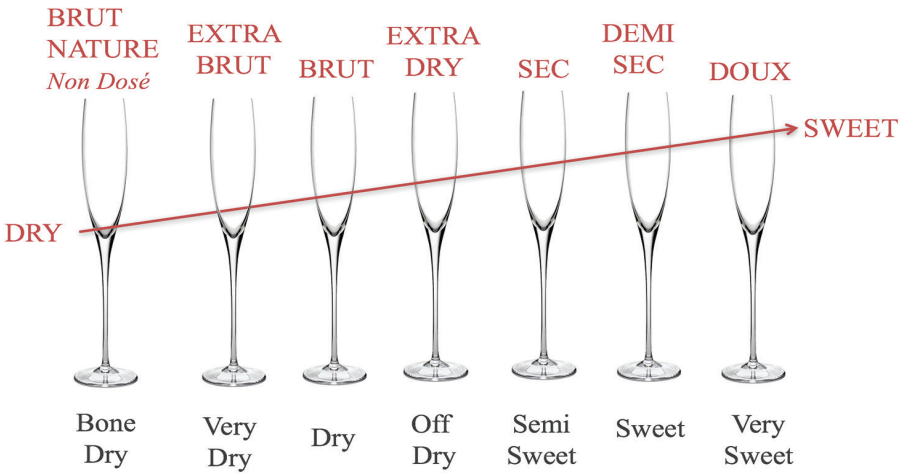


Step Six
Disgorging (Dégorgement) — Removal of Sediment Part 2
Once the sediment has collected in the neck of the bottle, it needs to be removed. To disgorge the sediment, each bottle's neck is frozen in an ice bath, so that the yeast can be ejected. This can be done by hand or, as is more often the case, by machine.



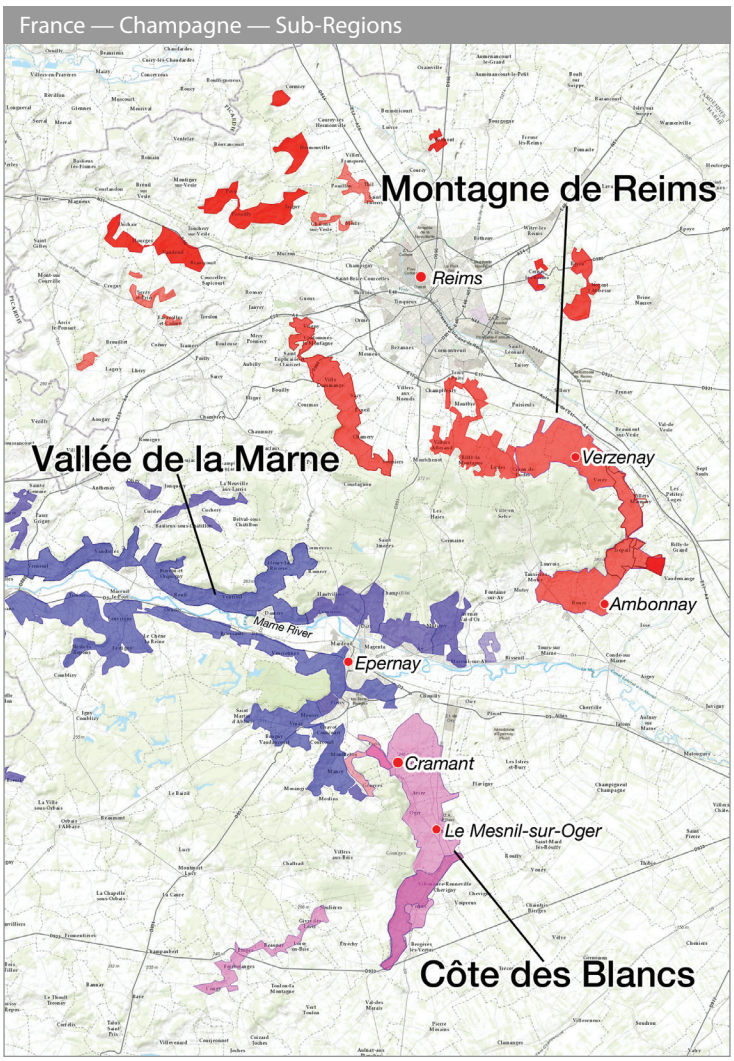
Step Seven
Dosage
After dégorgement, a mixture of wine and sugar called the liqueur d'expédition is added to the bottle. The amount of sugar added determines the sweetness level and, therefore, the style of the Champagne.

Champagne Sweetness Levels and Style Categories



Regional Wine Law — Champagne Appellations
- Champagne AOP
  – Sparkling wine made via the méthode Champenoise
- Champagne Sub-Regions
  – Vallée de la Marne
  – Côte des Blancs
  – Montagne de Reims

Champagne Age Designations
- Non-Vintage (NV) Champagne
  – Aged for a minimum of 15 months, with at least 12 months spent on the lees
  – Many producers far exceed these minimums
- Vintage Champagne
  – Aged for a minimum of 36 months
  – Many producers far exceed this minimum





Champagne Styles

- Rosé A pink-colored Champagne
- Blanc de Blancs 100% Chardonnay Champagne
- Blanc de Noirs Champagne made with only the dark grapes Pinot Noir and Meunier

Champagne Special Cuvées and Other Bottlings

- Single Vineyard A noted single vineyard on the label
- Clos or Mono Parcel A noted single parcel in a vineyard under a single ownership
- Cuvée Prestige or Tête de Cuvée The top-end bottling of a particular Champagne house or producer

Types of Champagne Producers

- Négociants Champagne producers who buy grapes, juice, or finished wine and bottle the wine under their own name or label
- Growers Champagne producers that make wine from grapes grown in vineyards they own

Vintage Variation

- Huge weather extremes mean that quality varies from season to season and year to year, resulting in wide vintage variations
- There are a limited number of vintage wines in a decade
- Most Champagnes are non-vintage wines

Top Recent Vintages of Champagne (indicated in color)



Methods of Making Sparkling Wine

Méthode Champenoise	Transfer Method	Tank / Charmat Method
Base wine is bottled Sugar and yeast added Second fermentation Yeast autolysis Disgorgement Dosage All steps happen in the same bottle.	Base wine is bottled Sugar and yeast added Second fermentation Yeast autolysis Bottles emptied into large tanks under pressure Filtered Dosage Rebottled	Base wine is sealed in pressurized tank Sugar and yeast added Second fermentation in tank Filtered under pressure Dosage under pressure
Advantages Extended lees contact Intense lees flavor	Advantages Lees contact Eliminates the need for riddling	Advantages Saves time! Fermentation finishes in 4 – 5 days No costly riddling or disgorging Best process for aromatic varieties
Examples Champagne Crémant Cava Franciacorta	Examples Large- and small-format bottling of Champagne and other sparkling wines	Examples Prosecco Moscato d'Asti Lambrusco

World Sparkling Wines



French Sparkling Wines

Crémant A term used for all French sparkling wines in France grown outside Champagne that are produced by the méthode champenoise (though law requires that the method must be identified to on labels as méthode classique)

Examples
- Crémant de Bourgogne Burgundy
- Crémant d'Alsace Alsace
- Crémant de Loire Loire Valley

Italian Sparkling Wines

Asti DOCG (Piedmont)
- Moscato d'Asti – made by the Charmat/tank method

Prosecco (Veneto)
- Made by the Charmat/tank method

Lambrusco (Emilia-Romagna)
- Made by the Charmat/tank method

Franciacorta DOCG (Lombardy)
- Made by the méthode classique (often referred to in Italian as the metodo classico or metodo tradizionale)
- Made with similar grape varieties to traditional Champagne
  – Chardonnay
  – Pinot Nero
  – Pinot Bianco


Lambrusco

Spanish Sparkling Wines

Cava DO (Catalonia)
- Classic Method
- Grapes
  – Xarel-lo
  – Parellada
  – Macabeo

Spain produces more sparkling wine than any other country!

Champagne and World Sparkling Wines

Quiz Questions

Which of the following is not a grape grown in Champagne?
a. Pinot Noir
b. Meunier
c. Riesling
d. Chardonnay

Sur lie aging refers to:
a. Botrytis-affected dessert wines
b. Wines aged in new, French oak
c. Fortified wines
d. Aging wines on broken-down yeast cells

How does sur lie aging affect the flavor of Champagne?
a. Increases the alcohol
b. Makes a wine sweeter
c. Makes a wine drier
d. Gives the wine a yeasty, fresh-baked-bread aroma and flavor

If a Champagne is labeled Blanc de Blancs, which grape variety has been used?
a. Pinot Noir
b. Meunier
c. Merlot
d. Chardonnay

Champagne vineyards are best known for which soil type?
a. Sand
b. Clay
c. Granite
d. Chalk

Prosecco is made by which method of sparkling wine production?
a. Méthode Champenoise
b. Tank method/Charmat method
c. Transfer method
d. None of the above

France



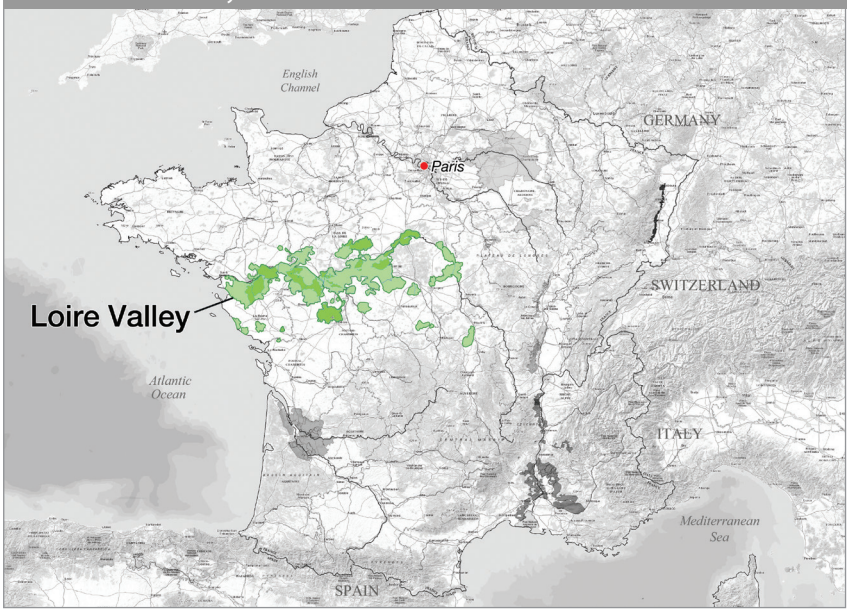
Loire Valley

Learning Points After studying this section, a student should be able to:

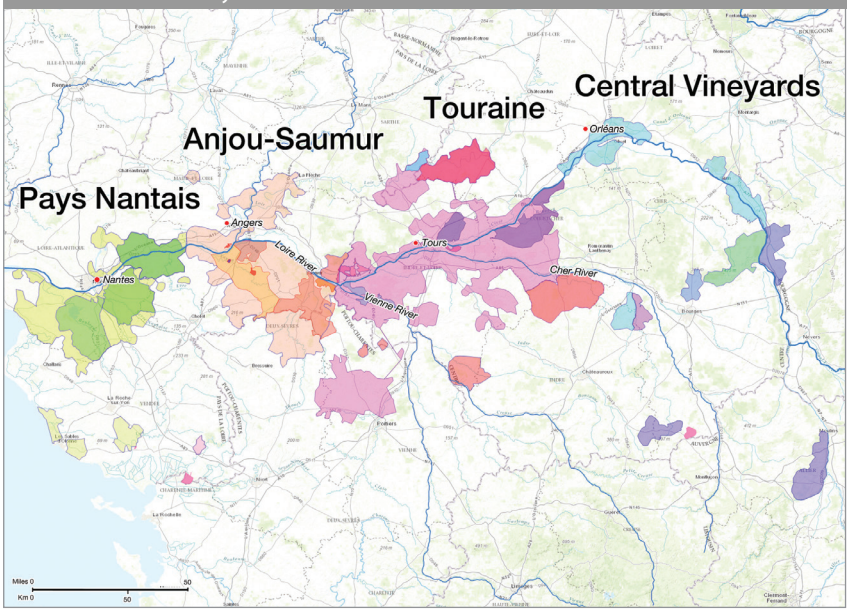
- Name the major sub-regions of the Loire Valley
- Know the five primary grape varieties of the Loire Valley
- Link which grapes are grown in which appellations

Introduction The Loire is the longest river in France, originating in the center of the country in the Massif Central and meandering 629 miles to the Atlantic Ocean. The wine regions along its banks are remarkably diverse with distinct microclimates, wine styles, grape varieties, and growing conditions.

France — Loire Valley



France — Loire Valley — Overview



Pays Nantais

Location/Geography
- Atlantic Coast

Climate
- Cool and wet maritime
- Affected by proximity to the Atlantic Ocean

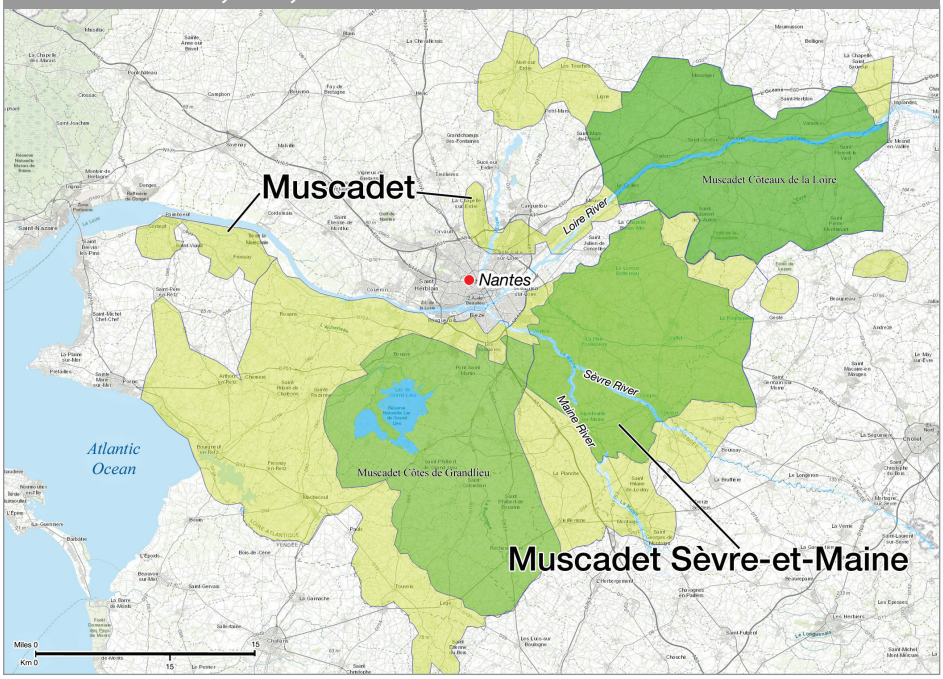
Soils
- Gravel and sand over schist and granite

Grape Varieties
- Melon de Bourgogne

Vinification
- Sur lie This term refers to the technique of aging wines on the remains of post-fermentation yeast cells (or "lees") to add complexity and richness to the finished wine

Pays Nantais Appellations
- Muscadet AOP
- Muscadet Sèvre-et-Maine AOP

France — Loire Valley — Pays Nantais



Anjou-Saumur



Location/Geography
- To the east of the Pays Nantais

Climate
- Maritime/continental (shifting from the former to the latter as vineyard locations move inland)
- Humid

Grape Varieties
- White
  – Chenin Blanc
- Red
  – Cabernet Franc

Anjou-Saumur Appellations
- Anjou-Villages AOP
  – Grape Variety
    – Red
      – Cabernet Franc
  – Vinification
    – Dry red wines

Saumur AOP
- Grape Varieties
  – White
    – Chenin Blanc
  – Red
    – Cabernet Franc
- Vinification
  – This AOP is well known for Chenin Blanc–based sparkling wines



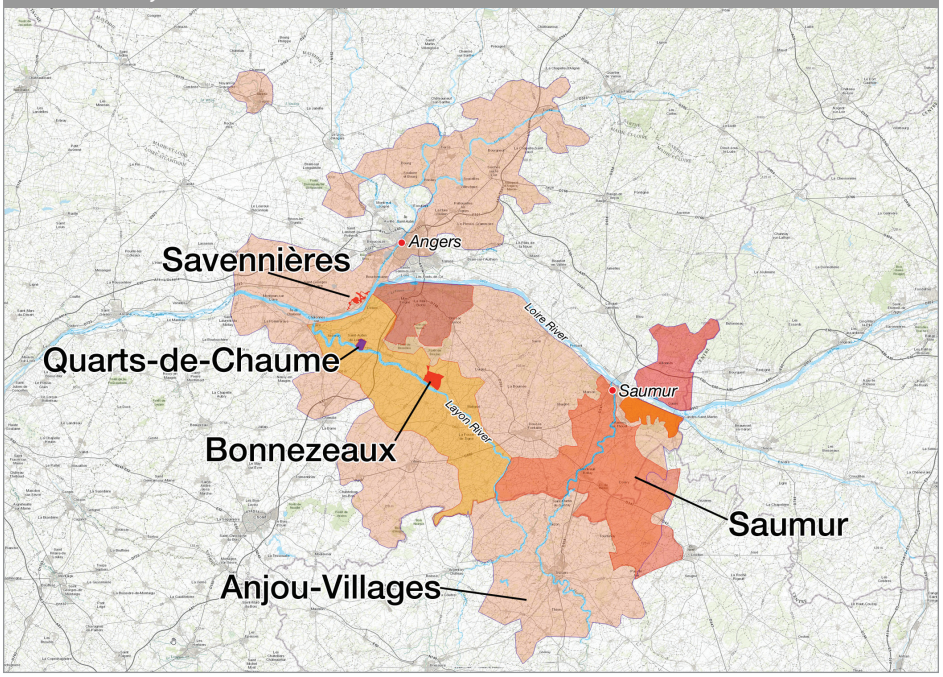
Château de Saumur

Savennières AOP
- Location North of the Loire River
- Aspect Steep, south-facing hillsides
- Grape Variety
  – White
    – 100% Chenin Blanc
- Vinification Dry white wines

Bonnezeaux AOP
- Location South of the Loire River on the bank of the Layon River
- Climate Humid (proximity to two rivers)
- Grape Variety
  – White
    – 100% Chenin Blanc
- Viticulture Late-harvest, botrytis-affected grapes
- Vinification Sweet wines

Quarts-de-Chaume AOP
- Location South of the Loire River on the bank of the Layon River
- Climate Humid (proximity to two rivers)
- Grape Variety
  – White
    – 100% Chenin Blanc
- Viticulture Late-harvest, botrytis-affected grapes
- Vinification Sweet wines

France — Anjou-Saumur



Touraine



Location/Geography
- To the east of Anjou-Saumur

Climate
- Continental — less maritime influence as vineyard locations shift inland toward the east

Soils
- Tuffeau (soft, limestone)

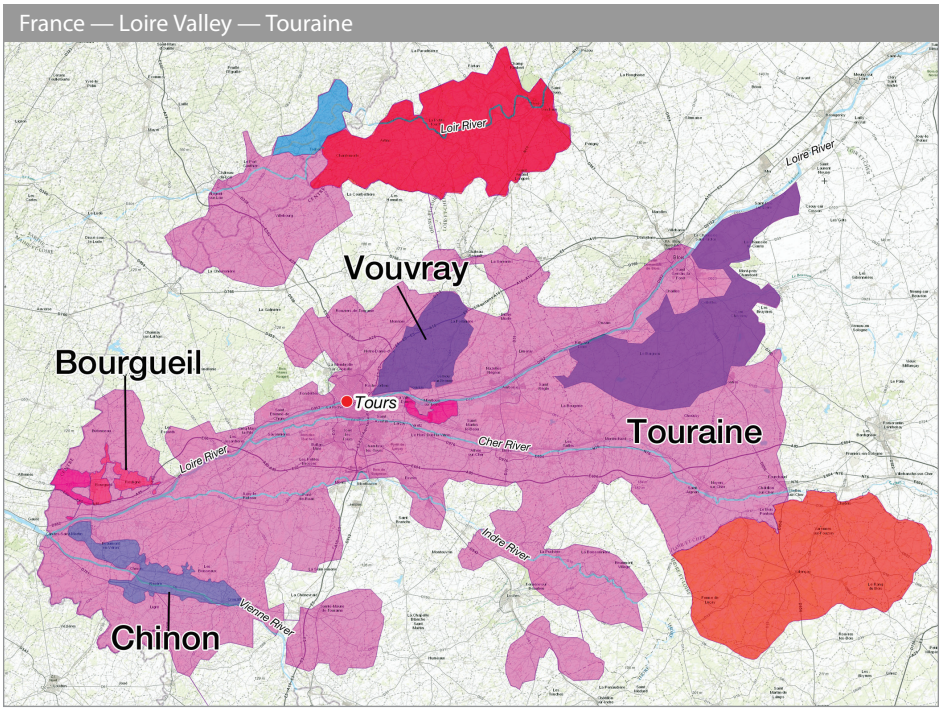
Grape Varieties
- White
  - Chenin Blanc
- Red
  - Cabernet Franc

Touraine Appellations
- Chinon AOP
  - Location South of the Loire River
  - Grape Varieties
    - Red
      - Cabernet Franc
  - Vinification
    - Dry red wines

- Bourgueil AOP
  - Location North bank of the Loire River
  - Grape Varieties
    - Red
      - Cabernet Franc
  - Vinification
    - Dry red wines



- Vouvray AOP
  - – Location North bank of the Loire River
  - – Soil Tuffeau
  - – Grape Varieties
    - – White
      - – 100% Chenin Blanc
  - – Vinification
    - – Sparkling wines
    - – Dry wines
    - – Off-dry wines
    - – Sweet wines (*moelleux)*



Central Vineyards

Location/Geography
- East of Touraine in the center of France

Climate
- Continental

Soils
- Silex (flint), limestone
- Kimmeridgian clay

Grape Varieties
- White
  - – Sauvignon Blanc
- Red
  - – Pinot Noir

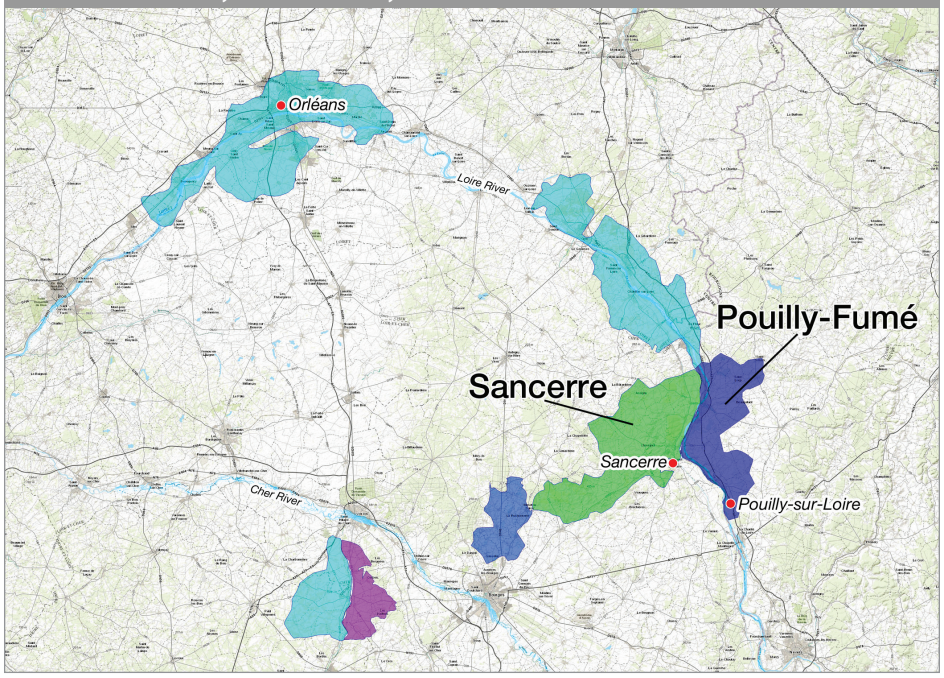
Central Vineyard Appellations

- Sancerre AOP
  - Location Western bank of the Loire River
  - Grape Varieties
    - White
      - 100% Sauvignon Blanc
    - Red
      - 100% Pinot Noir
  - Vinification
    - Dry red and white wines

- Pouilly-Fumé AOP
  - Location Eastern bank of the Loire River
  - Grape Varieties
    - White
      - 100% Sauvignon Blanc
  - Vinification
    - Dry white wines only



France — Loire Valley — Central Vineyards



Loire Valley

Quiz Questions

Which of the following is not a style of Vouvray AOP?
a. Sparkling
b. Dry white
c. Sweet
d. Dry red

What does sur lie aging refer to?
a. Botrytis dessert wines
b. Wines aged in new French oak
c. Fortified wines
d. Aging wines in on the lees

How does sur lie aging affect a finished wine?
a. Increases the alcohol
b. Makes a wine sweeter
c. Makes a wine drier
d. Gives a wine additional expressiveness and richness

Which of the following is a sweet wine appellation of Anjou-Saumur?
a. Sancerre
b. Chinon
c. Quarts-de-Chaume
d. Muscadet

Tuffeau is an important soil type of which area?
a. Pays Nantais
b. Anjou-Saumur
c. Touraine
d. Central Vineyards

Match the appellation with the grape variety. Some grapes may be used more than once.

APPELLATION (AOP)	GRAPE VARIETY
Chinon ☐	
Sancerre Blanc ☐	☐ Pinot Noir
Bourgueil ☐	☐ Sauvignon Blanc
Muscadet de Sèvre-et-Maine ☐	☐ Chenin Blanc
Savennières ☐	☐ Melon de Bourgogne
Pouilly-Fumé ☐	☐ Cabernet Franc
Vouvray ☐	
Sancerre Rouge ☐	

France

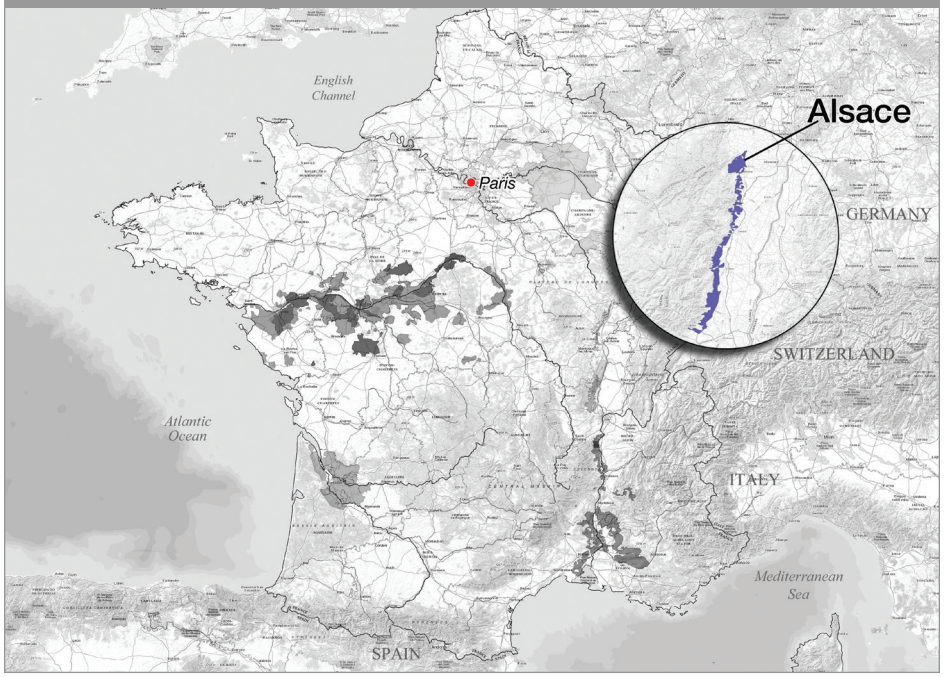


Alsace

Learning Points After studying this section, a student should be able to:

- Know the location of Alsace in France
- Know the general history of Alsace and how it has impacted wine style
- Remember the definition of a rain shadow
- Understand how the rain shadow in Alsace affects the climate, viticulture, and wine style
- Know the four primary white grape varieties of Alsace

France — Alsace



Factors of Production

Historical Background
Alsace is among the most distinctive wine regions in France. Its geographical isolation and history as a highly desirable — and hotly disputed — region with alternating French and German rule over the centuries has shaped its singular culture and wine style. The wines remain strongly connected to both German and French roots, as some of the prominent grapes are Germanic in origin, though French winemaking techniques are often employed.

Location/Geography

- Alsace is located in the northeastern corner of France along the border with Germany. It is nestled between the Vosges Mountains to the west and the Rhine River to the east. The Vosges Mountains create a rain shadow protecting the region from the harsh, rainy weather coming from Northern France and the Atlantic.

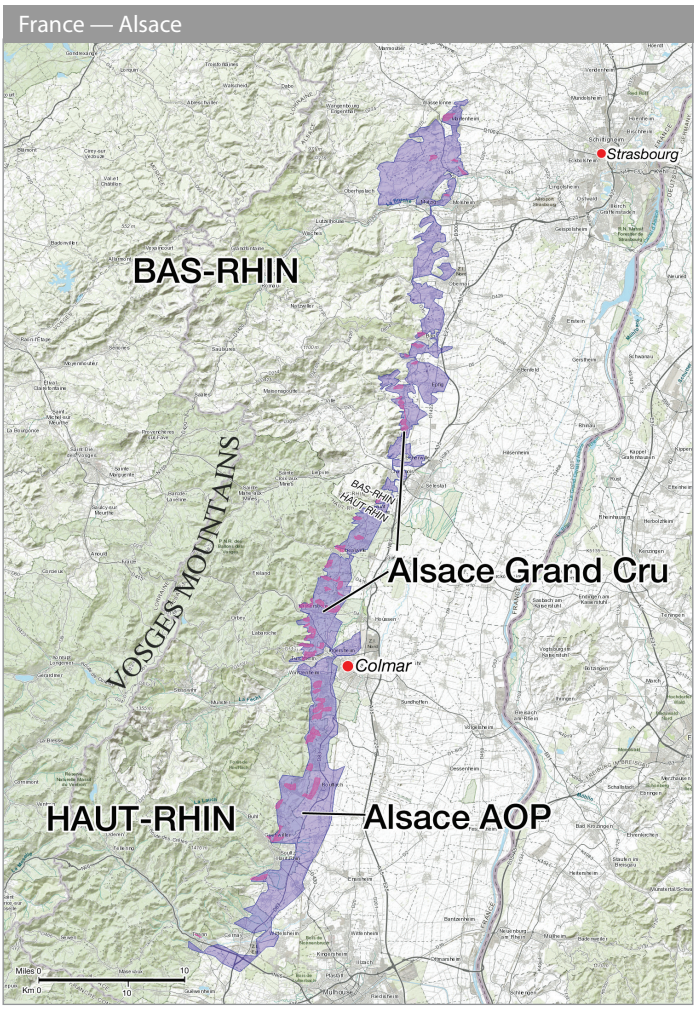
- The region is divided in half along the départmental boundaries
  - Bas-Rhin is to the north and has lower elevation and less protection from the Vosges
  - Haut-Rhin is to the south, has higher elevation, and is the location of the best vineyards

Climate

- Cool continental because of the northerly latitude
- Dry, sunny summers due to the rain shadow from the Vosges
- Alsace is one of the driest regions in France

Topography/Aspect

- Vineyards are planted on the rolling foothills of the Vosges Mountains
- The region also features flat plains along the Rhine River





Soil
- There is tremendous diversity across the region because of ancient geologic activity, with various soil types including marl, limestone, gneiss, schist, sandstone, granite, clay, and volcanic soils

Grape Varieties
- White
  - Riesling
  - Gewurztraminer
  - Muscat
  - Pinot Gris
  - Pinot Blanc
  - Sylvaner
- Red
  - Pinot Noir

Over 90% of Alsace wines are made from white grape varieties.

Viticulture
- Long, cool, dry growing season due to the rain shadow cast by the Vosges Mountains
- The better vineyards are planted on the lower slopes facing east-southeast

Cause	Effect
Rain shadow from the Vosges Mountains	Drier climate Sunnier climate (not necessarily warmer) Long growing season Riper grapes Higher alcohol potential Fuller-bodied wines

Vinification
- Neutral casks often used for fermentation and aging
- Little to no use of new oak

Regional Wine Law
- Most wines are labeled by reference to the single grape variety utilized

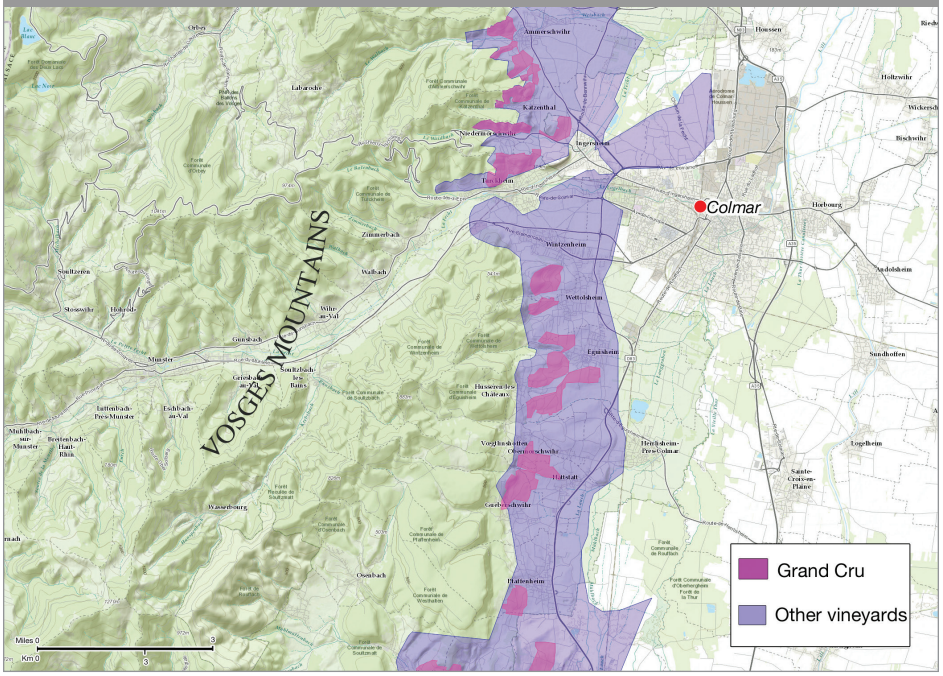
Wines labeled by variety must be made entirely from the grape indicated.

Alsace Appellations
- Alsace/Vin d'Alsace AOP
  - One AOP covering the entire region
  - All Alsace AOP wines must be bottled in the traditional tall, slender Flûte d'Alsace-style bottle

Alsace Grand Cru AOP

- 51 Grands Crus vineyards
- Four grape varieties are allowed to be planted in these vineyards
- These varieties are matched with the specific soil type and terroir of the specific vineyard site
  - Riesling
  - Gewurztraminer
  - Muscat
  - Pinot Gris

France — Alsace — Grands Crus



Crémant d'Alsace AOP

- Méthode Traditionnelle Sparkling Wines that are usually made from a blend of grapes

VT and SGN are single variety wines. Only Riesling, Gewurztraminer, Muscat, and Pinot Gris can be used.

Late Harvested Wines
Vendange Tardive (VT) Late-harvest (may also be affected by botrytis) Rich, full-bodied, but not always sweet Sélection de Grains Nobles (SGN) These wines are always affected by botrytis, made in very small quantities, only in vintages when growing conditions are conducive to their production

Alsace



Quiz Questions

What is the name of the mountain range that protects Alsace?
a. Vosges
b. Massif Central
c. Pyrenees
d. Alps

What is the name of the river that flows to the east of Alsace?
a. Loire
b. Rhône
c. Mosel
d. Rhine

What does a rain shadow provide?
a. Protection from harsh weather
b. More rain
c. More wind
d. Hail

Which of the following grapes is not allowed in Alsace Grand Cru AOP wines?
a. Gewurztraminer
b. Muscat
c. Pinot Noir
d. Pinot Gris

What type of wine is Sélection de Grains Nobles (SGN)?
a. Sparkling wine
b. Fortified wine
c. Dry red wine
d. Botrytis-affected sweet wine

What type of wine is Crémant d'Alsace?
a. Sparkling wine
b. Fortified wine
c. Dry red wine
d. Botrytis-affected sweet wine

If a wine from Alsace is labeled by grape variety, it must contain _____ % of that variety.
a. 100%
b. 90%
c. 85%
d. 75%

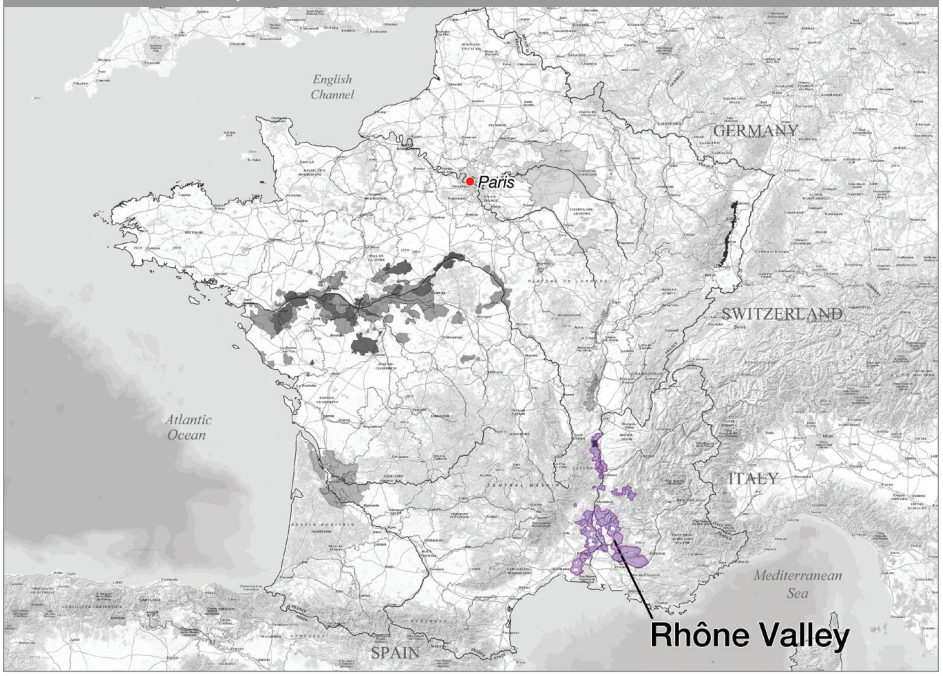
France

Rhône Valley

Learning Points After studying this section, a student should be able to:

- Name the main white and red grape varieties of the Northern Rhône
- Name the main white and red grape varieties of the Southern Rhône
- Understand the climate differences between the Northern and Southern Rhône
- Define and understand the impact of the Mistral

France — Rhône Valley



The Northern Rhône Valley



Location/Geography

- The Northern Rhône's vineyards run along a narrow band on both sides of the Rhône River. The band begins about 15 miles south of Lyon and extends for roughly 50 miles, bookended by the towns of Vienne in the north and Valence in the south.

Climate

- Continental
- The Rhône River, which originates in Switzerland, acts as a climate moderator for the Northern Rhône's vineyards, warming the adjacent slopes and reflecting sunlight up to the vines
- Mistral winds are a prominent airflow that begins in Switzerland near the mouth of the river, picking up speed as it heads south into France and into the Northern Rhône Valley. It slightly warms the area and dries the climate, helping prevent mildew and other molds.

Topography/Aspect

- Steep hillside vineyards



Soil
- Granite
- Schist

Grape Varieties
- White
  – Viognier
  – Marsanne
  – Roussanne
- Red
  – Syrah



Viticulture
- Vineyards are planted on steep slopes overlooking the river
- Vines are often staked to the ground to protect them from the intense Mistral wind and from erosion due to the steep grade
- Terraces built in Roman times are still maintained, to permit work in the vineyards, which is perilous

Vinification
- Single-variety wines dominate, with fewer blends than most French regions
- Both white and red wines are typically fermented and aged in oak, often in large oak foudres
- Many producers ferment in stainless steel and then age wines in a combination of new and used oak vessels
- Co-fermentation Some red wines are made by co-fermenting or blending small percentages of white grapes with Syrah, increasing aromatic complexity and lessening the prominence of tannin



Appellations of the Northern Rhône

Côte-Rôtie
- Red wines only
- Syrah with a maximum of 20% Viognier

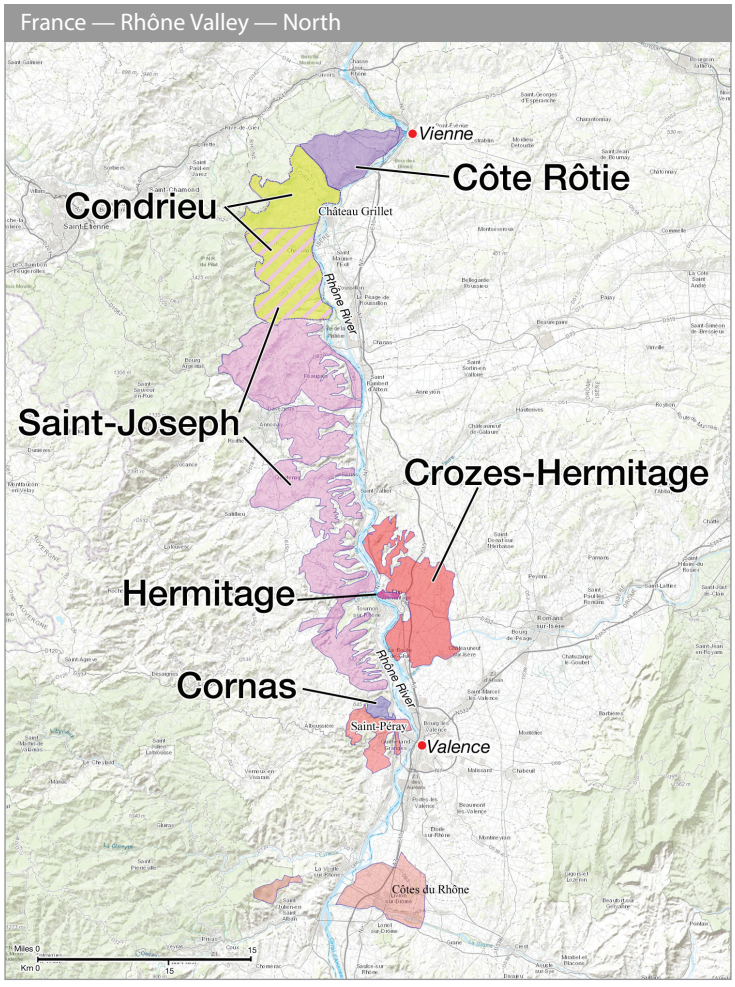
Condrieu
- White wines only
- 100% Viognier

Saint-Joseph
- Red wines: Syrah with maximum 10% Roussanne and Marsanne
- White wines: Roussanne and Marsanne

Crozes-Hermitage
- Red wines: Syrah with maximum 15% Roussanne and Marsanne
- White wines: Roussanne and Marsanne

Hermitage
- Red wines: Syrah with maximum 15% Roussanne and Marsanne
- White wines: Roussanne and Marsanne

Cornas
- Red wines only
- 100% Syrah



The Southern Rhône Valley



Location/Geography
- 30-mile gap between the Northern Rhône and the Southern Rhône

Climate
- Mediterranean
- Mistral winds serve to cool the area
- Hot summers moderated by significant diurnal temperature swings
- The Rhône River moderates and cools temperatures in nearby vineyards

Topography/Aspect
- Flatter plains, scrubland, and broader lowlands descending toward the Mediterranean Sea

Soil
- Alluvial clays
- Alluvial deposits of large river rocks (galets)

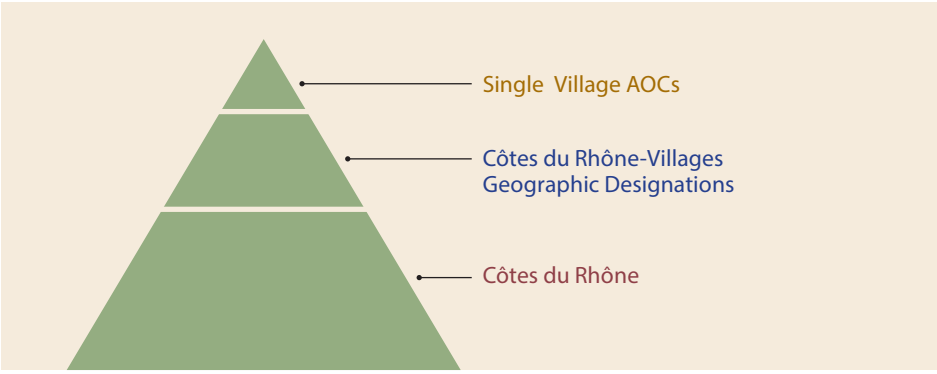
Grape Varieties
- White
  - Roussanne
  - Clairette
  - Grenache Blanc
- Red 90% of production
  - Grenache
  - Syrah
  - Mourvèdre

Viticulture
- Bush (gobelet) vine training
- Many vineyards planted on flat valley floor

Vinification
- Blends dominate, fewer single-variety wines
- Blending of grapes; almost all wines are blends
- Oak use depends on the area and the producer, but usually large oak casks rather than barriques
- No chaptalization is allowed



Southern Rhône AOC System



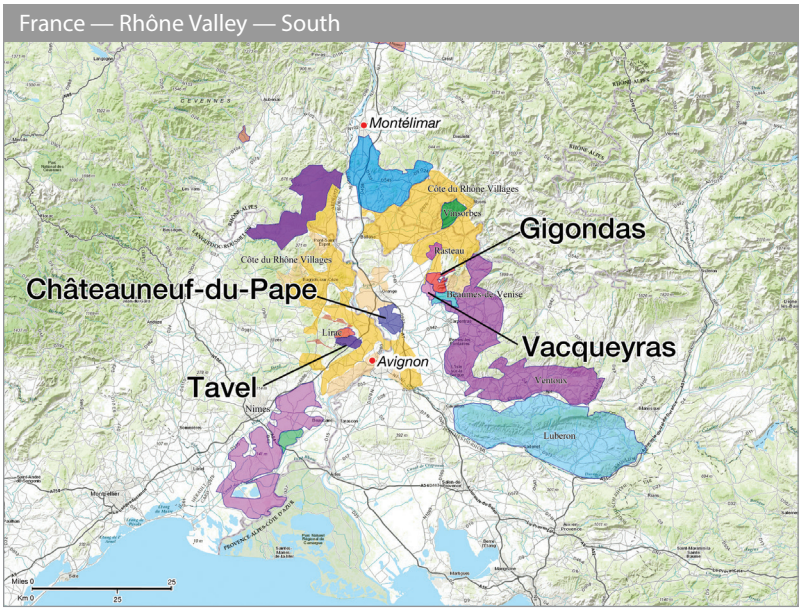
Southern Rhône Single Village Appellations

Châteauneuf-du-Pape
- White
  – Blend of local varieties
- Red
  – Grenache-based blends
    – 14 grape varieties plus variations authorized

Gigondas
- Red
  – Grenache-based blend

Vacqueyras
- White
  – Blend of local varieties
- Red and rosé wines
  – Grenache-based blends

Tavel
- Rosé only
  – Grenache-based



Rhône Valley



Quiz Questions

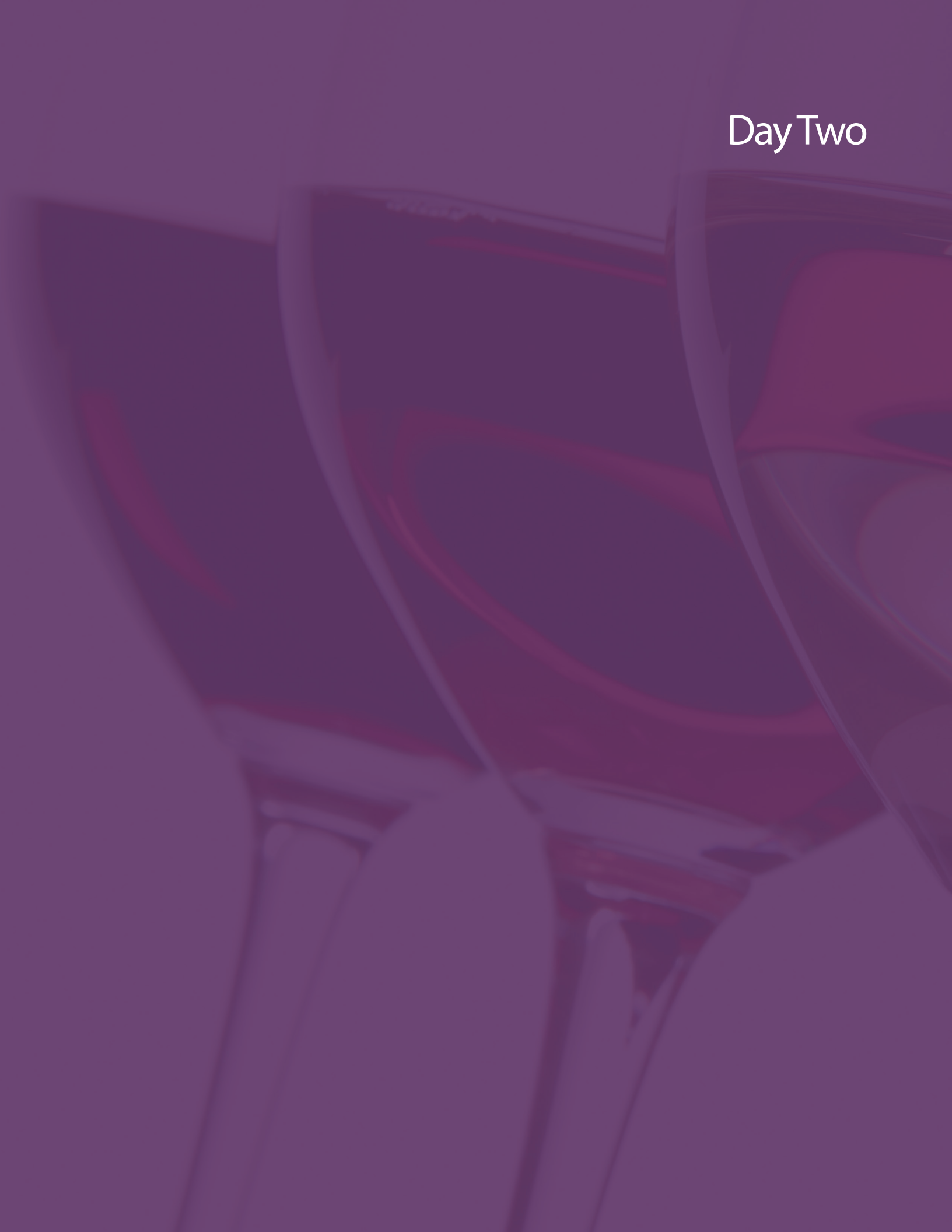
For each of the following, note the difference between the Northern Rhône and the Southern Rhône.

Factor of Production	Northern Rhône	Southern Rhône
Climate		
Topography		
Important Soil Types		
Main Red Grape Variety		
Main White Grape Variety		
Blends or Single-Variety Wines		
Mistral Wind		

Match the appellation with the grape variety. Some grapes may be used more than once.

APPELLATION (AOP)	GRAPE VARIETY
Côte-Rôtie ☐	☐ Viognier
Condrieu ☐	☐ Syrah
Châteauneuf-du-Pape ☐	☐ Grenache
Hermitage Blanc ☐	☐ Marsanne
Tavel ☐	
Gigondas ☐	
Cornas ☐	

Day Two





Italy



Learning Points

After studying this section, a student should be able to:

- Know the location of Italy's major wine regions
- Know the primary grape varieties of the highlighted regions and their primary wine style
- Know the prominent geographic features of Italy including the major mountain ranges and bodies of water
- Understand how these geographic features play a role in viticulture

Italy — Regions



Factors of Wine Production

Introduction

- Etruscans and Greek settlers produced wine in Italy before the rise of the Romans, who developed the ancient world's most extensive wine culture. Evidence indicates that vines were planted widely across the peninsular "boot" by the 3rd century, with special concentration in areas close to Rome. Today, Italy offers an astonishing array of wines, thanks to innumerable indigenous varieties that have been protected by proud local wine cultures — but also popularized worldwide in tandem with the country's famous cuisine.

Location/Geography

- Italy is made of twenty very independent regions, covering a large expanse from the snowcapped northern Alpine regions — bordering Austria and Switzerland — down to a latitude that is actually south of the northern edge of the African continent. The peninsula of Italy lies between the Tyrrhenian and Ligurian seas on the west, the Ionian Sea to the south, and the Adriatic Sea to the east. The Apennine Mountains run like a backbone down the center of the peninsula, diversifying the altitudes at which vines can be planted and separating regions in a way that has historically protected the distinctiveness of regional varieties and wine styles.

Climate

- Spans from cool, continental in the north to warm Mediterranean in the south

Topography/Aspect

- Italy is capped in the north by the Alps and defined lengthwise by the spine of the Apennine Mountains

Grape Varieties

- 1,300 registered grape varieties, hundreds of which are indigenous to Italy

Viticulture

- A remarkable total of 900,000 registered vineyards



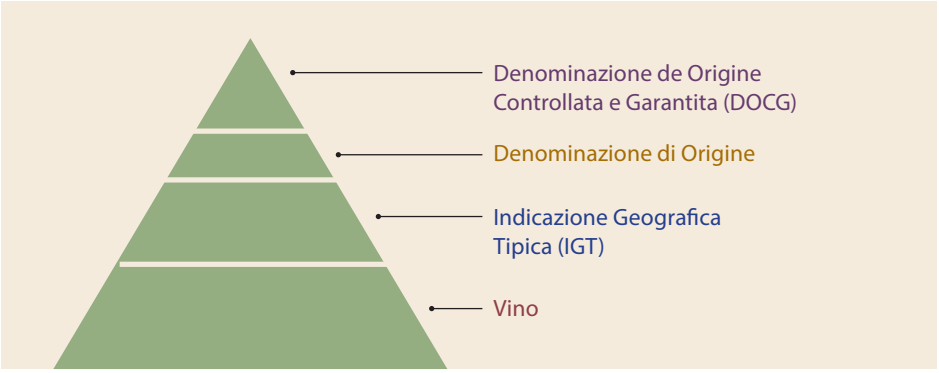


Italian Wine Law and Classification

Wines without geographic indication	Wines with geographic indication
• Vino These are generic wines that can be blanco, rosso or rosato and labeled with or without a vintage	• IGP Indicazione Geografica Protetta - Includes IGT Indicazione Geografica Tipica • DOP Denominazione di Origine Protetta - Includes DOC and DOCG • A producer may choose which term to use depending on one's classification within the "old" system, meaning producers in a traditional DOCG zone most likely will not use the DOP acronym.

The Denominazione di Origine Controllata (DOC) system was introduced in 1963 as a means of formalizing and protecting Italian wine appellations.

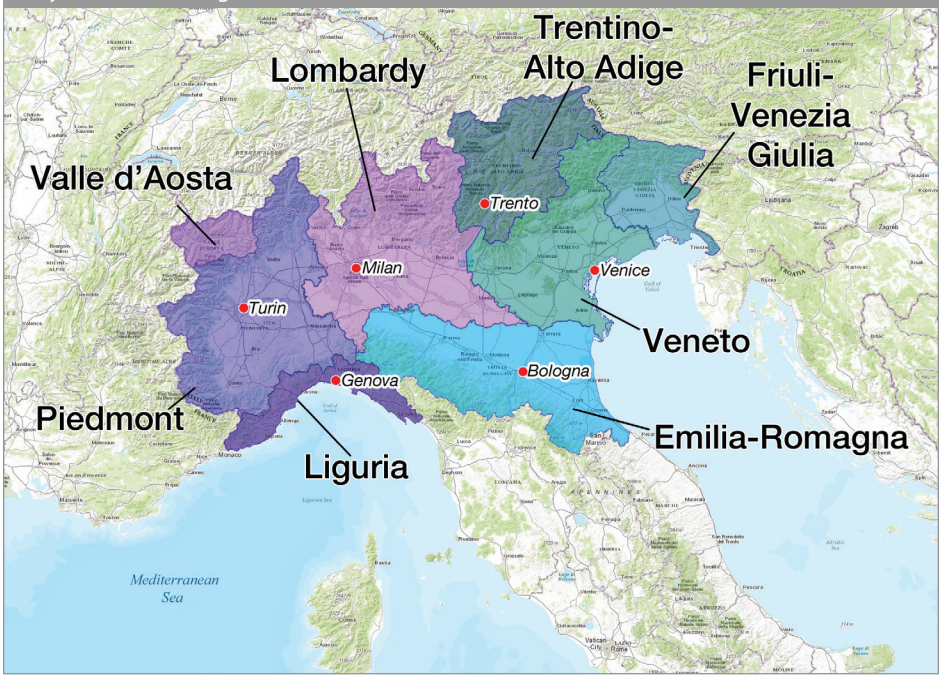
Italian Wine Classification



Helpful Italian Label Terminology
Classico A traditional, theoretically superior vineyard area within a DOC or DOCG
Riserva Means "reserve" and is legally defined. This term usually indicates extended ageing (in cask, then bottle) and can denote lower yields and higher alcohol depending on the appellation.
Superiore Denotes higher level of alcohol or longer aging depending on the appellation
Spumante Sparkling
Frizzante Lightly sparkling
Metodo Classico Traditional method for making sparkling wines
Secco Dry
Amabile Off-Dry
Dolce Sweet
Recioto/Passito Wine made from dried grapes that is often sweet

Northern Italy

Italy — Northern Regions



Piedmont — Factors of Production
Home to some of Italy's finest wine



Location/Geography
- Piedmont is located in Northwestern Italy, bordering both France and Switzerland. Piedmont is actually a French word meaning "foot of the mountain"; the region is cradled by the Alps to the north and west and the Apennines to the south and east. The verdant Po River, Italy's most important, begins in Piedmont.

Climate
- Continental with a rain shadow effect from the Alps protecting the wine region

Topography/Aspect
- Mountains and rolling foothills

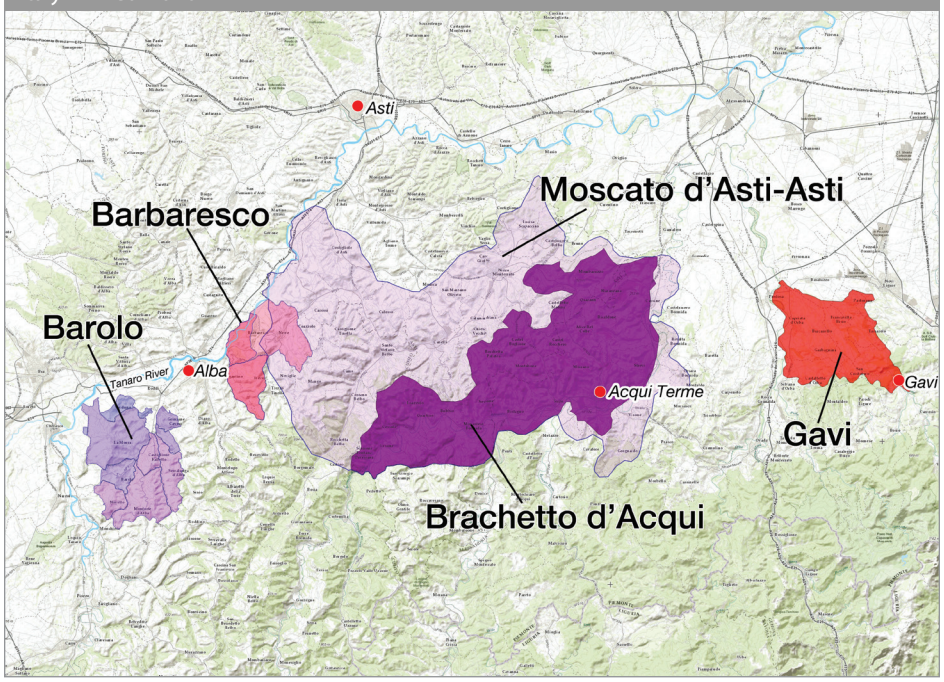
Soil
- Limestone and sandstone

Grape Varieties
- White
  - Moscato
  - Cortese
  - Arneis
- Red
  - Nebbiolo
  - Barbera
  - Dolcetto
  - Brachetto

Nebbia is a pervasive fog that often settles over the vineyards near harvest time. It is thought that this is how the Nebbiolo grape was named.



Italy — Piedmont



Appellations of Piedmont



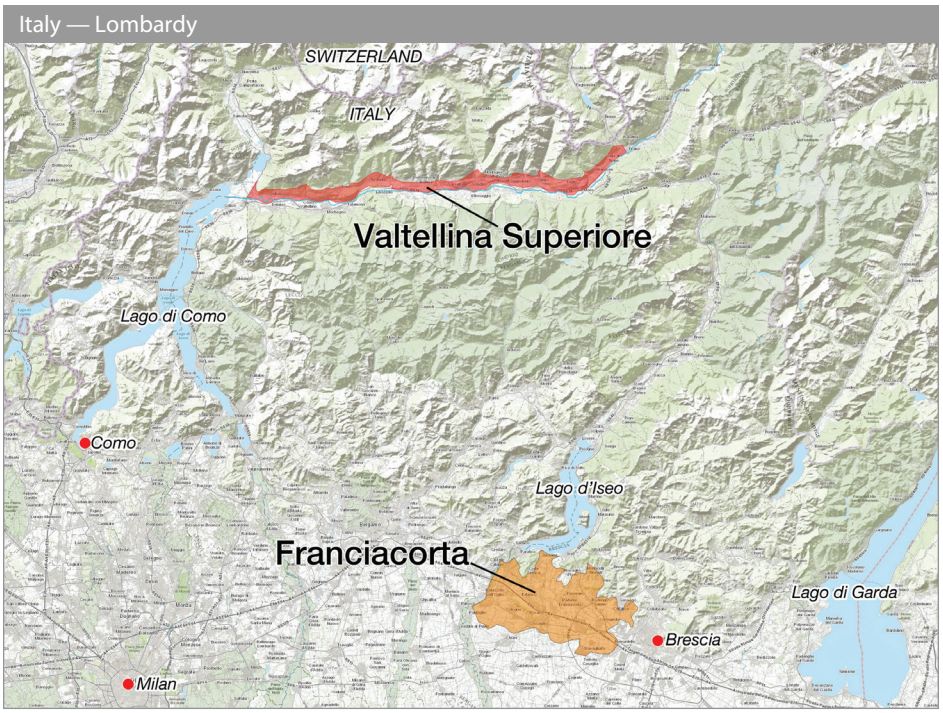
Barolo and Barbaresco DOCG
- Grape Variety
  - Red
    - 100% Nebbiolo
- Viticulture/Aspect The best vineyards are on hillsides with optimal exposure to ripen Nebbiolo
- Vinification
  - Dry red wines
  - Long oak aging in large barrels or small barriques, depending on producer
  - Time in oak and minimum aging requirements are stipulated by law
    - Barolo requires 38 months total aging with a minimum of 18 months in oak
    - Barbaresco requires 26 months total aging with a minimum of 9 months in oak

Moscato d'Asti / Asti DOCG
- Grape Variety
  - White
    - Moscato
- Vinification
  - Moscato d'Asti: Off-dry, frizzante sparkling wines
  - Asti DOCG: White, spumante, or metodo classico sparkling wines

Barbera d'Asti DOCG
- Grape Variety
  - Red
    - Barbera
- Vinification
  - Dry red wines

Gavi DOCG
- Grape Variety
  - White
    - Cortese
- Vinification
  - Dry white wines

Brachetto d'Acqui DOCG
- Grape Variety
  - Red
    - Brachetto
- Vinification
  - Sweet, sparkling red wines





Lombardy

Location/Geography
- Northeast of Milan in the foothills of the Alps near the famous lakes Como, Iseo, and Garda

Climate
- Cool continental

Topography/Aspect
- Mountainous and rolling foothills

Grape Varieties
- White
  - Chardonnay
  - Pinot Bianco
- Red
  - Pinot Nero
  - Nebbiolo

Appellations of Lombardy

- Franciacorta DOCG
  - – Grape Varieties
    - – White
      - – Chardonnay
      - – Pinot Bianco
    - – Red
      - – Pinot Nero
  - – Vinification
    - – Metodo classico sparkling wines only

- Valtellina Superiore DOCG
  - – Climate
    - – High altitude and alpine
    - – Abundant sunshine allows for a long, slow growing season
  - – Grape Variety
    - – Red
      - – Nebbiolo
  - – Vinification
    - – Oak-aged, dry red wines

Trentino-Alto Adige



Location/Geography

- On the Alpine border of Austria and Switzerland. A region of two distinct cultures with two nearly autonomous regions, Germanic to the north and Italian to the south

Climate

- Continental with cold winters and surprisingly warm summers

Topography/Aspect

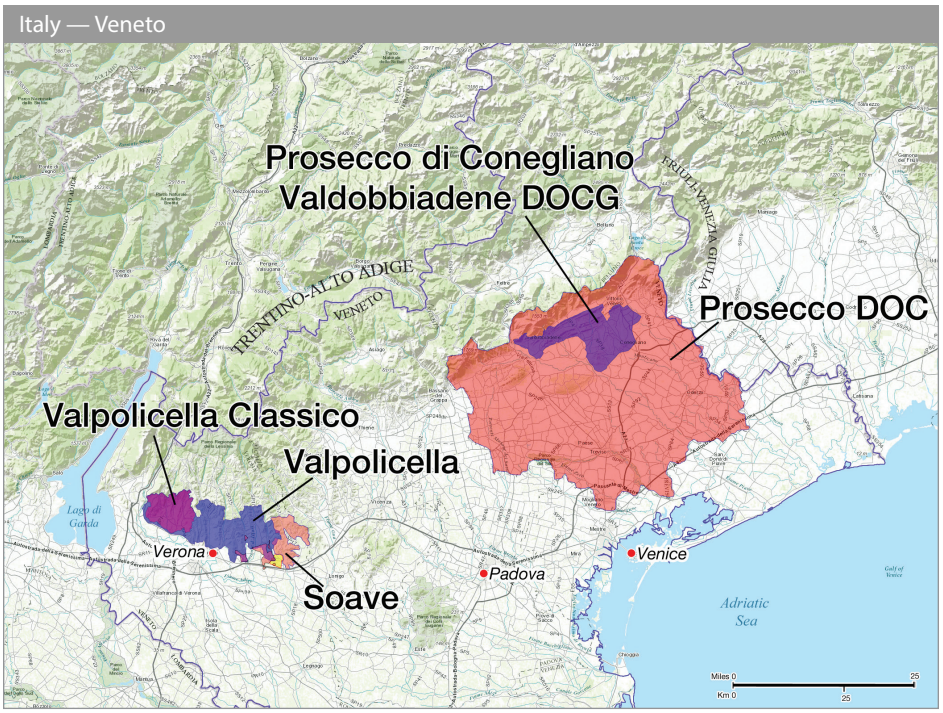
- Mountainous and rolling foothills

Grape Varieties Wide variety of both red and white grapes grown and labeled by variety

- White
  - – Pinot Grigio
  - – Sauvignon Blanc
  - – Pinot Bianco
- Red
  - – Merlot
  - – Lagrein

Appellations of Trentino-Alto Adige

- Trentino DOC
- Alto Adige (Südtiroler) DOC





Veneto

Location/Geography

- Northeastern Italy in the foothills of the Alps extending eastward to the border of the Adriatic Sea

Climate

- Continental with a warmer maritime climate near the coast

Veneto Appellations

- Soave DOC
  - Grape Variety
    - White
      - Garganega
  - Vinification
    - Dry white wines
  - Superior sub-zone
    - Soave Superiore DOCG

- Prosecco DOC
  - Grape Variety
    - White
      - Glera (Prosecco)
  - Vinification
    - Charmat/tank method sparkling wines
  - Superior sub-zone
    - Conegliano Valdobbiadene Prosecco DOCG

- Valpolicella DOC
  - Grapes Variety
    - Red
      - Corvina (dominant)
      - Rondinella
  - Vinification
    - Dry red wines
  - Superior sub-zone
    - Valpolicella Classico DOC

- Amarone della Valpolicella DOCG
  - Grape Varieties
    - Red
      - Corvina (dominant)
      - Rondinella

- Vinification Amarone is made using the appassimento process
  - Appassimento Process
    - Grapes are harvested and dried for several weeks
    - As the fruit dries it develops unique flavor characteristics
    - Wine is fermented to dry or off-dry
    - A high alcohol wine is produced generally 14 –16% ABV



Friuli-Venezia-Giulia



Location/Geography
- Northeastern Italy, extending eastward to the border with Slovenia

Climate
- Continental

Grape Varieties (wines are labeled with grape variety indicated)
- White
  - Pinot Grigio
  - Sauvignon
  - Friulano
- Red
  - Merlot (most widely-planted)

Vinification
- Mostly unoaked whites and reds

Emilia-Romagna

Location/Geography
- A large region extending from the heart of north-central Italy eastward to the coast of the Adriatic Sea

Climate
- Continental

Topography/Aspect
- Broad, vast plains with intensive agriculture and viticulture
- Considered the breadbasket of Italy

Appellations of Emilia-Romagna
- Lambrusco DOC
  - Grape Variety
    - Red
      - Lambrusco
  - Vinification
    - Red sparkling wine (frizzante or spumante) made by the Charmat/tank method
  - Style
    - Secco = Dry
    - Amabile = Off-Dry

Emilia-Romagna is a great source for more than just wine. Here we find some of our favorite Italian foods such as Parmigiano-Reggiano, Prosciutto di Parma and Balsamic vinegar.

Italy — Central Regions



Central Italy

Tuscany

Location/Geography

- Extends from the Ligurian Sea in the west to the foothills of the Apennine Mountains in the east

Climate

- Maritime-influenced on the coast and more continental inland

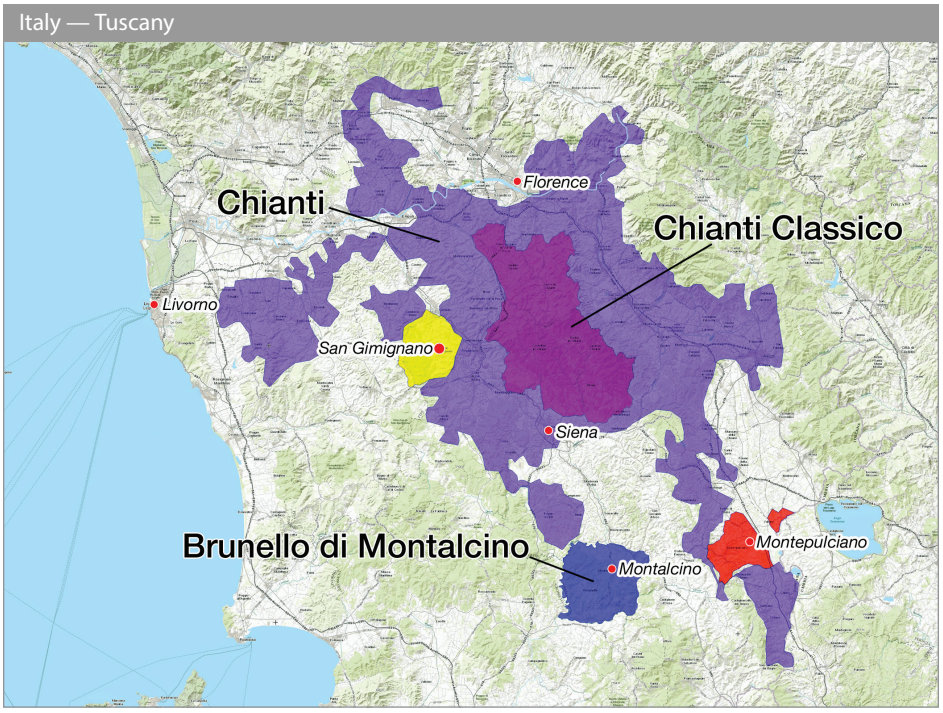
Grape Varieties

- White
  - Vernaccia
- Red
  - Sangiovese
  - Syrah
  - Cabernet Sauvignon
  - Merlot

Tuscany Appellations

Chianti DOCG

- Grape Variety
  - Red
    - Sangiovese (minimum 70%)
- Vinification
  - Dry red wines only





Chianti Classico DOCG

- Smaller area in the heart of the larger Chianti region
- More stringent rules and aging requirements than Chianti DOCG
- Grape Variety
  - Red
    - Sangiovese (minimum 80%)
- Soil
  - Galestro, a soft marl-like soil
  - Sandstone
- Vinification
  - Dry red wines only



Brunello di Montalcino

- Location/Geography
  - Slopes around the hill town of Montalcino
- Soil
  - Clay and marine sediments at lower elevation
  - Galestro at higher elevation
- Grape Variety
  - Red
    - 100% Sangiovese Grosso (locally called Brunello)
- Vinification
  - Dry red wines only
  - Time in oak and minimum aging requirements are stipulated by law
  - Wines are required to be aged for a minimum of two years in wood plus four months in bottle. They may not be sold before January 1st of the fifth year following the harvest.
  - Large Slavonian oak barrels or small barriques are used depending on the producer

Marches

Location/Geography
- On the eastern coast of Italy along the Adriatic Sea and extending westward into the foothills of the Apennine Mountains

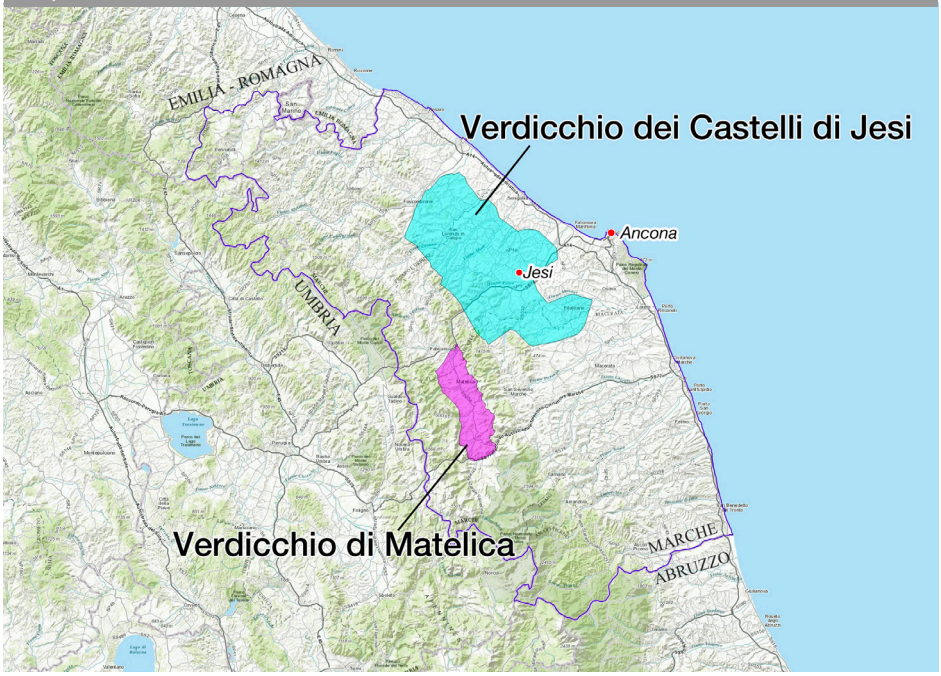
Climate
- Mediterranean

Grape Variety
- White
  – Verdicchio

Vinification for Verdicchio
- Dry, unoaked white wines

Important Appellations of the Marches
- Verdicchio di Matelica DOC
- Verdicchio dei Castelli di Jesi DOC

Italy — Marche



Southern Italy and Sicily



Italy — Southern Regions



Campania

Location/Geography
- Southern Italy, extending from the Mediterranean Sea into the mountains to the east, near Naples and the Amalfi Coast

Climate
- Mediterranean, sunny and warm

Topography/Aspect
- A combination of relatively low-lying areas near the sea and very rugged terrain in the mostly volcanic mountains to the east

Soil
- Alluvial sediments, volcanic soils in the mountains to the east and on the famous Mount Vesuvius

Grape Varieties
- White
  - Falanghina
  - Fiano
  - Greco
- Red
  - Aglianico

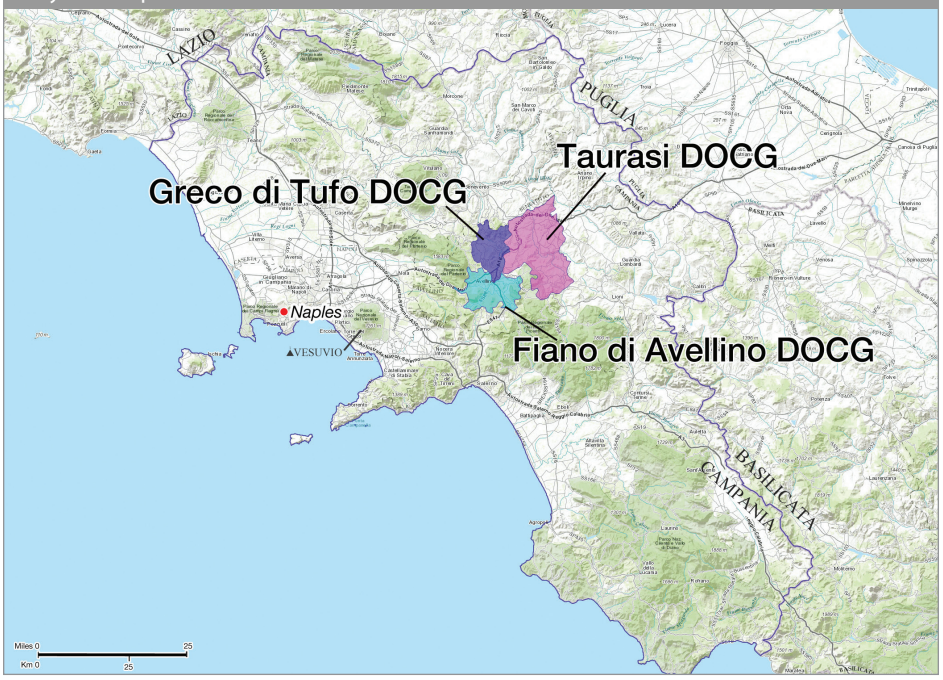
Appellations of Campania

- Fiano di Avellino DOCG
  - Grape Variety
    - White
      - Fiano
  - Vinification
    - Dry white wines

- Greco di Tufo DOCG
  - Grape Variety
    - White
      - Greco (an old grape variety planted by the ancient Greeks)
  - Vinification
    - Dry white wines

- Taurasi DOCG
  - Grape Variety
    - Red
      - Aglianico
  - Vinification
    - Dry, oak-aged, age-worthy red wines
    - Time in oak and minimum aging requirements are stipulated by law
      - Wines must be aged for a minimum of three years with one year in wood

Italy — Campania







Sicily

Location/Geography
- Island to the west of the mainland Italy in the Mediterranean Sea

Climate
- Overall Mediterranean climate, but with important local variations
- Maritime near the sea, hot inland becoming much cooler at higher elevations on Mt. Etna

Topography/Aspect
- Rolling hillsides near Mt. Etna and in inland districts
- Flatter areas near the coast

Soil
- Notably varied across different areas on this very large island, but famously volcanic on and near the slopes of the active Mt. Etna

Grape Varieties
- White
  – Carricante
- Red
  – Nero d'Avola
  – Nerello Mascalese

Important Appellation of Sicily

- Etna DOC
  - Location / Geography
    - Eastern Sicily with the vines on the slopes of Mount Etna
  - Soil
    - Well-drained volcanic soils
  - Grape Varieties
    - White
      - Carricante
    - Red
      - Nerello Mascalese
  - Vinification
    - Dry white, red and rosé wines



Italy



Quiz Questions

The Alps provide _____ to the Piedmont wine region.
a. A rainshadow
b. Storms
c. Heat
d. A cooling affect

What does metodo classico refer to?
a. Drying grapes
b. Oak aging
c. Special way of making sweet wines
d. Sparkling wines made using the Classic Method

What is Italy's most important river in Piedmont?
a. Loire
b. Danube
c. Rhine
d. Po

Which of the following wines is made by the Appassimento Process?
a. Prosecco
b. Soave
c. Amarone
d. Barolo

By law, when can Brunello di Montalcino wines be released for sale?
a. After January 1st following the harvest
b. After January 1st of the second year following the harvest
c. After January 1st of the fifth year following the harvest
d. After January 1st of the tenth year following the harvest

Which of the following DOCG zones is located in Piedmont?
a. Taurasi
b. Soave
c. Amarone
d. Barolo

Match the DOC/DOCG with the primary style of wine.
Some styles may be used more than once.

Moscato d'Asti DOCG ☐
Barbera d'Asti DOCG ☐
Gavi DOCG ☐
Brachetto d'Acqui DOCG ☐
Franciacorta DOCG ☐
Valtellina Superiore DOC ☐
Soave Superiore DOCG ☐
Brunello di Montalcino DOCG ☐
Etna Rosso DOC ☐
Taurasi DOCG ☐
Fiano di Avellino DOCG ☐
Greco di Tufo DOCG ☐
Verdicchio di Matelica DOC ☐

☐ Off-dry, semi-sparkling white wines
☐ Dry red wines
☐ Dry white wines
☐ Sweet, sparkling red wines
☐ Dry, metodo classico sparkling wines
☐ Dry, Charmat method sparkling wines

Match the DOC/DOCG with its dominant grape variety.
Some grapes may be used more than once.

Barbaresco DOCG ☐
Gavi DOCG ☐
Barolo DOCG ☐
Prosecco DOC ☐
Valtellina Superiore DOCG ☐
Franciacorta DOCG ☐
Soave DOC ☐
Valpolicella DOC ☐
Amarone della Valpolicella DOCG ☐
Lambrusco DOC ☐
Brunello di Montalcino DOCG ☐
Chianti Classico DOCG ☐
Etna Rosso DOC ☐
Taurasi DOCG ☐

☐ Sangiovese
☐ Lambrusco
☐ Corvina
☐ Nebbiolo
☐ Garganega
☐ Cortese
☐ Aglianico
☐ Chardonnay
☐ Pinot Nero
☐ Pinot Bianco
☐ Glera
☐ Nerello Mascalese

Germany

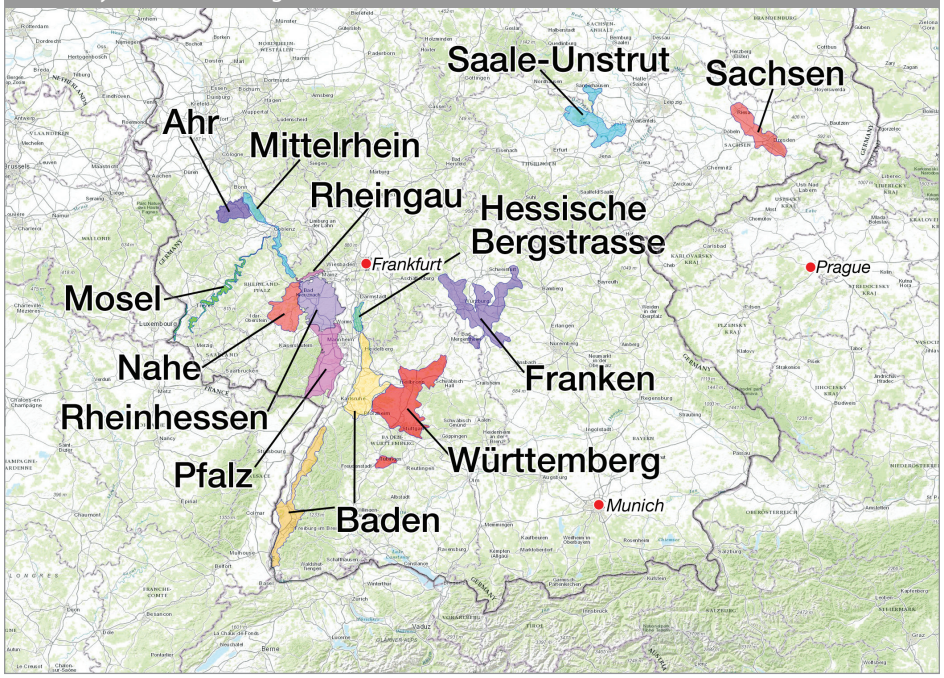


Learning Points

After studying this section, a student should be able to:

- Name the primary white grape variety of Germany
- Locate the main wine regions of Germany geographically
- Understand the climate of Germany and its effect on viticulture and vinification
  – Cause and effect: Climate > Ripeness > Wine style
- Know the names of the main rivers of important wine regions and how they affect climate and viticulture
- Understand the hierarchy of German wine law
- Understand the premise of the Prädikat system
- Recite the Prädikat levels in order of sweetness

Germany — Overview Regions



Factors of Wine Production

Introduction

- Germany is home to some of the world's coolest vineyards at the northernmost extreme of viticulture in the northern hemisphere. Some of the top vineyards are also among the world's steepest producing what is arguably the world's purest expression of Riesling.







Location / Geography

- The majority of vineyards are clustered in the southwestern corner of Germany near the borders of Belgium, France, and Switzerland. Most wine regions are at 49°N latitude or above.

Climate

- Cool and continental with strong moderating influences from rivers and mountain ranges

Topography/Aspect

- Rolling hills with rivers and steep hillside vineyards on river banks

Soil

- Varies depending on the region, but the best vineyards are planted on heat-retaining soils and rocks such as slate and basalt. These soils are prized for absorbing sun during the daytime and retaining heat at night.

Grape Varieties

- White 70% of production
  – Riesling
  – Müller-Thurgau
  – Silvaner
- Red
  – Spätburgunder (Pinot Noir)

Viticulture

- Vineyards are generally planted on steep, south-facing hillsides, maximizing sunlight and warmth to achieve ripeness in the grapes.
- The grapes enjoy a long, cool growing season, but often struggle to fully ripen.
- Most vineyards are planted along river valleys of the Rhine, Mosel, and their tributaries. Bodies of water can act as a climate moderator and provide warmth from the reflection of sunlight.

Vinification

- The vast majority of wines are fermented in stainless-steel or large oak casks.
- Chaptalization (sugar addition) of wine is controversial and against the law for most quality levels.
- Wines can be fermented dry (trocken), off-dry, or lusciously sweet



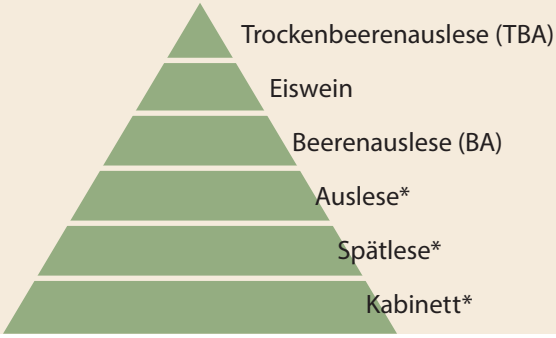
German Wine Law

Wines without geographic indication	Wines with geographic indication
• Wein• Landwein (PGI)	– Regional wines: rarely exported
	• Qualitätswein (PDO) – Quality wine from one of 13 major regions called Anbaugebiete – This category includes top trocken wines
	• Prädikatswein (PDO) – A subset of Qualitätswein categorized by ripeness at harvest. There are six prädikate levels of quality. These wines are often, but not necessarily, sweet.

Prädikatswein

The ripeness of the grapes at harvest means everything and is the basis of the quality level system.

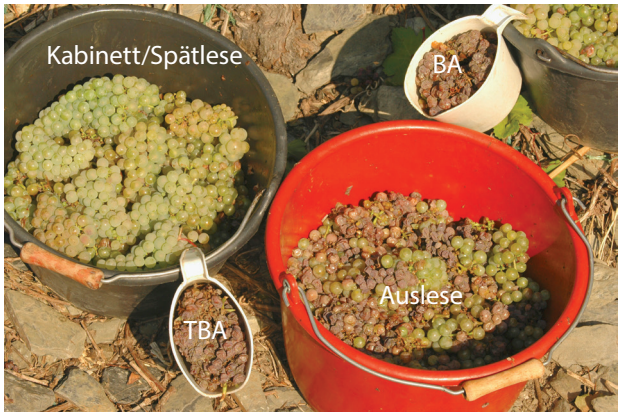
The six Prädikat levels of quality



Increasing quality, price and ripeness at harvest

*Can be sweet or dry

Not all German wines are sweet. The Prädikat levels are determined when the grapes are picked in the vineyard. What happens in the winery and how the wine is fermented is a different story.



Kabinett, Spätlese, and even Auslese wines can be fermented dry! Look at the alcohol levels or for the word trocken to determine whether a wine is dry.

VDP. Prädikatsweingut

VDP
The Verband Deutscher Prädikatsweingüter, or VDP, is a German association of more than 200 top producers. Founded in 1910, this association is committed to quality by emphasizing the tradition of making dry riesling from the best terroir and vineyard sites. The quality levels the VDP has set forth are a more restrictive classification of vineyards, or einzellagen, designed to emulate the grand cru model of Burgundy.

GG (Grosses Gewächs)
These are dry, or trocken, wines from the top vineyard sites in the VDP Classification.

Decoding a German wine label
Learning to read a German wine label is half the battle in understanding what you are drinking. The basis of labeling is to provide information on exactly where the wine is from, the ripeness of the grapes at the time of harvest, and (potentially) the style of the wine.



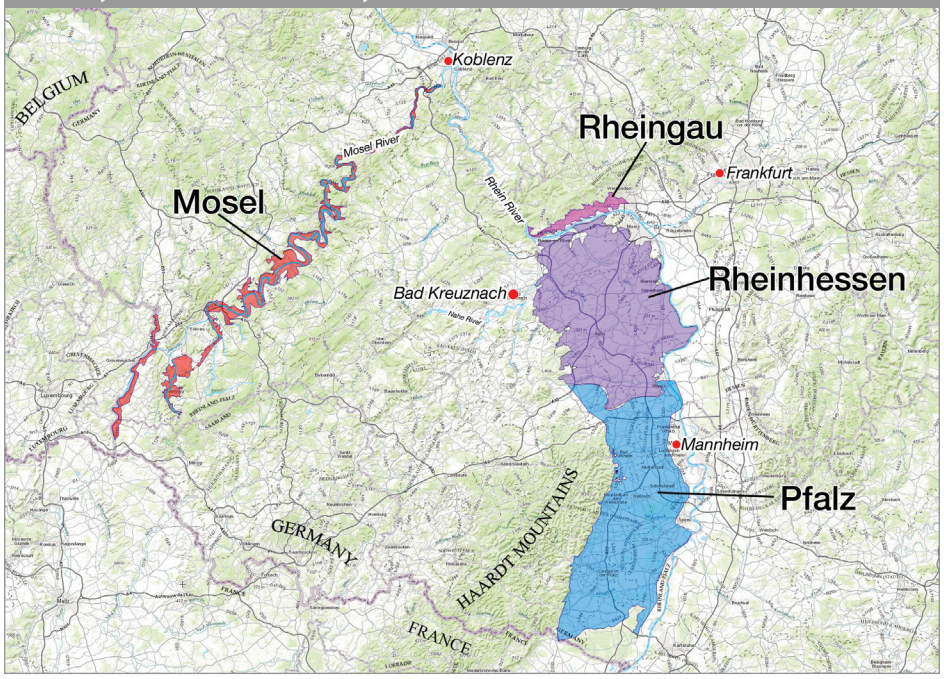
	German Term	Label Example
Producer		Dr. Loosen
Vintage		2012
Alcohol level		7.5%
Wine region	Anbaugebiet	Mosel
Village name	Gemeinde	Ürzig
Vineyard name	Einzellage	Würzgarten
Grape variety		Riesling
Ripeness level at harvest	Prädikat	Auslese

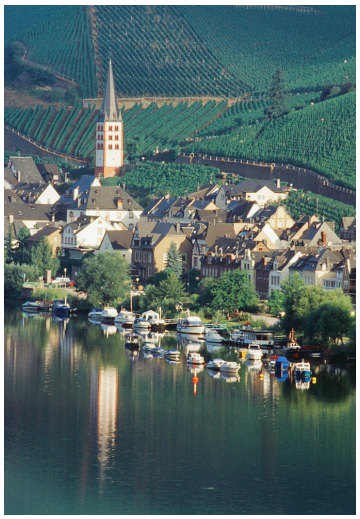
Ürziger means from the village of Ürzig, just like a New Yorker is from New York. The "-er" at the end of a word in German is a possessive meaning "from that place."

German Wine Regions



Germany — Rhein and Mosel Valleys





Mosel

Germany's oldest winemaking region and one of the greatest locations for the pure expression of Riesling.

Location/Geography
- Northern limit of viticulture at the 49th parallel along the Mosel River
- These are some of the most northerly vineyards in the world

Climate
- Cold and continental, moderated by the Mosel River

Topography/Aspect
- Very steep vineyards — among the steepest in the world
- Facing south to capture the warmth of the sun

Soil
- Slate that is porous yet heat-retaining

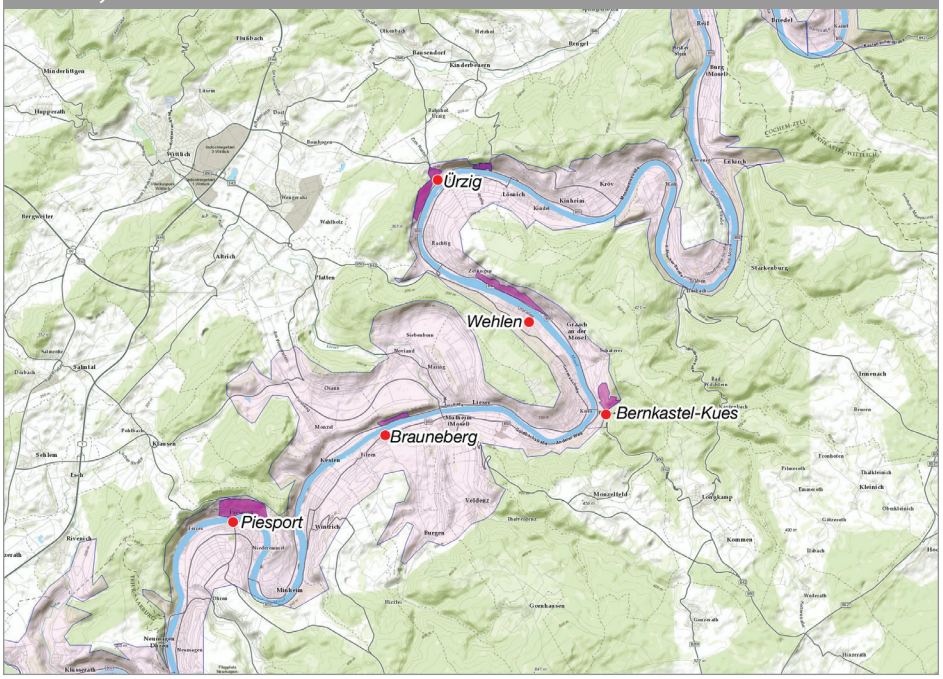
Grape Varieties
- Riesling

Viticulture
- A long growing season to achieve ripeness. Vines are planted on precipitous, south-facing slopes very close to the Mosel River. Northerly growing conditions make ripening a challenge. Harvested grapes are generally high in acidity and low in sugar.

Vinification

- Mainly stainless-steel fermentation
- Residual sugar is left in the wine to counterbalance the intense acidity
- Alcohol in the finished wine is generally low, often topping out at just 8%

Germany — Mosel





Rheingau



Location/Geography
- South of the Mosel on the Rhine River with a backdrop of the Taunus Mountains

Climate
- Continental and slightly warmer with the more southerly latitude
- The Taunus Mountains provide protection
- The Rhine River reflects sunlight directly up into the vines, providing additional light for photosynthesis and warmth for ripening

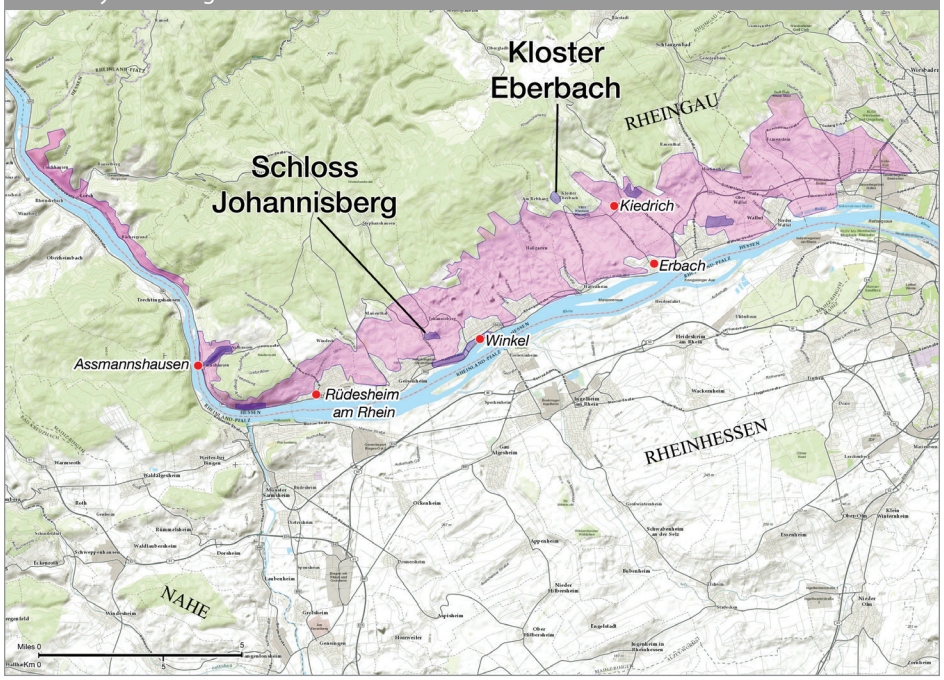
Soil
- Mixture of slate and others

Topography/Aspect
- The Rheingau boasts one long south-facing slope on the north bank of the Rhein

Grape Varieties
- White
  – Riesling
- Red
  – Spätburgunder (Pinot Noir)

Viticulture
- More reliable ripeness than the Mosel

Germany — Rheingau



Rheinhessen

Location/Geography
- Large, sprawling wine area just south of the Rheingau

Climate
- Continental

Topography / Aspect
- Flat, fertile farmland

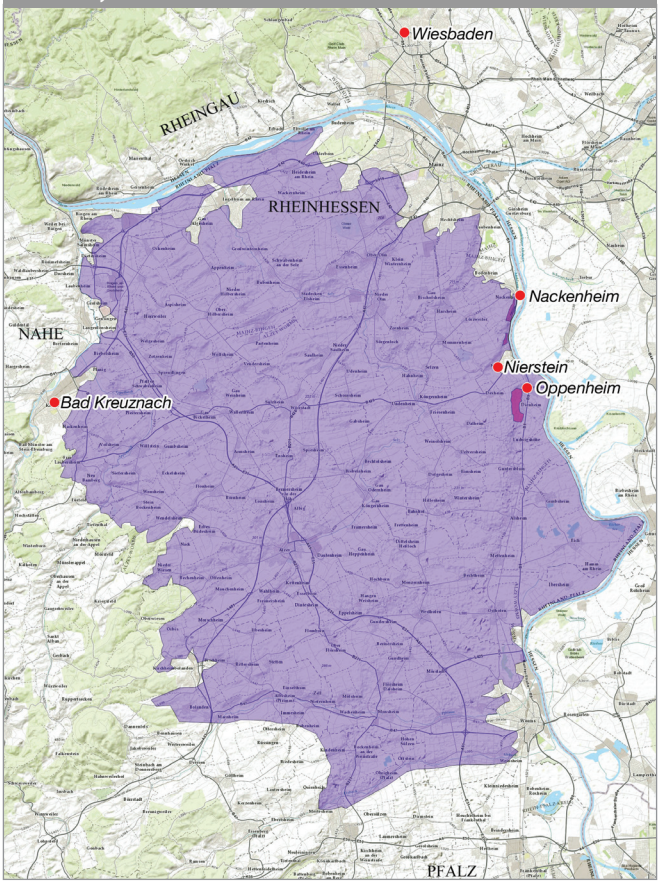
Soil
- Red sandstone mixed with slate

Grape Varieties
- White
  - Riesling (the best but not the most planted grape in the Rheinhessen)
  - Müller-Thurgau
  - Silvaner

Viticulture
- The Rheinhessen is the largest wine region in Germany. The best vineyards are found on a small strip along the steep west bank of the Rhein. Quality ranges from Liebfraumilch (e.g., Blue Nun) up to top vineyards for modern, dry Riesling. Specificity of village and vineyard is key.

In the 1980s, over 60% of all German wine exports were of Liebfraumilch. This sweet, cheap wine (mainly made from Müller-Thurgau) was extremely popular. However, it severely damaged the image of quality German wine for decades.

Germany — Rheinhessen



Pfalz



Location/Geography

- The Pfalz is geographically contiguous with Alsace, despite the important fact that the Rhine River separates the two regions. The Haardt Mountains are the dominant influence in the area and are the northerly extension of the Vosges Mountains of France. Just as the Vosges provide protection to Alsace and create a particularly sunny environment, so too do the Haardt Mountains for the vineyards of the Pfalz.

Climate

- A relatively southerly latitude with sunny and dry climate, making this one of the warmest growing areas in Germany

Soil

- Limestone

Grape Varieties Quite diverse

- White
  - Riesling
  - Weissburgunder (Pinot Blanc)
  - Grauburgunder (Pinot Gris)
- Red
  - Spätburgunder (Pinot Noir)

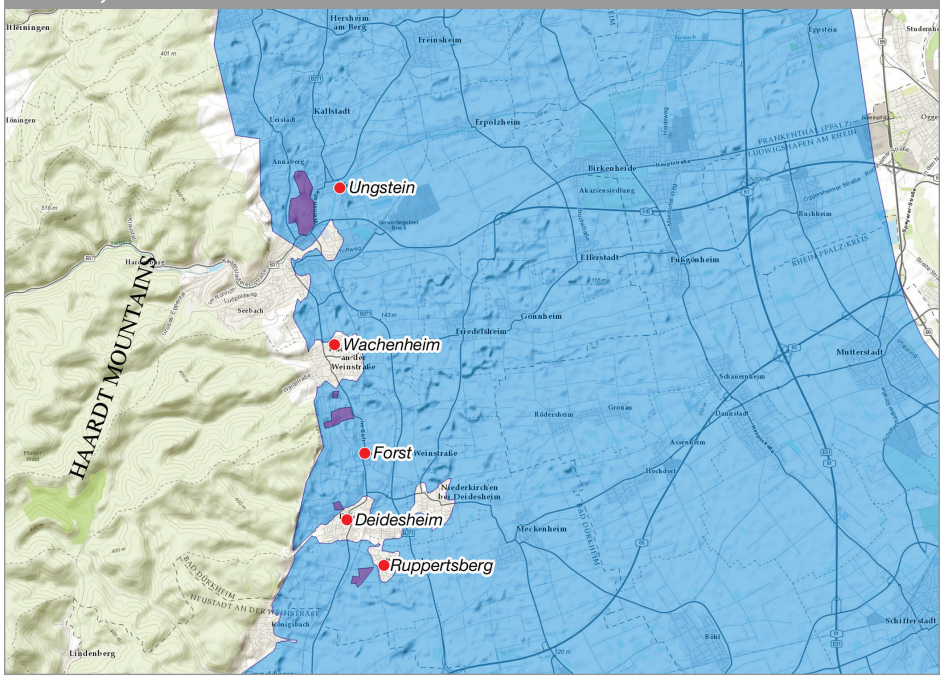
Viticulture

- Because of its more southerly latitude and abundant sunshine, ripening is significantly less challenging than in most German regions

Vinification

- Focus is on dry wines

Germany — Pfalz



Germany

Quiz Questions

What is the Prädikat system is based on?
a. Ripeness of grapes at harvest
b. Sweetness of the wine when it is bottled
c. Alcohol level
d. Oaky character

Which of the following is an important river in one of Germany's wine regions?
a. Loire
b. Rhine
c. Danube
d. Rhône

All GG wines are:
a. Sweet
b. Dry (Trocken)
c. Oaky
d. Sparkling

Spätburgunder is the German word for which grape variety?
a. Pinot Gris
b. Cabernet Sauvignon
c. Riesling
d. Pinot Noir

Rank the following Prädikat in order of ripeness.
__ Eiswein
__ Beerenauslese (BA)
__ Auslese
__ Spätlese
__ Trockenbeerenauslese (TBA)
__ Kabinett

Name 5 of the 13 German anbaugebiete.

What is an Einzellage?

Name three ways vineyards in the Mosel attain extra warmth to help grapes ripen.

Austria

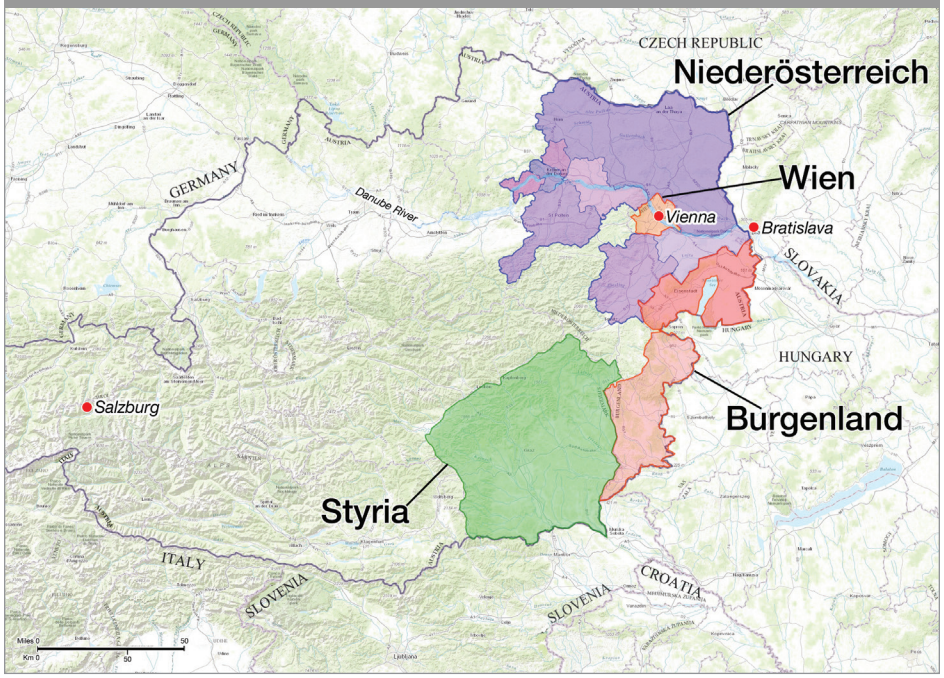


Learning Points

After studying this section, a student should be able to:

- Name the primary white grape varieties grown in Austria
- Name the important river that flows through Austria's main wine-growing regions
- Recognize four main wine regions of Austria
- Recognize three important sub-regions of Niederösterreich
- Recognize the three categories of the Wachau dry wine classification

Austria — Overview



Factors of Wine Production

Introduction

- Grape growing has existed in Austria for thousands of years. For such a small country — producing less than 1% of the world's fine wine — quality is exceptionally high.

Location/Geography

- Austria is located in Central Europe, southeast of Germany and northeast of Italy. Much of Western Austria is covered by the Alps, with the wine-growing area located on the eastern edge of the country along the borders of the Czech Republic, Slovakia, and Hungary.

Climate

- The climate is continental, with cold winters and very warm summers moderated by the Danube River and its tributaries.

Topography/Aspect

- Rolling foothills east of the Alps

Grape Varieties

- White Majority of plantings (over 70%)
  - Grüner Veltliner
  - Riesling
- Red Only 30% of plantings
  - Zweigelt
  - Blaufränkisch
  - St.-Laurent

Viticulture

- Steep, terraced vineyards overlooking the Danube River and its tributaries in some areas, but also vast planes in lower-lying areas

Vinification

- Austrian wines are either very dry or very sweet, as there is no tradition of off-dry styles
- New oak is rarely used for white wine production

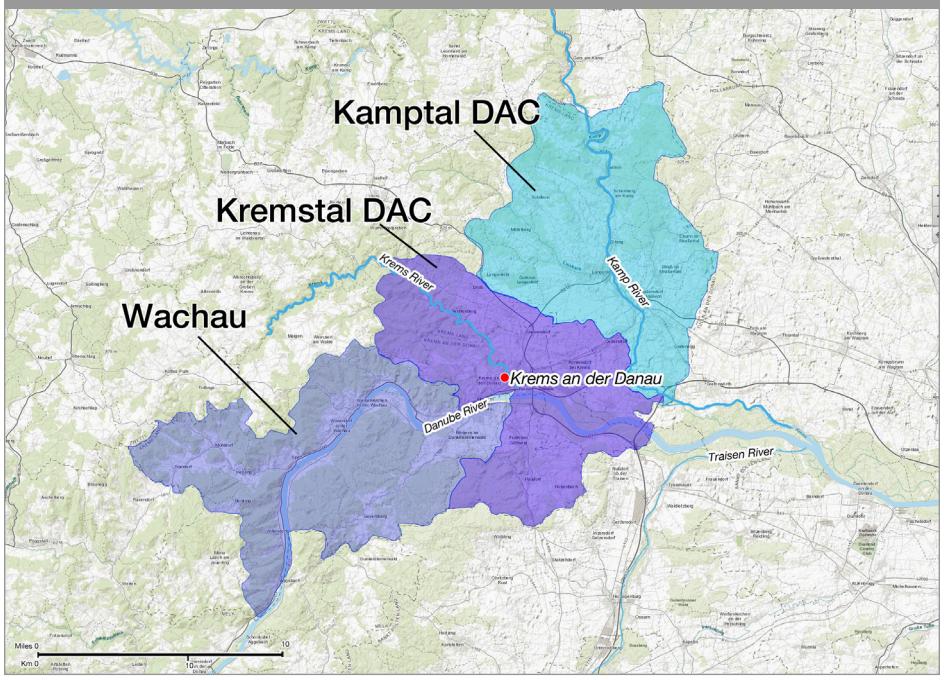
EU Wine Classification	
Wines without geographic indication	Wines with geographic indication
• Wein	• Landwein (PGI) Regional wines: rarely exported • Qualitätswein (PDO) – Districtus Austriae Controllatus (DAC) This terroir-based system of quality wines with appellation of origin is similar to AOC or DOC. Only specific grapes and wine styles are permitted in these demarcated regions. The focus is on dry wines. • Prädikatswein (PDO) – Similar system and use of terms as in Germany, with wines categorized by ripeness level at harvest. This system is rarely used today, aside from the very sweet styles such as BA, TBA, and Eiswein.

Austrian Wine Regions



Niederösterreich (Lower Austria) is the largest wine-growing region, with many sub-zones along the Danube River and its tributaries. The focus is on dry, unoaked, high-quality expressions of Grüner Veltliner and Riesling.

Austria — Niederösterreich Detail



Three Important Sub-Regions

- Kremstal DAC Located in the valley of the Krems River
- Kamptal DAC Located in the valley of the Kamp River
- Wachau Many of Austria's best vineyards are located in the Wachau on a narrow band of steep slopes along the banks of the Danube. The region has instituted its own system of quality for dry wines.

Wine Classification for Wachau Dry Wines based on ripeness at harvest
Steinfeder 11.5% maximum alcohol. The lightest of the three styles, named for a local grass found in the vineyards
Federspiel 11.5% to 12.5% alcohol. Named for a falconer's tool.
Smaragd 12.5% minimum alcohol. Named for an emerald-colored lizard that suns itself in the vineyards. These wines are often made from very ripe grapes and produce intensely rich, dry white wines.

Austria

Quiz Questions

Which of the following is not one of the four major wine-growing regions of Austria?
a. Wien (Vienna)
b. Pfalz
c. Burgenland
d. Niederösterreich

Which of the following is Austria's signature white grape variety?
a. Chardonnay
b. Pinot Grigio
c. Grüner Veltliner
d. Pinot Gris

Which styles of wine are mainly produced in Austria?
a. Either very dry or very sweet
b. Off-dry
c. Sparkling and sweet
d. Sparkling and dry

Smaragd is a quality term used in which wine region?
a. Wachau
b. Wien
c. Mosel
d. Alsace

Which of the following rivers is most important to Austrian viticulture?
a. Russian
b. Mosel
c. Rhine
d. Danube

Spain



Learning Points

After studying this section, a student should be able to

- Know the location, climate, primary grape varieties, and style of wine in each of the main growing regions of Spain
- Understand the hierarchy of Spanish wine designations
- Understand the importance of oak aging to red wines from Rioja
- Know the bottle aging requirements for Rioja
- Know the sub-regions of Rioja

Spain



Factors of Spanish Wine Production

Introduction

- Spain has the largest planted acreage of any wine producing country. However, it is third in global production behind Italy and France.

Location/Geography

- Eastern majority of the Iberian Peninsula, with Portugal on its western border
- Atlantic Ocean to the north and northwest
- Mediterranean Sea to the south and east

Climate

- A variety of climates depending on the location, from cool maritime in the north to arid warm in the center of the country and to the south

Topography/Aspect

- Very mountainous with an interior, raised plateau called the Meseta

Grape Varieties

- Tempranillo is the best known variety.

Regional Wine Law	
Wines without geographic indication	Wines with geographic indication
• Vino	• IGP Vino de la Tierra (VdlT) - Similar to French Vin de Pays, noting a specific location yet with few requirements in terms of grape variety, yields, or aging • DOP - VCIG Vinos de Calidad con Indicación Geográfica. A category used as a gateway for current VdlT regions to gain DO status. - DO Denominación de Origen Equates to the French AOC. Each DO has a regulatory body that is responsible for creating and defining wine law and regulations for it. - DOCa Denominación de Origen Calificada A step above the DO category recognizing the top quality wine regions in Spain. To date there are two wine regions recognized as DOCa, Rioja and Priorat. • Vinos de Pagos A single estate wine designation that can be situated outside of the DO system. The wine from a DO Pago must be made and bottled at that domain or estate. An estate within an existing DO must surpass the basic DO requirements.

Northwest Spain



Rías Baixas DO

Location/Geography
- Borders Portugal in the northwest corner of Spain. This area is called "Green Spain" because of its relatively high rainfall for Spain, which results in lush vegetation

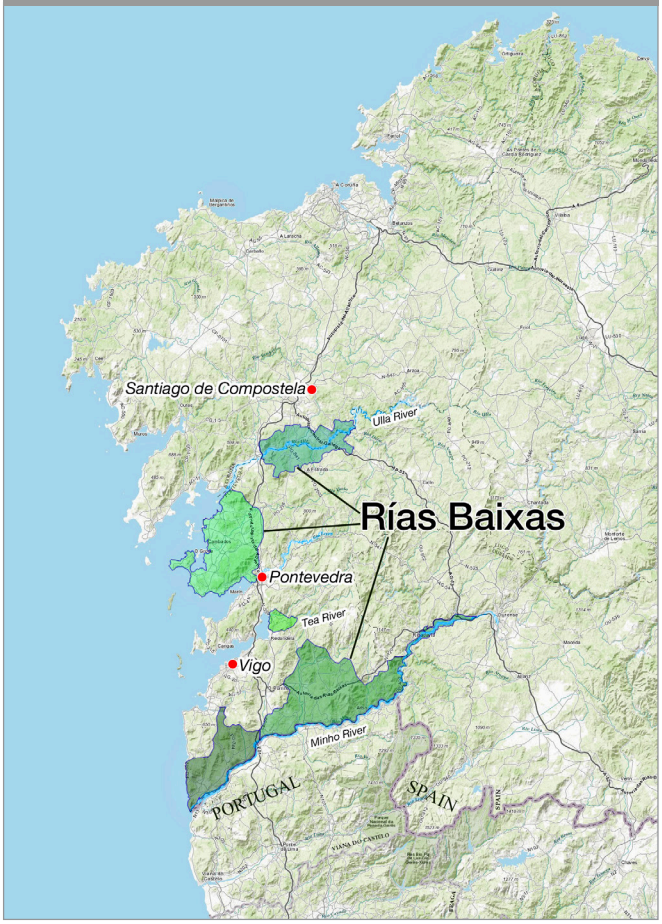
Climate
- Due to proximity to the Atlantic Ocean and the numerous rivers that flow through the region, the climate is humid and maritime.

Soil
- Granite, alluvial, and slate

Grape Varieties
- White
  - Albariño represents 90% of plantings in this area. Wines must be 100% Albariño if labeled with the grape variety. Most Spanish wine labels feature a geographic name, but here the grape variety appears on the bottle.

Vinification
- Stainless-steel fermentation
- Crisp, dry, aromatic white wine

Spain — Rias Baixas



North Central Spain

Rioja DOCa

Introduction

- Rioja has been producing wines for over 2,000 years and is Spain's highest-profile red wine region. It is named after the Oja, a small tributary of the main river Ebro. It was the first region in Spain to be named a DOCa.

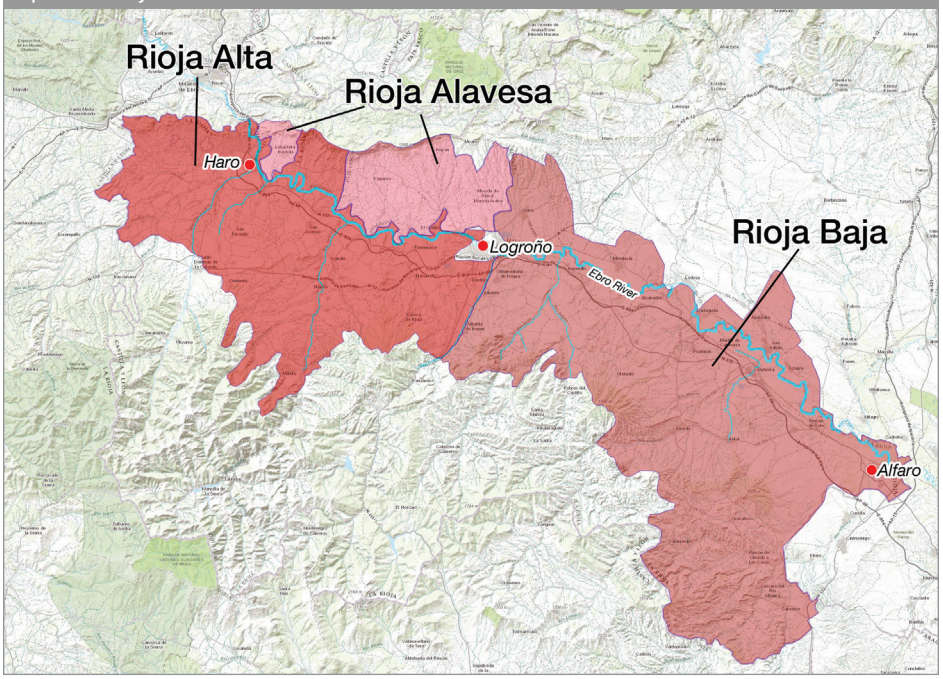
Location/Geography

- The region is located in north-central Spain and is protected by the Pyrenees Mountains to the northeast and the Cantabrian Mountains to the northwest.

Climate

- Continental
- Mountains create a rain shadow, protecting the region from harsh Atlantic weather
- There are three sub-regions within Rioja, each with slightly different climates:
  - Rioja Alavesa
  - Rioja Alta
  - Rioja Baja

Spain — Rioja



Grape Varieties

- White
  - Viura
- Red
  - Tempranillo
  - Garnacha



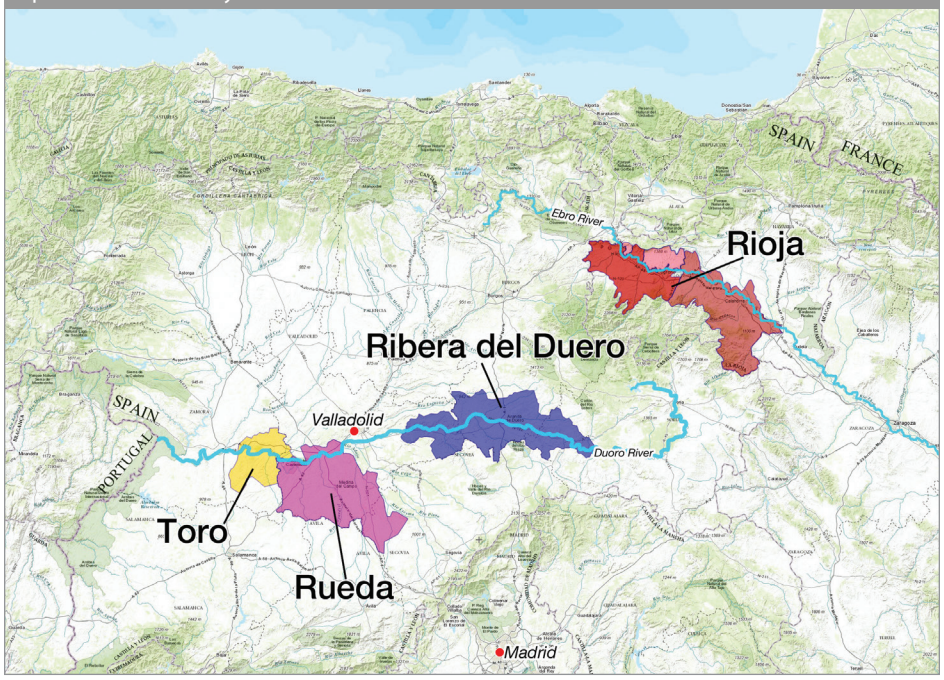
Vinification

- Length and time of oak aging is the primary focus of quality categories
- Traditionally, American oak was used but today producers use French oak as well.

- Rioja DOCa aging quality levels for red wines
  - Crianza Requires a total two years of aging before release
  - Reserva Requires wines be aged for three years, including one year in oak. These wines are from the best sites, best vintages, and best selection of grapes.
  - Gran Reserva Requires that wines age for at least two years in oak and three years in the, bottle. These are generally sourced from the best sites and made only in top vintages. Gran Reserva wines are rare and can offer outstanding value.

Duero River Valley

Spain — Duero Valley



Ribera del Duero DO

Climate

- Continental with a challenging climate of very hot summers and cold winters and extreme diurnal shifts

Topography/Aspect

- On the high central plateau (Meseta) at 2,500 feet, these are the highest elevation vineyards in Spain

Grape Varieties

- Red
  - Tempranillo (known locally as “Tinto Fino”)

Viticulture
- The high elevation and intense diurnal shifts allow the grapes to get very ripe while preserving natural acidity in spite of the hot summers

Vinification
- Red wines only, with a small production of rosé



Toro DO

Climate
- Continental, with extremely hot, dry summers

Grape Varieties
- Red
  – Tempranillo (known locally as "Tinto de Toro")

Vinification
- Toro is known for rich, intense red wines

Rueda DO

Climate
- Continental

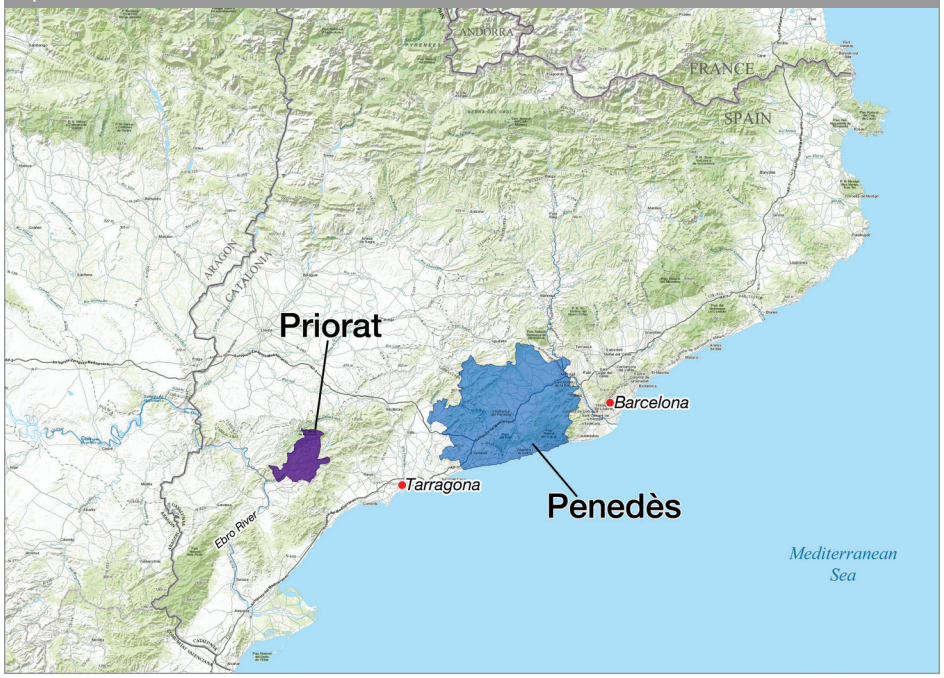
Grape Varieties
- White
  – Verdejo
  – Sauvignon Blanc

Vinification
- Rueda is best known for crisp, dry white wines

Northeastern Spain — Catalonia



Spain — Catalonia



Penedès DO/Cava DO

Located in the vicinity of Barcelona, this area is most widely known as Cava country, producing an immense amount of traditional method sparkling wine.

Location/Geography

- Environs of Barcelona reaching up into the Pyrenees Mountains at the French border

Climate

- Mediterranean

Grape Varieties

- White
  - Macabeo
  - Xarel-lo
  - Parellada

Vinification

- Sparkling wines made by the traditional method

Priorat DOCa

Priorat is one of two DOCa wines of Spain (DOQ in Catalan).

Location/Geography
- A very rugged area just a few miles from the Mediterranean Sea but completely isolated and surrounded by mountains

Climate
- Hot and dry

Soil
- Stony schist soils, with the best vineyards situated on llicorella, a mix of black slate and quartzite

Grape Varieties
- Red
  – Garnacha (Grenache)
  – Cariñena (Carignan)

Viticulture
- Low yields due to the climate
- Vines must dig deep for water due to the nature of the soil

Vinification
- Intense, concentrated, dry red wines



Spain



Quiz Questions

In which DO will you find wines made from the Albariño grape?
a. Rías Baixas DO
b. Penedès DO
c. Rueda DO
d. Cava DO

What are the two DOCa regions of Spain?
a. Rioja and Ribera del Duero
b. Rioja and Cava
c. Rioja and Priorat
d. Cava and Rueda

Priorat DOQ produces which of the following styles of wine?
a. Sparkling wine made in the traditional method
b. Powerful, dry red wines
c. Sweet white wines
d. Fortified wines

Which aspect of topography affects the climate of Ribera del Duero?
a. Strong diurnal difference
b. Warm to hot summer
c. High elevation of the Meseta
d. All of the above

The main white grape variety of Rueda is:
a. Verdejo
b. Chardonnay
c. Riesling
d. Xarel-lo

Which combination of region and grape variety is not correct?
a. Rioja and Tempranillo
b. Ribera del Duero and Tempranillo
c. Toro and Tempranillo
d. Priorat and Tempranillo

What does “Gran Reserva” on a label of Rioja refer to?
a. Sweetness level
b. Aging requirements for time in barrel and bottle
c. Location
d. Estate bottled

Portugal

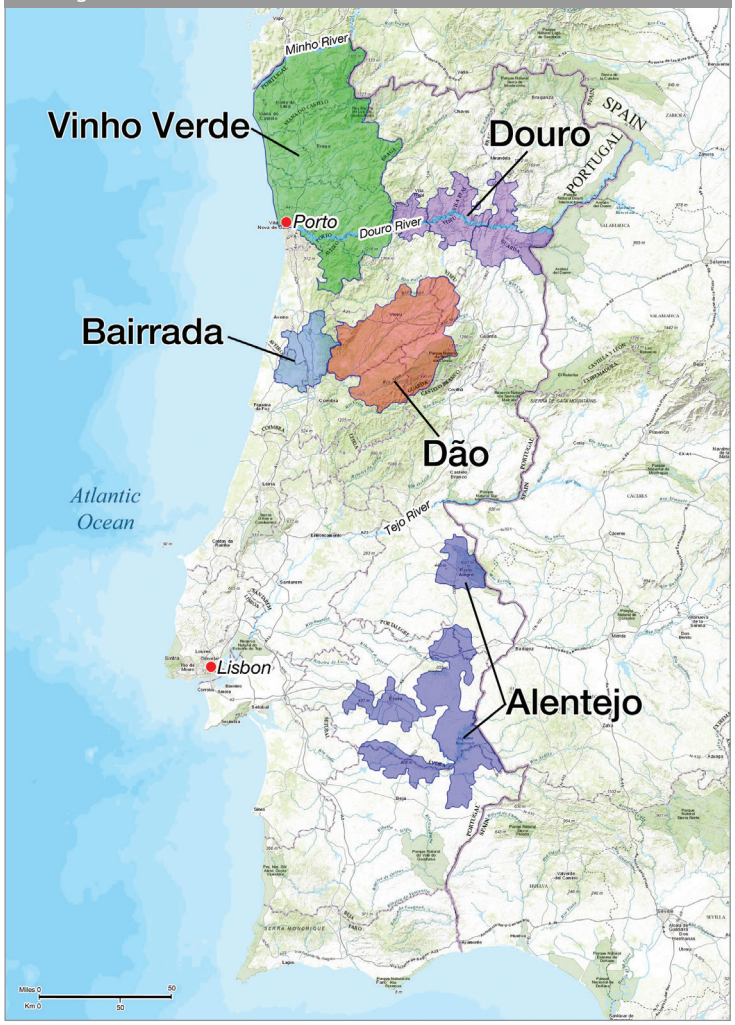
Learning Points

After studying this section, a student should be able to:

- Recognize the location of Portugal on the Iberian Peninsula
- Know the location, climate, main grape variety, and style of Vinho Verde DOP
- Know the location, climate, main grape variety, and style of Douro DOP
- Recognize the three sub-regions of the Douro DOP
- Recognize Bairrada, Dão, and Alentejo as DOP regions located in Portugal

We will address Port and Madeira in the fortified wine section.

Portugal — Overview



Factors of Wine Production



Introduction

- Portugal is steeped in tradition with a multitude of indigenous varieties and some of the oldest demarcated wine regions. However, the country's wine industry has picked up the pace of change recently, with modern equipment and production techniques turning out wines of excellent quality and value.

Location/Geography

- Portugal is located on the southwest portion of the Iberian Peninsula, with the Atlantic Coast to the west being a dominant feature.

Climate

- Portugal has a varied climate that can be divided into three distinct areas. Along the coast in the north, conditions are cool and humid due to the influence of the Atlantic Ocean, with abundant rainfall and a lush, green environment akin to Rías Baixas across the Spanish border. Moving south along the coast, conditions become warmer and more characteristic of a Mediterranean climate. The interior of the country has a decidedly continental climate marked by hot, arid conditions.

Topography/Aspect

- Rugged, difficult terrain for viticulture inland

Grape Varieties

- Portugal has a remarkable array of over 200 indigenous varieties.

Regional Wine Law	
Wines without geographic indication	Wines with geographic indication
• Vinho	• IGP Indicação Geográfica Protegida – Larger regional designations; 85% must be from the stated region – Many grape varieties are allowed depending on the region – Minimum alcohol is regulated • DOP Denominação de Origem Protegida – Primary category for quality wine – Specific wine regions, located inside a larger IGP – Regulates wine style, maximum yields, minimum alcohol, and aging requirements

Important Appellations of Portugal

Vinho Verde DOP

Vinho Verde translates to "green wine," referencing the youthful nature of the wines and the implied recommendation to drink them while young. Vinho Verde is the largest DOP in Portugal.

Location/Geography

- Northern Portugal on the Atlantic Coast, just south of the Spanish border

Climate

- Cool, maritime, rainy, and humid. This is a contiguous region of the Spanish Rías Baixas to the north.

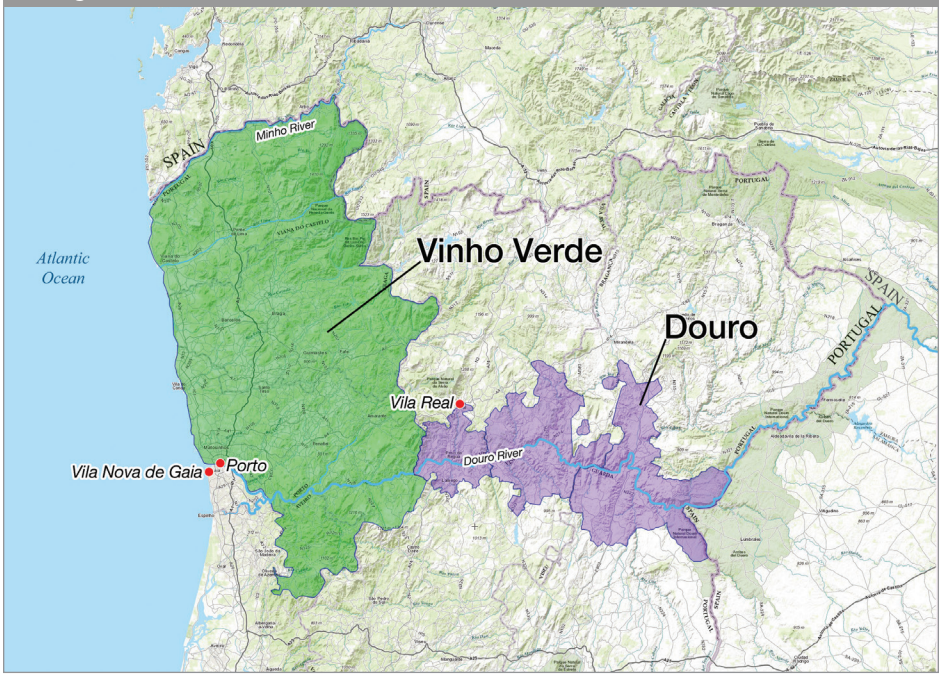
Grape Varieties

- White
  - Loureiro (most planted)
  - Trajadura
  - Alvarinho (Albariño)

Vinification

- The most characteristic wine from the region is a low-alcohol, white wine with lively acidity and a slight effervescence due — most often — to an injection of carbon dioxide at bottling

Portugal — Northern — DOPs



Douro DOP



The Douro Valley was one of the first demarcated wine regions in the world. Most known for its production of the fortified wine, Port, this area has been gaining repute as a high-quality producer of dry, unfortified red wines.

Location/Geography

- Northern Portugal along the Douro River (known in Spain as the Duero)

Climate

- There are three sub-regions of the Douro, each with a very different climate. The climate changes and become drier and hotter as you move inland from the Atlantic Ocean.
  - Baixo Corgo
  - Cima Corgo
  - Douro Superior

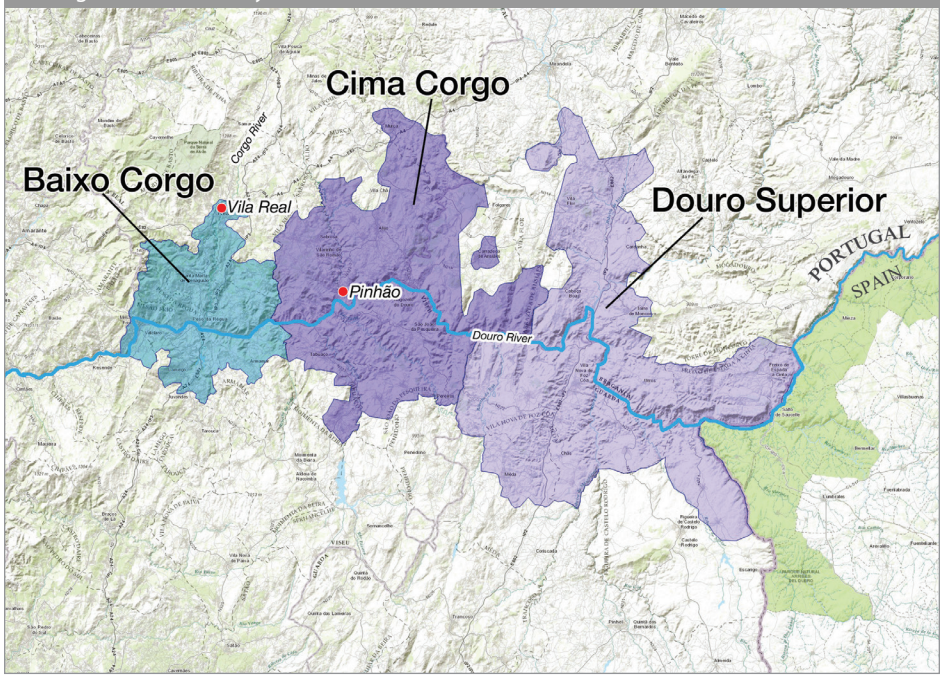
Topography/Aspect

- Mountainous, rugged, wild, and remote

Soil

- Schist (top vineyards)

Portugal — Douro Valley



Grape Varieties

- Red
  – Touriga Nacional (plus many indigenous varieties)

Viticulture

- Incredibly steep, terraced vineyards along the banks of the Douro and its tributaries
- Single vineyards, or quintas

Vinification

- Rich, dry, ripe, powerful red wines
- Wines are usually a blend of many indigenous grapes



Portugal



Quiz Questions

In which DOP will you find wines made from the Alvarinho, Trajadura, and Loureiro grapes?
a. Cava
b. Vinho Verde
c. Rueda
d. Douro

The Douro DOP shares the same appellation boundaries as which fortified wine?
a. Sherry
b. Port
c. Madeira
d. Banyuls

What description best characterizes the white wines from the Vinho Verde DOP?
a. Youthful, high acid, low alcohol, slightly effervescent
b. Youthful, moderate acid, moderate alcohol, oak aged
c. Youthful, high acid, low alcohol, fully sparkling
d. Aged in oak for a minimum of one year

Baixo Corgo is a sub-zone of which wine region?
a. Rioja DOCa
b. Toro DO
c. Rueda DO
d. Douro DOP

The best vineyards are planted on which soil type in the Douro DOP?
a. Slate
b. Volcanic
c. Tufo
d. Schist

What description best characterizes the red wines from the Douro DOP?
a. Earthy and elegant
b. Rich, intense, and full-bodied
c. Soft and earthy
d. Fruity and light

North America — The United States

Learning Points

After studying this section, a student should be able to:

- Understand the general history of winemaking in the United States and the key contributors to the success of the industry
- Know the governing body that regulates beverage alcohol in the United States
- Recognize wine label minimum requirements for vintage, variety and location
- Know the definition of an AVA
- Recognize important AVAs of California, Oregon, Washington, and New York State
- Begin to take note of climate influences in each region and link grape varieties to climates and regions



Agoston Haraszthy





Robert Mondavi

Factors of Wine Production

Introduction/Historical Background

Winemaking in the United States is a tale of two histories. One, on the East Coast, dates back to the 1500s with French Huguenots in Florida and to the 1600s with colonists in Jamestown and other northeast settlements. The other, in the West, was initiated by Franciscan mission plantings in present-day Texas and New Mexico in the sixteenth century and along the California coast in the seventeenth century.

The wine industry began to flourish in the mid-1850s and gain international recognition. Agoston Haraszthy, a Hungarian fur trader, saw the potential of Sonoma in particular and is considered the father of the California wine industry. He founded the Buena Vista winery in 1857 and is credited with importing European vinifera vines to California. The Gold Rush attracted Italian and French immigrants which had important consequences for the wine cultures of California and the broader United States.

Hard Times

By the late 1800s, just as the USA's wine industry was establishing itself, it was plagued a series of setbacks.

While California wines were on the rise, European vineyards were ravaged by phylloxera. The vine louse made its way to California vineyards in the 1880s and 1890s, delivering a devastating blow to the growing regions. After struggling for several decades to replant and recover commercial momentum, the industry was undercut yet again by the enactment of Prohibition (1920 – 1933), which forbade the production and sale of beverage alcohol except for sacramental purposes. This purported "noble experiment" failed to eradicate the nation's taste for alcoholic drinks, but it succeeded in crippled the growing wine trade. At the time Prohibition was repealed in 1933, fewer than 100 wineries remained. Repeal occurred during the Great Depression, which badly hampered industry recovery. Because the Depression was followed immediately by World War II, a full-scale revival took nearly five decades from the onset of Prohibition.

A New Era

It was not until the 1960s and 1970s that the wine industry began to flourish again. The modern era of the industry was ushered in thanks to luminaries like Robert Mondavi and André Tchelistcheff, who—along with many others—brought quality winemaking back to life in California. The "world class" caliber of their accomplishments was established by a famous blind tasting in 1976 that became known as the Judgment of Paris, in which two California contenders prevailed over classic French wines from Burgundy and Bordeaux in a blind tasting conducted by world-renowned experts.



Today, the United States is currently the world's fourth largest producer of wine, with wine being made in every state, exports trending upward, and total wine consumption exceeding that of every other nation.

United States Appellation Law

- All federal beverage alcohol laws are regulated by the Tax and Trade Bureau (TTB).
- The TTB defines and approves the boundaries of American wine regions.
- The TTB demarcates appellations based on distinctive geographical, physical, and climatic features.
- According to the TTB, "the establishment of viticultural areas allows vintners to describe more accurately the origin of their wines to consumers and helps consumers to identify wines they may purchase."

Named wine-growing regions are called
American Viticultural Areas (AVAs).

- These are defined as "delimited grape-growing areas," which refers to geographic location only.
- The first AVAs were named in the early 1980s, beginning with Augusta, Missouri (1980), and Napa Valley, California (1981).

United States Wine Labeling Law These are the minimum percentages that can be used on labels.
Grape Variety • 75% min. variety composition if from country (USA), state, county or AVA • 90% minimum in Oregon for many varieties
Vintage • 85% minimum from the vintage stated if from a state or county • 95% minimum from the vintage stated if from an AVA or single vineyard
Appellation or AVA (origin of the grapes) • 75% minimum from a country (USA), state** or county • 85% minimum from a stated AVA • 95% minimum from a stated single vineyard **Washington requires 95%, California and Oregon require 100%
Estate Bottling • 100% from grapes grown on land owned or controlled by the winery, which must be located in an AVA

California

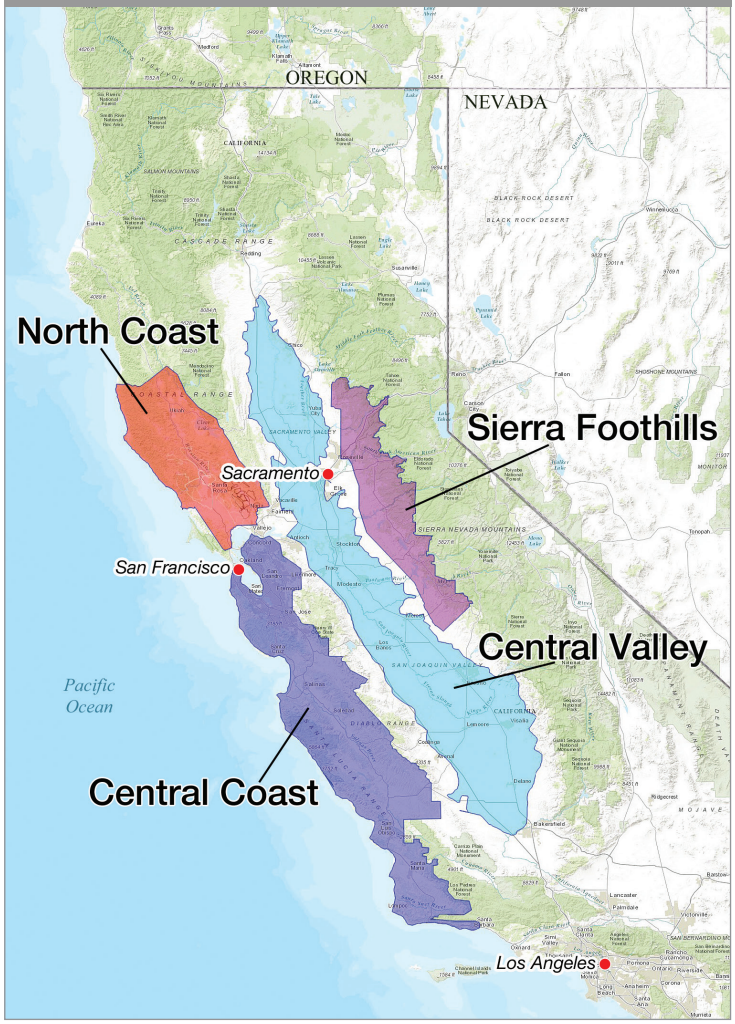
Factors of Wine Production

Location/Geography
- West Coast of the United States

Climate
- Cool on the coast, due to the influence of the Pacific Ocean. Warm to hot inland, based on distance from ocean's influence. This is a common theme for almost all wine regions we will discuss in California.

Topography/Aspect
- Mountain ranges and rolling hills, either blocking cool Pacific air or, depending upon orientation, funneling it inland

United States — California — Overview





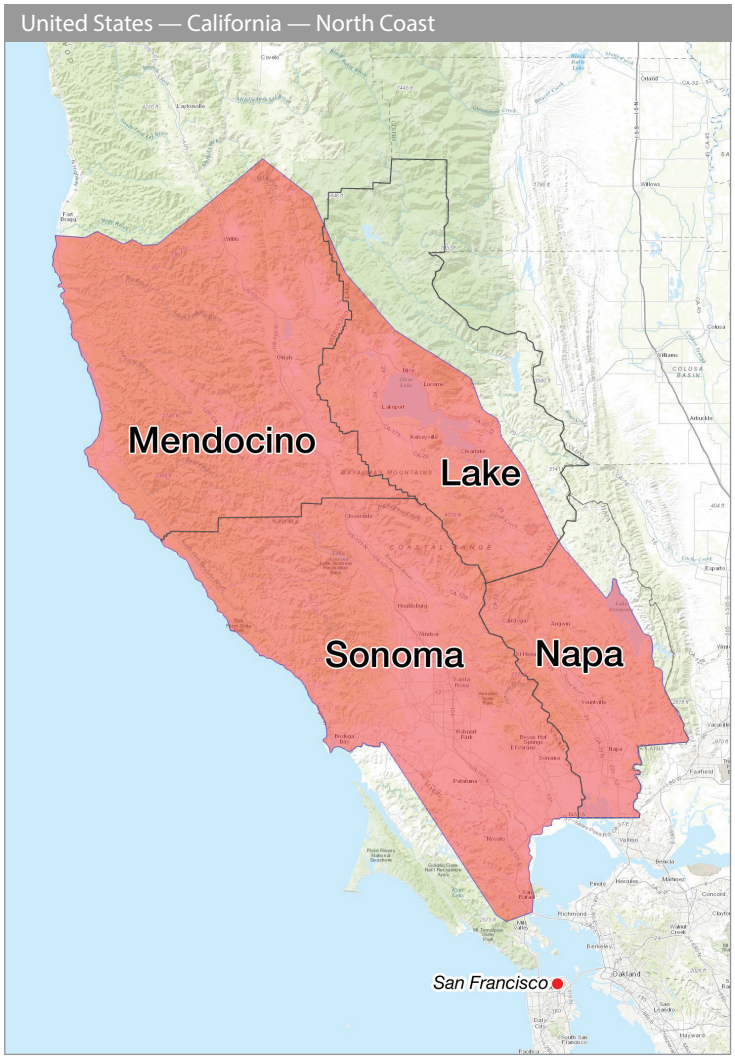
Grape Varieties

- White
  - Chardonnay
  - Sauvignon Blanc
- Red
  - Cabernet Sauvignon
  - Merlot
  - Zinfandel
  - Pinot Noir

Important Areas

- North Coast
- Central Coast
- Central Valley
- Sierra Foothills

California — North Coast



Napa Valley

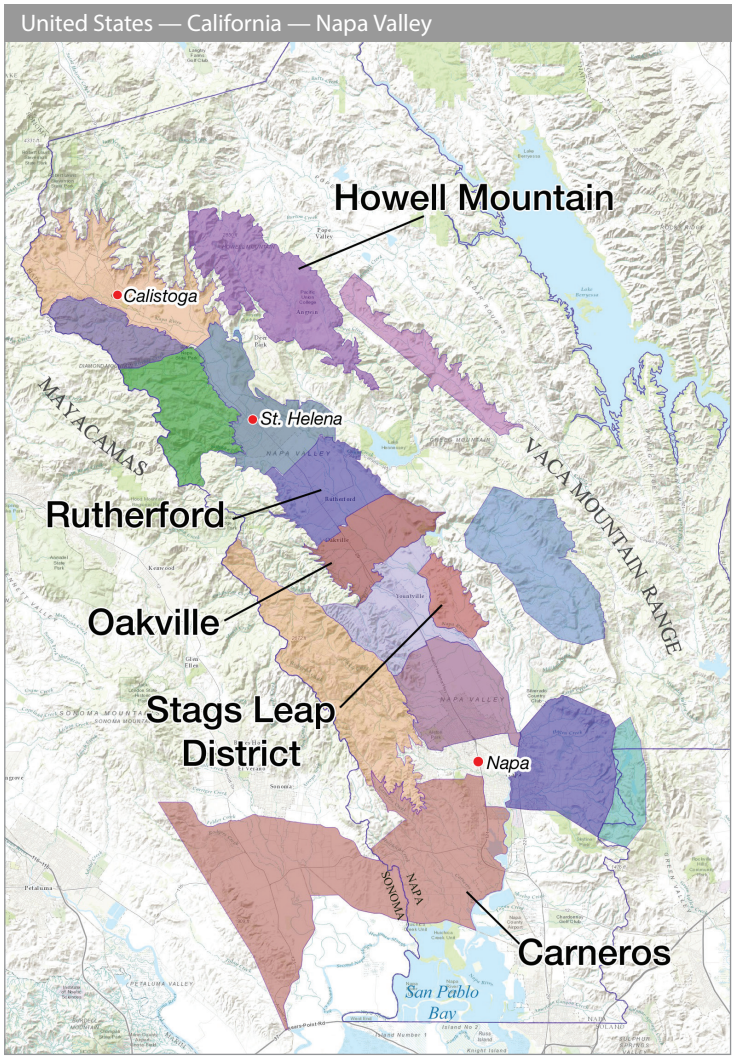
Location/Geography

- The Napa Valley stretches from the San Pablo Bay 30 miles north to Mount Saint Helena. The Vaca Mountains flank the valley to the east and the Mayacamas Mountains separate Napa from Sonoma to the west.
- The Napa River flows through the heart of the region.

Climate

- The dry Mediterranean climate and varies depending on altitude and the influence of cool air and fog rolling off the San Pablo Bay. This morning and evening cool air and fog creates large diurnal shifts in temperatures throughout the day. The AVAs in the southern portion of the Napa Valley are highly affected by cool air and fog. This lessens as you move north up the valley.

Looking at the map of the AVAs, note which are in the valley and which are in the mountains. Think about the climate of each and what grapes may be best grown.



Topography/Aspect

- The mountainous portions of Napa Valley vineyard land rise up to 2,000 feet in altitude.



Soil
- Very diverse across the valley and up in the mountainous areas

Grape Varieties
- White
  – Chardonnay
  – Sauvignon Blanc
- Red
  – Cabernet Sauvignon
  – Merlot
  – Zinfandel
  – Pinot Noir

Viticulture
- Vineyards in the Napa Valley are planted on the higher-elevation slopes and hillsides or on the valley floor. These differing locations bring differences in intensity of color, flavor, and structure in the resulting wines.
- Morning and evening fogs rolling in off the bay create the large shifts in temperatures from day to night, helping retain needed acidity and imparting freshness to the wines.
- The wide range of climates from south to north allows for different types and styles of wine, including cooler-climate Pinot Noir and warmer-climate Cabernet Sauvignon and Zinfandel.



Vinification
- Wines of the Napa Valley are often marked by extensive use of new French and American oak barrels, lending notes of vanilla and toast to both red and white wines.
- Malolactic fermentation is often employed when making white wines, especially Chardonnay, imparting rich, buttery aromas and flavors.
- Sparkling wines are produced in the cooler southern areas of Napa, most notably in Carneros.

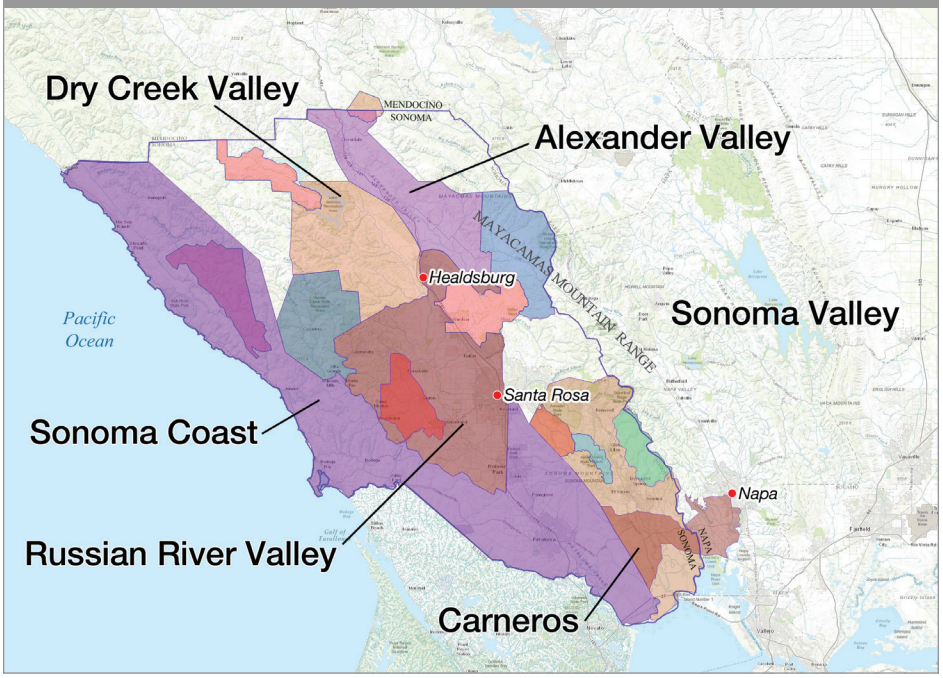
Important AVAs
There are many AVAs in the Napa Valley; these are a few of the most important:
- Carneros AVA
- Stags Leap District AVA
- Oakville AVA
- Rutherford AVA
- Howell Mountain AVA

Sonoma County

Location/Geography
- Western edge of the North Coast, extending eastward from the Pacific Ocean to the ridge line of the Mayacamas Mountains bordering the Napa Valley

Climate
- Cooler coastal areas, with warmer zones moving inland. Climate is extremely varied and depends on proximity to the Pacific Ocean, altitude, and the inland influence of fog and cool air from the ocean flowing through a gap in the mountains called the Petaluma Gap. The fog and cool air create large diurnal shifts from night to day.

United States — California — Sonoma



Looking at the map of the Sonoma AVAs, note which are close to the Pacific and have the influence of its cool air and fog and those that do not.



Topography/Aspect

- Hilly or mountainous throughout

Grape Varieties

- White
  - Chardonnay
  - Sauvignon Blanc
- Red
  - Pinot Noir
  - Cabernet Sauvignon
  - Merlot
  - Zinfandel
  - Syrah

Viticulture

- Hillsides
- Differences in elevation
- Diurnal shifts

Vinification

- Intense red wines, often aged in new-oak barrels
- Sonoma is incredibly diverse in the types of wine made. Styles are highly dependent on climate and cooling factors.

Important Sonoma County AVAs

- Carneros AVA
- Sonoma Valley AVA
- Sonoma Coast AVA
- Alexander Valley AVA
- Russian River Valley AVA
- Dry Creek Valley AVA

Mendocino County

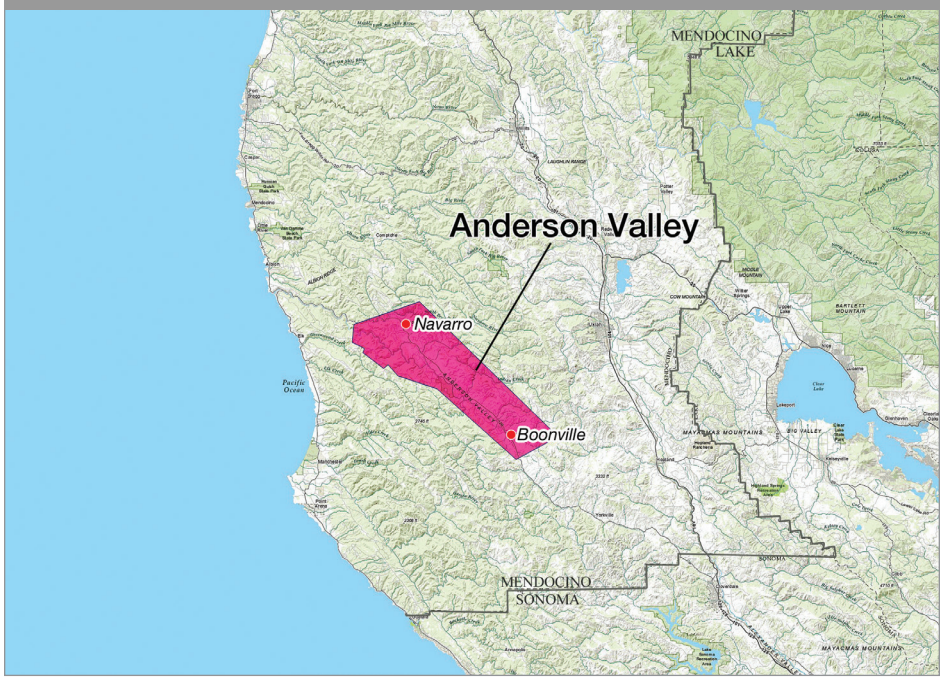


Location/Geography
- North of Sonoma County along the Pacific Ocean

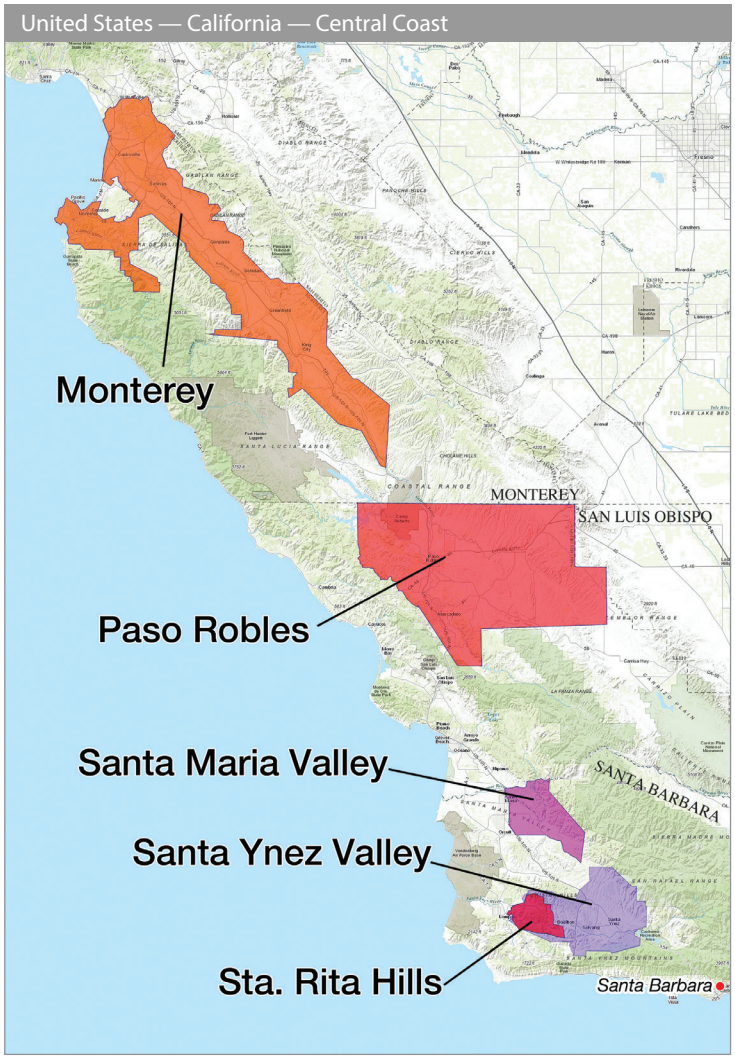
Climate
- Very dependent on proximity to the Pacific Ocean. Cool coastal areas and warm inland areas

Important Mendocino County AVAs
- Anderson Valley AVA
  - Climate
    - Cool coastal
  - Grape Varieties
    - White
      - Chardonnay
    - Red
      - Pinot Noir
  - Vinification
    - Well-known for traditional-method sparkling wines

United States — California — Mendocino



California — Central Coast



Monterey AVA

Location/Geography

- South of San Francisco and San Jose, near the town of Monterey
- A very fertile area known for many types of agriculture

Climate

- Cool maritime, with fog and intense wind near the coast
- Very warm to hot further south and inland

Topography/Aspect

- A gap in the mountains along the coast begin to run east-west instead of the typical north-south orientation, funneling cool air and strong winds directly inland



Grape Varieties
- White
  - Chardonnay
- Red
  - Pinot Noir
  - Cabernet Sauvignon
  - Merlot
  - Zinfandel

Viticulture
- Vineyard site selection is important to protect from severe harsh winds funneled in from the Pacific

Paso Robles AVA

Location/Geography
- San Luis Obispo County between Monterey and Santa Barbara

Climate
- Generally, a very warm AVA with hot days and cool nights
- Paso Robles is blocked from the cool maritime influence of the Pacific Ocean by mountains to the west. However, a small gap in the mountains allows cool air to funnel in and reach a portion of the wine-growing area.

Grape Varieties
- White
  - Chardonnay
- Red
  - Cabernet Sauvignon
  - Rhône varieties such as:
    - Grenache
    - Syrah
  - Zinfandel



Santa Barbara County

Location/Geography
- North of Los Angeles and north of the city of Santa Barbara

Climate
- Maritime, with a dramatic change in climate from the cool, wet, and windy coast to the warm and dry areas inland

Topography/Aspect
- California's Coastal Range turns and runs west to east, unlike the north-south orientation that predominates further up the coast. This creates a valley that funnels cool air and fog directly in from the Pacific Ocean.

Grape Varieties

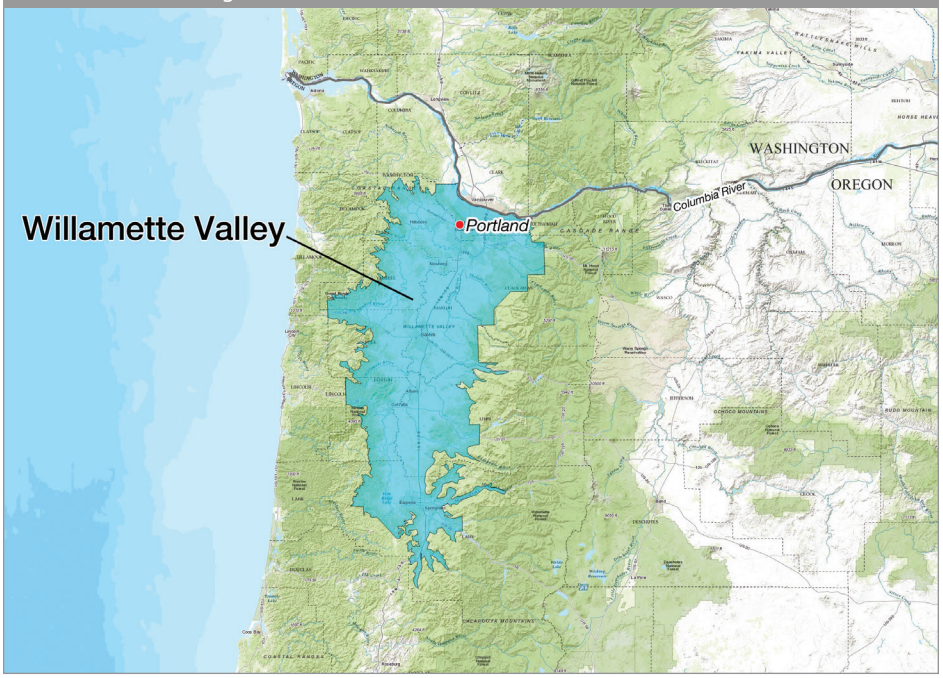
- White
  - Chardonnay
  - Sauvignon Blanc
- Red
  - Pinot Noir
  - Rhône varieties
    - Grenache
    - Syrah
  - Bordeaux varieties
    - Cabernet Sauvignon
    - Merlot

Important AVAs

- Santa Maria Valley AVA
- Santa Ynez Valley AVA
- Sta. Rita Hills AVA

Oregon

United States — Oregon



Factors of Wine Production

Location/Geography

- Pacific Northwest
- Main wine regions are situated between the Coast Range and the Cascade Mountains, running south from Portland



Climate
- Cool and maritime-influenced. The Coastal Range provides a rain shadow offering partial protection against storms headed eastward from the Pacific Ocean.

Topography/Aspect
- Rolling hills and mountains

Soil
- Mix of volcanic, alluvial, and clay

Grape Varieties
- White
  – Pinot Gris
  – Chardonnay
  – Riesling
- Red
  – Pinot Noir (70% of plantings)



Oregon pioneer
David Lett — Eyrie Vineyards
1975

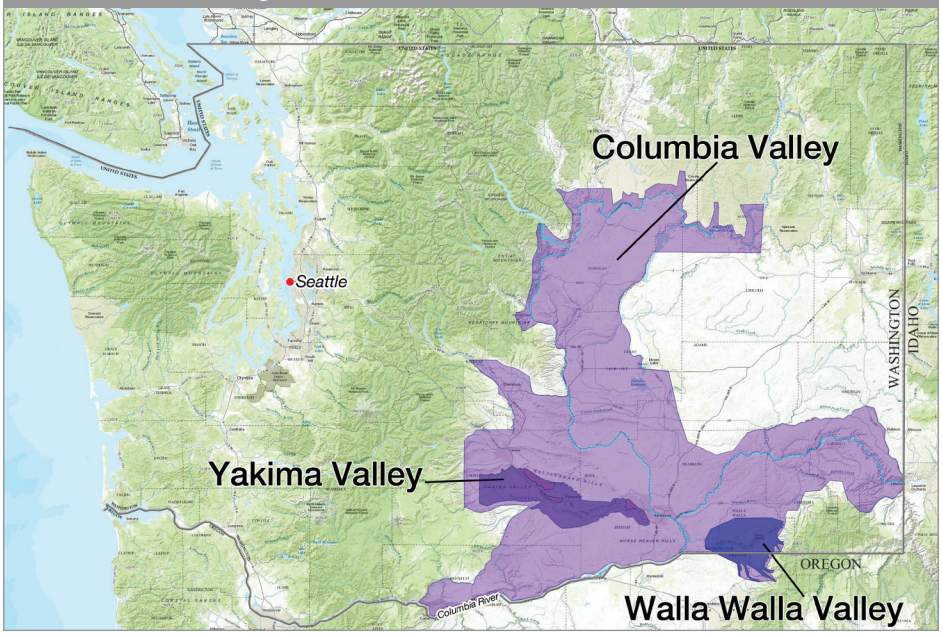
Viticulture
- Vineyards in the Willamette Valley are planted on the higher-elevation slopes and hillsides or on the valley floor. These differing locations bring differences in intensity of color, flavor, and structure in the resulting wines.

Important AVA
- Willamette Valley AVA
  – Many sub-AVAs

Regional Wine Law
- Oregon wine law is unique in that it requires that the wine contains a minimum of 90% of the grape variety stated on the label. An exception is made for Cabernet Sauvignon, Merlot, and a few other grape varieties which is allows the standard 75 percent.
- Oregon also has stricter state laws for labeling by AVA:
  – A wine labeled by reference to an AVA within Oregon must contain a minimum 95 percent of grapes grown in that appellation, rather than the standard 85 percent.

Washington State

United States — Washington State



Factors of Production

Location/Geography

- Located in the Pacific Northwest, with the majority of vineyards located to the east of the Cascade Mountains

Climate

- The Cascade Mountains create a rain shadow protecting the entire eastern portion of the state from the rainy and cool weather from the Pacific Ocean. This protection creates a continental, high-desert climate with hot summers, very cold winters, and little precipitation.

Grape

- White
  - Chardonnay
  - Riesling
- Red
  - Cabernet Sauvignon
  - Merlot
  - Syrah

Viticulture

- The desert-like conditions offer a dramatic diurnal differences of up to 40 degrees between day and night. Low temperatures allow the vines to rest and help preserve acidity and freshness in the wine.
- Irrigation is essential. The Columbia, Yakima, and Snake rivers are the primary sources of water.

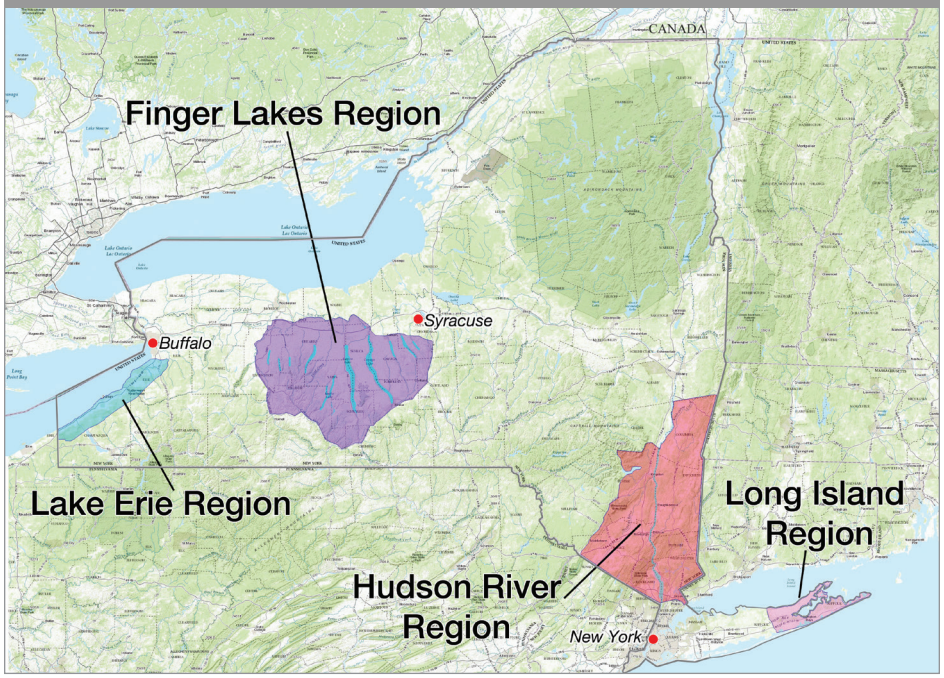
Important AVAs

- Columbia Valley AVA
  - Yakima Valley AVA
  - Walla Walla Valley AVA

New York State



United States — New York State



Factors of Wine Production

Location/Geography
- Northeastern United States

Climate
- Continental, with moderating influences of lakes and rivers for inland areas and the Atlantic Ocean for coastal regions

Grape Varieties
- White
  - Riesling
  - Gewürztraminer
  - Chardonnay
- Red
  - Pinot Noir
  - Merlot
  - Cabernet Franc
  - Concord
- Hybrid
  - Aurora
  - Seyval Blanc



Finger Lakes pioneer Dr. Konstantin Frank

Viticulture
- It is important to protect vines from deep freezes during the harsh winters and from mold in the warm, humid summer months

Important AVAs
- Finger Lakes AVA
- Hudson River Region AVA
- Long Island AVA
- Lake Erie AVA

North America

Quiz Questions

Which governmental body controls the production and sale of beverage alcohol?
a. FDA
b. TTB
c. IRS
d. FAA

For a Rutherford AVA Merlot, what is the minimum percentage of Merlot that must be in the wine?
a. 75%
b. 85%
c. 95%
d. 100%

Which of the following best describes the climate of the Anderson Valley and its best-known style of wine?
a. Cool climate/sparkling wines
b. Cool climate/sweet wines
c. Warm climate/fortified wines
d. Warm climate/red wines

Which of the following is an AVA in Sonoma County?
a. Rutherford
b. Stags Leap
c. Monterey
d. Russian River Valley

Who is credited with importing European vinifera vines to California?
a. Agoston Haraszthy
b. Dr. Konstantin Frank
c. Robert Mondavi
d. David Lett

The Willamette Valley is best known for which grape variety?
a. Cabernet Sauvignon
b. Grenache
c. Merlot
d. Pinot Noir

What has the most dramatic influence on the climate of Columbia Valley AVAs?
a. Hail
b. Fog from the Pacific Ocean
c. Moderation from the lakes and rivers
d. Rain shadow from the Cascade Mountains

South America



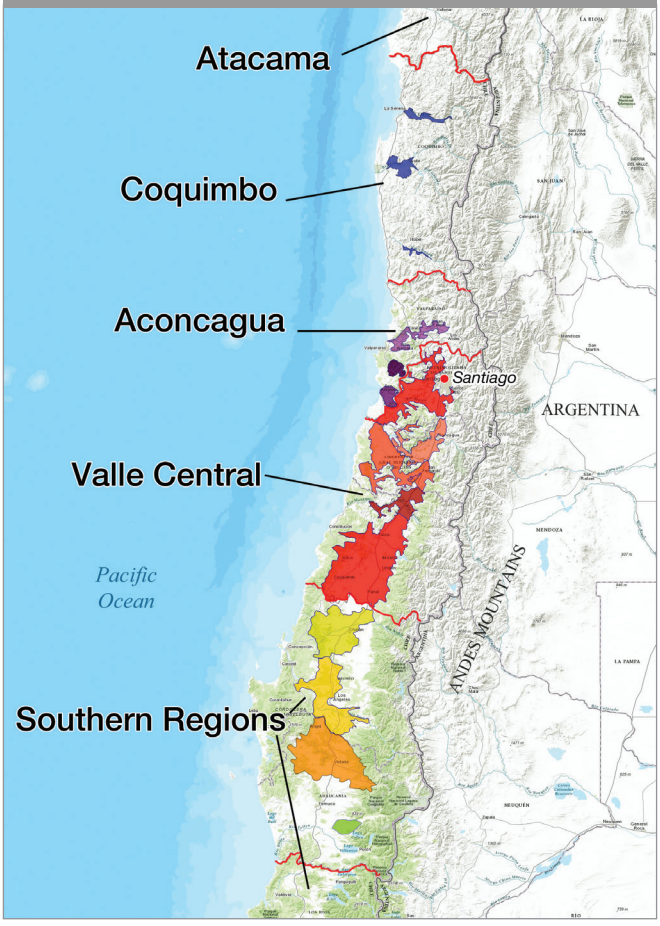
Chile

Learning Points

After studying this section, a student should be able to:

- Know the major geographical influences that affect the vine-growing regions of Chile
- Know the major grape varieties grown in Chile and how they arrived to the country
- Have a familiarity with the DO system
- Recognize the major growing areas and major sub-regions

South America — Chile Overview



Factors of Chilean Wine Production

Introduction / Historical Background

Viticulture arrived in Chile and other South American countries from Spain (by way of Mexico) during the mid-sixteenth century. After a promising beginning, the wine industry was hampered by restrictive laws from Spain intended to prevent competition with Iberian producers. Restrictions were put in place to limit production to sacramental purposes, though some private estates managed to circumvent these rules. As South American countries achieved autonomy in the 1800s, waves of European immigrants revived wine production with vine cuttings from their various homelands.

Location/Geography

- Chile stretches 2,670 miles along the southern half of South America's Pacific Coast
- The country is very narrow, rarely exceeding 100 miles in width and bounded by the Andes and the Pacific Ocean

Climate

- Chile's climate varies immensely from the hot and extraordinarily dry Atacama Desert in the north to the very cool southern regions
- The icy Humboldt ocean current brings cool, moist air, and fog to the coastal areas
- The Coastal Range mountains blocks the cool, moist air from the Pacific, creating a rain shadow. The inland areas between the Coastal Range and the Andes have a warm to hot Mediterranean climate.

Topography/Aspect

- Significant variations in altitude mark Chile's major regions, with vineyards in valleys, on foothills, or at upper elevations

Grape Varieties Many of Chile's vines were brought from Bordeaux in the 1800s

- White
  - Chardonnay
  - Sauvignon Blanc
- Red (75% of plantings)
  - Cabernet
  - Merlot
  - Carmenère (long mistaken for Merlot)

Viticulture

- Phylloxera does not exist in Chile because of its strict quarantine laws and geographical isolation.
- Many rivers descending from the Andes bring snowmelt water for irrigation and create channels in the Coastal Range that enable cool air from the Pacific to travel inland.

Regional Wine Law

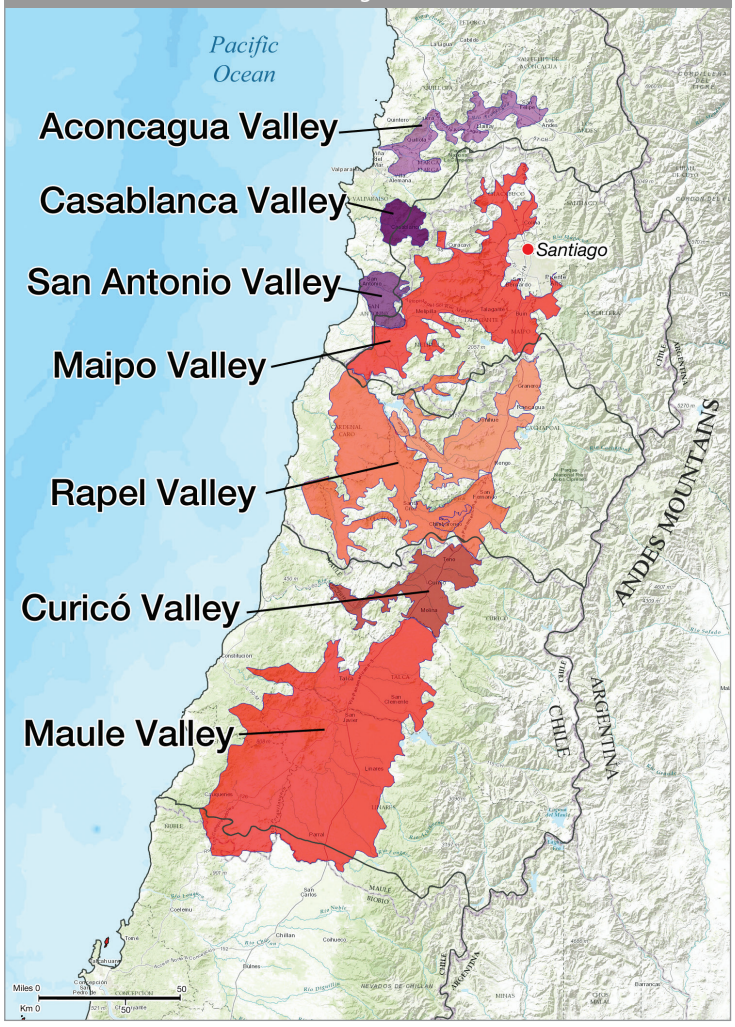
- Denominación de Origen (DO) Very similar to the AVA system in the US for denoting geographic origin
  - Minimum 75% must be from the region
  - There are six regional DO's in Chile from north to south
    1. Atacama
    2. Coquimbo
    3. Aconcagua
    4. Valle Central
    5. Sur
    6. Astral

- Grape variety and vintage labeling
  - Only Vitis vinifera (no hybrids)
  - Must be a minimum 75 percent of the stated variety
  - Must be a minimum 75 percent of the stated year
  - In practice, most wines conform to 85 percent laws for all of the categories above to comply with EU export standards.



- Major Chilean Regions and Notable Sub-Regions
  - Aconcagua DO
    - San Antonio DO and Casablanca Valley DO
      - Both of these areas are situated west of the Coastal Mountains near the Pacific Ocean
      - Cool maritime climate
      - Grape Varieties
        - White
          - Chardonnay
          - Sauvignon Blanc
        - Red
          - Pinot Noir

South America — Chile — Aconcagua – Valle Central



- Valle Central DO (Central Valley DO)
  - Location/Geography
    - Between the Andes and the Coastal Mountains
    - More than 80 percent of Chile's wine production is located in this broadly encompassing region, which stretches southward 200 miles from the suburbs of Santiago.

– Climate
  – Warm to hot

– Grape Varieties
  – Red
    – Cabernet Sauvignon
    – Carmenère
    – Merlot

– Important Sub-Regions
  – Maipo Valley DO — most famous, best known for Cabernet Sauvignon
  – Curicó DO
  – Rapel DO
  – Maule Valley DO

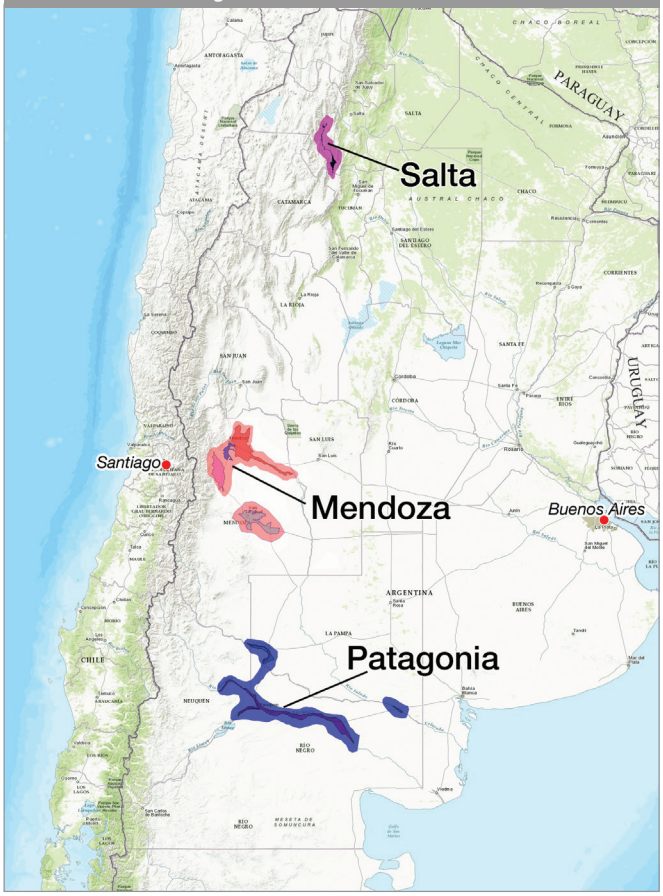
Argentina

Learning Points

After studying this section, a student should be able to:

- Know the location of Argentina in South America
- Understand the importance of elevation and diurnal differences for viticulture
- Understand the role of irrigation and how vines are irrigated
- Know the primary grape varieties of Argentina
- Recognize three of the main wine regions in Argentina and — for each — know important geographic and climate factors

South America — Argentina



Factors of Argentine Wine Production



Introduction
- Argentina is South America's largest wine-producing country and is the fifth largest producer in the world. Vineyards were revitalized by Italian and Spanish immigrants towards at the end of the nineteenth century.

Location/Geography
- Located on the eastern side of the Andes Mountains

Climate
- The Andes form a rain shadow offering protection from westerly winds and storms, creating a very dry, arid climate



Topography/Aspect
- Vineyards are planted in the front range of the Andes at an average altitude of 3,000 feet above sea level. This elevation is key to the success of viticulture in Argentina.

Grape Varieties
- White
  – Torrontés
- Red
  – Malbec
  – Bonarda
  – Cabernet Sauvignon
  – Syrah

Viticulture practices
- The wine regions are very dry and low in humidity, keeping the vineyards free of fungal problems.
- Irrigation is essential due to the rain shadow cast by the Andes Mountains creating an arid climate. Snowmelt from the Andes provides plentiful water.
- Major diurnal swings between hot days and cool nights during the growing season
- The brutal Zonda wind blows down from the Andes in the late spring and early summer. This wind can affect the flowering of the vines.
- Hail is a frequent hazard in the vineyards. Hail nets are employed in many vineyards to protect the vines.

Regional Wine Law
- IGs Indicaciones Geográficas (geographic indications)
  – Regions are demarcated by political or geographical boundaries, similar to AVAs

- DOCs (Denominación de Origen Controlada)
  – Specify grape varieties, viticultural practices, and aging requirements
  – Similar to European appellation systems

Important Appellations of Argentina

Salta IG

Location Geography
- Northernmost wine region in Argentina

Climate
- Generally the climate is warm; however, vineyards are planted at high elevation where temperatures are cooler

Grape Varieties
- White
  – Torrontés
- Red
  – Malbec

Viticulture
- Home to some of the highest-altitude vine plantings in the world, at almost 10,000 feet

Important sub-region
- Cafayate IG

Mendoza IG

Climate
- Continental and arid
- Elevation-dependent

Grape Varieties
- Red
  – Malbec

Viticulture
- Mendoza is the largest viticultural region in Argentina
- Most vineyards are planted at altitudes between 2,000 and 4,000 feet
- The strong Zonda wind helps to keep mildew and other diseases to a minimum
- Irrigation is essential
- The traditional furrow or flood technique is widely utilized, with water from rivers directed through the vineyards in channels
- Modern methods such as drip irrigation are increasingly used

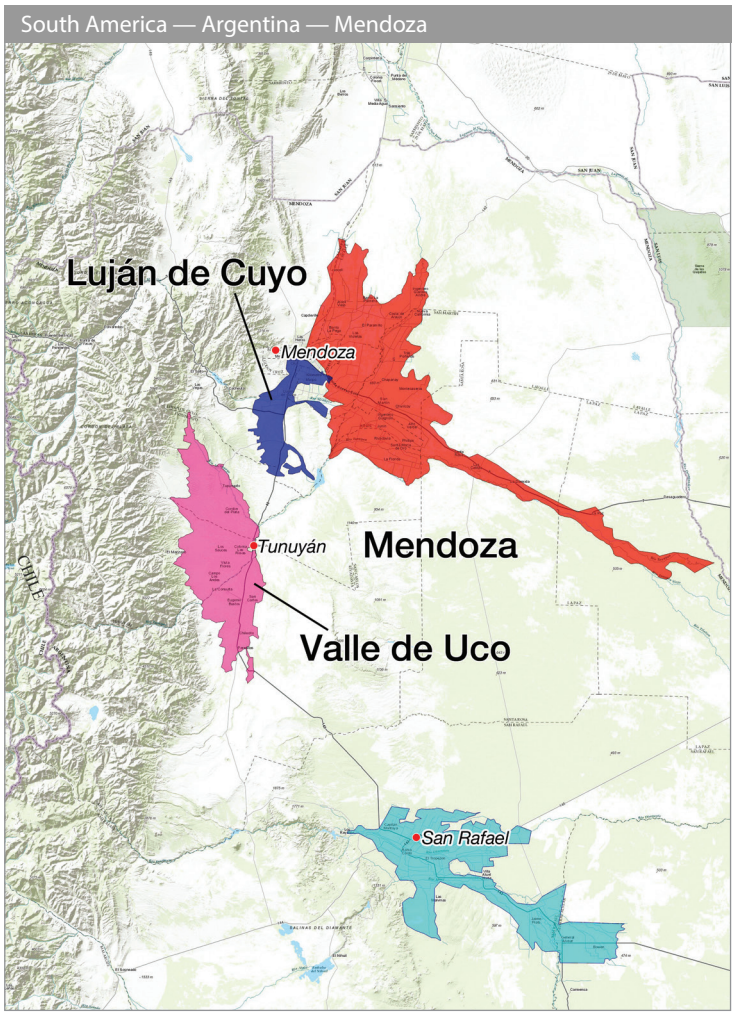


Flood irrigation

Vinification
- Many producers age their wines in new French or American oak barrels



Important Sub-Region
- Luján de Cuyo DOC
- Uco Valley IG



Patagonia IG

Climate
- A notably cool area with some of Argentina's southernmost vineyards

Grape Varieties
- White
  - Torrontés
- Red
  - Malbec
  - Cabernet Sauvignon
  - Pinot Noir

South America — Chile

Quiz Questions

What makes up most of the vineyard plantings in Chile?
a. Hybrids
b. White grape varieties
c. Red grape varieties
d. Grapes for fortified wine production

The Valle Central DO is the largest wine-growing area in Chile.
a. True
b. False

Both the San Antonio and Casablanca DOs share this trait.
a. Cool climate regions near the Pacific Coast
b. Cool climate, high elevation regions near the Andes
c. Warm climate regions in the Valle Central
d. Warm climate regions in northern Chile

What is the best-known grape variety produced in the Maipo Valley?
a. Cabernet Sauvignon
b. Pinot Noir
c. Malbec
d. Merlot

Which of the following brings cool, moist air and fog to the coastal regions of Chile?
a. Humboldt Current
b. Mistral
c. Zonda
d. Andes snow

Carmenère is a grape brought to Chile from the Bordeaux region of France.
a. True
b. False

Which of the following is not a sub-region of the Valle Central DO
a. Rapel Valley
b. Mendoza
c. Maipo Valley
d. Maule Valley

For a long time, Carmenère was mistaken for which grape variety?

In order to bear the name of a grape, vintage, or region, a wine must contain a minimum what percent according to Chilean wine law?

Most producers use what percent in order to adhere to European law for export?

South America — Argentina



Quiz Questions

What is the primary red grape variety of Argentina?
a. Pinot Noir
b. Cabernet Sauvignon
c. Torrontés
d. Malbec

What is the primary white grape variety of Argentina?
a. Pinot Noir
b. Cabernet Sauvignon
c. Torrontés
d. Malbec

Which is a prominent area in Argentina for Torrontés?
a. Salta
b. Mendoza
c. Patagonia
d. Casablanca

What is an important feature of the Salta vineyards?
a. Rain shadow
b. High altitude
c. Proximity to the sea
d. Low-lying plains

What is the Zonda?
a. A type of vineyard rot
b. A fierce wind from the Andes
c. A current from the Pacific Ocean
d. A type of vineyard pest

Where is the Luján de Cuyo DOC located?
a. Chile
b. Patagonia
c. Salta
d. Mendoza

Choose the major hazard to the vineyards of Mendoza.
a. Snow
b. Tornados
c. Hail
d. Rain

List one pro and one con for how the Zonda affects viticulture in Mendoza.

Pro:

Con:

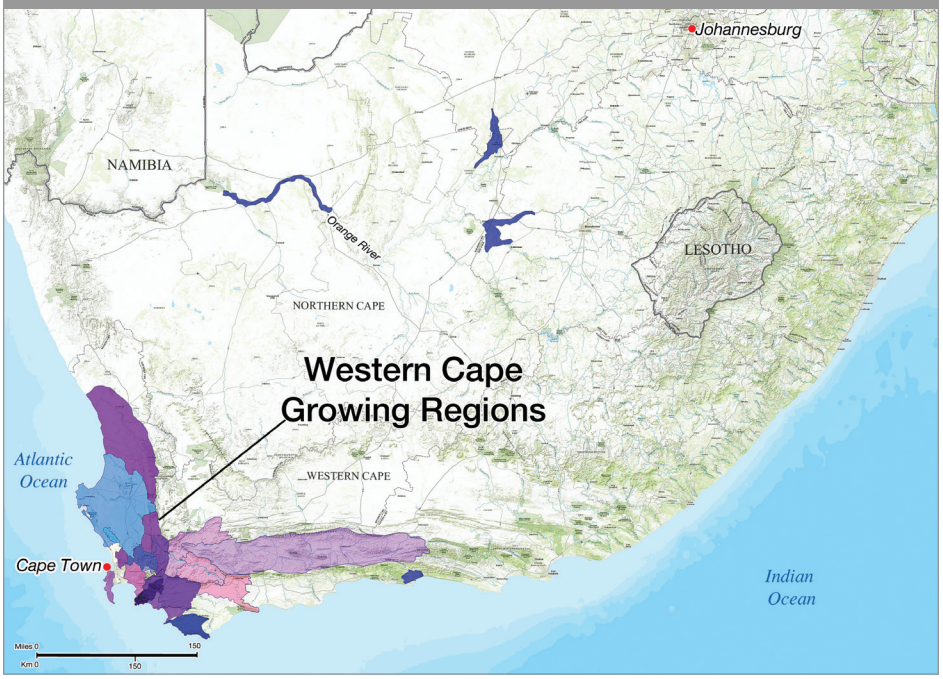
South Africa

Learning Points

After studying this section, a student should be able to:

- Know the location of South Africa
- Understand the basics of South Africa's wine-growing history
- Know the two adjacent oceans and how they affect South African wine regions
- Know the name of the ocean current that cools the coastal vineyards
- Recognize the term "Cape Doctor" and its effect on South African viticulture
- Understand the basics of the Wine of Origin System
- Understand the role of the KWV
- Know the primary grape varieties
- Recognize examples of important South African geographic Wine of Origin designations

South Africa — Overview



Factors of Wine Production

Introduction/Historical Background

South Africa's long history of wine production dates back to the seventeenth century. The cape became a refueling and trade station for ships on voyages to India and beyond, and then a settlement of the Dutch East India Company. The first vines were planted in 1655, but grape -growing did not really begin to flourish until 1688 when French Huguenots arrived to the cape bringing with them strong winemaking skills. There were many high points and setbacks over the centuries, but when apartheid came to a definitive end with fully democratic elections in 1994, economic boycotts were lifted and South African wines gained full access to export markets. Along with the privatization of the KWV this stimulated a rebirth and the modernization of the industry. Today, South Africa ranks in the top ten wine-producing countries worldwide.



Location/Geography
- The southern tip of Africa adjacent to both the Atlantic and Indian oceans

Climate
- Mostly maritime with the cooling effect of the oceans
- The Benguela Current flows north from Antarctica to cool the coastal areas.
- It becomes very warm to hot moving inland away from the coast.

Soil
- Ancient and diverse

Grape Varieties
- White
  - Chenin Blanc (locally called Steen)
  - Chardonnay
  - Sauvignon Blanc
- Red
  - Pinotage (a Pinot Noir and Cinsault crossing)
  - Cabernet Sauvignon
  - Syrah
  - Merlot
  - Pinot Noir

Viticulture
- High occurrence of vine virus
- The Cape Doctor, a strong southeasterly wind, blows across the western cape in the spring and summer. This wind can:
  - Help suppress fungal disease
  - Help moderate temperatures
  - Can injure the vines and disturb flowering

Regional Wine Law

Wine of Origin System (WO)
- The WO system was introduced in 1973.
- Producers looking for certification must adhere to specific standards.
- Wines must be submitted to the board and are tasted and tested for approval.
- A WO seal appears on all bottles of South African wine that pass this certification.

WO Labeling Laws
- Vintage: Minimum 85 percent must be from the stated year
- Variety: Minimum 85 percent of the stated variety
- Appellation: 100 percent of the grapes must come from the named geographic Wine of Origin designation

The KWV:
In 1918 the Ko-operatiewe Wijnbouwers Vereniging van Zuid-Afrika (KWV) was formed, rescuing the South African wine industry from disaster after the ravages of phylloxera and the severe loss of exports in the late 1800s. The KWV produced wine, stabilized prices, and established a quota system that emphasized quantity over quality. The KWV controlled the South African wine industry until apartheid was lifted and became a private company in 1997.



Geographic Designations — largest to smallest with prime South African examples

Geographical Units
- Western Cape

Regions
- Coastal Region

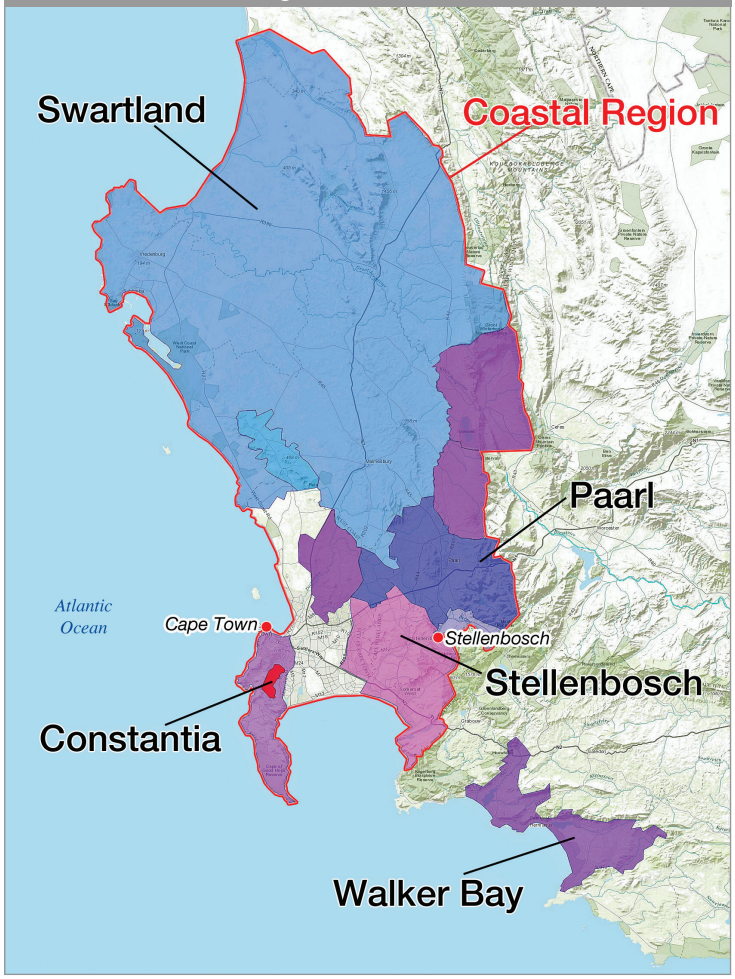


Districts
- Stellenbosch
- Paarl
- Walker Bay
- Swartland

Wards (defined by soil, climate, and geologic factors)
- Constantia
  - A rich history, with sweet wines long regarded as among the best in the world

Estates
- Single vineyards

South Africa — Coastal Region



South Africa



Quiz Questions

Steen is a local name for which grape variety?
a. Chardonnay
b. Riesling
c. Chenin Blanc
d. Pinot Noir

The grape variety Pinotage is a _____ of Cinsault and Pinot Noir.
a. Crossing
b. Hybrid
c. Clone
d. Blend

The Benguela Current can help:
a. Cool coastal South African vineyards
b. Warm coastal South African vineyards
c. Prevent rot
d. Prevent phylloxera

Which of the following is a district in South Africa?
a. Mendoza
b. Stellenbosch
c. Maipo
d. Salta

Order the following South African Geographic Wine of Origin designations from smallest to largest:

1. Geographical Units	(Smallest)	1.
2. Estates		2.
3. Regions		3.
4. Wards		4.
5. Districts	(Largest)	5.

What is the KWV?

Name three effects of the Cape Doctor wind on the vineyards of South Africa:

1.

2.

3.

Australia

Learning Points

After studying this section, a student should be able to:

- Know the location of Australia and its climatic influences
- Know the general location of wine-grape-growing on the Australian continent
- Understand the Australian GI system
- Know the primary vine-growing states and their major wine regions
- Be able to associate the primary wine regions with climate and grape variety
- Understand the philosophy and importance of blending for the Australian wine industry

Australia — Overview



Factors of Wine Production

Introduction/Historical Background

The first vineyards were planted in New South Wales in the late eighteenth century, and commercial viticulture was established in multiple areas across the southern swath of the continent between 1820 and 1840. As in most New World wine-growing countries, European immigrants brought experience as well as varietal and stylistic preferences that took root along with the vines they worked. Phylloxera caused serious setbacks in Victoria, where the wine industry was centered late in the nineteenth century, but recovery was achieved quickly, albeit with a shift toward fortified wines from warmer regions located principally in the state of South Australia. Immense tracts of irrigated vineyard land were planted along major rivers, establishing a foundation for Australia's role as a wine-exporting powerhouse in the twentieth century. Fine wine gained prominence with the advent of temperature-controlled fermenters in the mid-1950s and a shift to planting in cooler areas with premium vine varieties.



Boutique wineries arose and spread very rapidly, though never displacing industrial-scale producers. Today, wineries of both types coexist, serving different types of consumers both domestically and internationally.

Location/Geography

- Australia is a large country roughly the size of the continental U.S.A. It is situated in the South Pacific Ocean and made up of six states and multiple territories.

Climate

- Australia is the world's driest inhabited continent with a hot desert interior that is inhospitable to viticulture.
- Most wine regions are clustered in the southeastern part of the continent in temperate latitudes near major cities.

Soil

- Ancient, eroded, and nutrient-poor soils with great diversity

Grape Varieties

- White
  - Chardonnay
  - Sauvignon Blanc
  - Semillon
  - Riesling
- Red
  - Shiraz
  - Cabernet Sauvignon
  - Merlot
  - Grenache
  - Pinot Noir

Viticulture

- Vine-growing is concentrated in cooler coastal areas moderated by the Pacific and Indian Oceans. Vineyards are also planted in cooler high-elevation areas
- Irrigation is imperative, especially for turning vast interior Outback into land hospitable for vine growing.
- The warm, dry climate tends to produce very ripe grapes. It is important — though often difficult — to maintain adequate natural acidity for achieving balance in finished wines.
- The combination of artisanal and industrial wineries is an important factor in Australian wine production.

Vinification

- Australia's wine industry has long been a world leader in technological development, partly due to a strongly innovative culture and partly because expansion could only be achieved through mechanization because of labor shortages.
- Emphasis on technical precision has created a broad tendency to produce wines in a very clean, fruit-driven style
- Oak aging: Traditionally, American oak was prevalent, but use of French barriques has become increasingly common.
- Acidification is often employed to counterbalance the effects of the country's warm climate.
- Australia has long been a global leader in alternative packaging and closures, from bag-in-box to screw caps for still wines and crown caps for sparkling wines.

The Importance of Large-Scale Blending
Vineyards and wineries in Australia are often widely separated. Grapes are frequently trucked hundreds of miles to a winery for vinification. Many wines are blended from multiple growing sites far removed from one another, with the objective of attaining consistent flavors from year to year. This practice is not limited to bulk production. Indeed, some of the Australia's most esteemed wines are made by this method, including the iconic Penfolds "Grange." Blending grapes and regions is crucial to the consistency and quality of Australian wine.

Harvest
- With labor in relatively short supply, and large vineyards widely dispersed, many sites are planted to accommodate mechanical harvesting.
- Picking is often performed at night to preserve freshness and acidity.

Australian Appellation System
- The Label Integrity Program of Australia requires an 85 percent minimum across the board:
  – 85 percent stated grape variety on label
  – 85 percent stated vintage on label
  – 85 percent stated region on label
- Geographical Indications (GI)
  – Australian GIs define geographical areas much like the AVAs of the United States

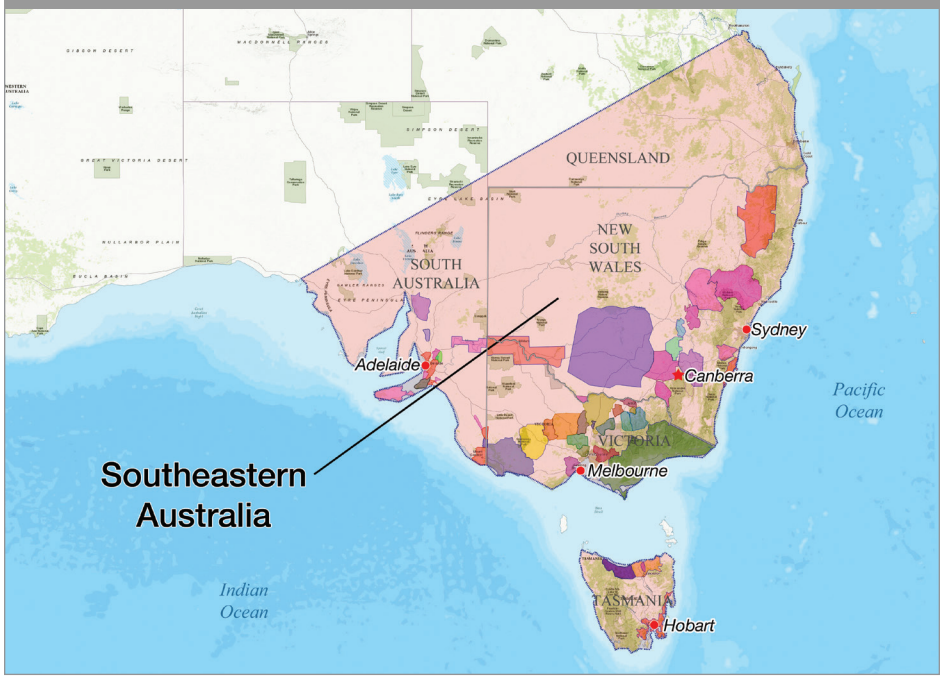
GI Categories — from largest area to smallest
Country Australia — 100% of the grapes must originate from Australia
Southeastern Australia
State of Origin
Zones
Regions
Sub-Regions

Southeastern Australia GI



A massive geographical area comprising five states. This GI is integral to the practice of blending for mass-market wines and meeting EU appellation requirements.

Australia — Southeastern



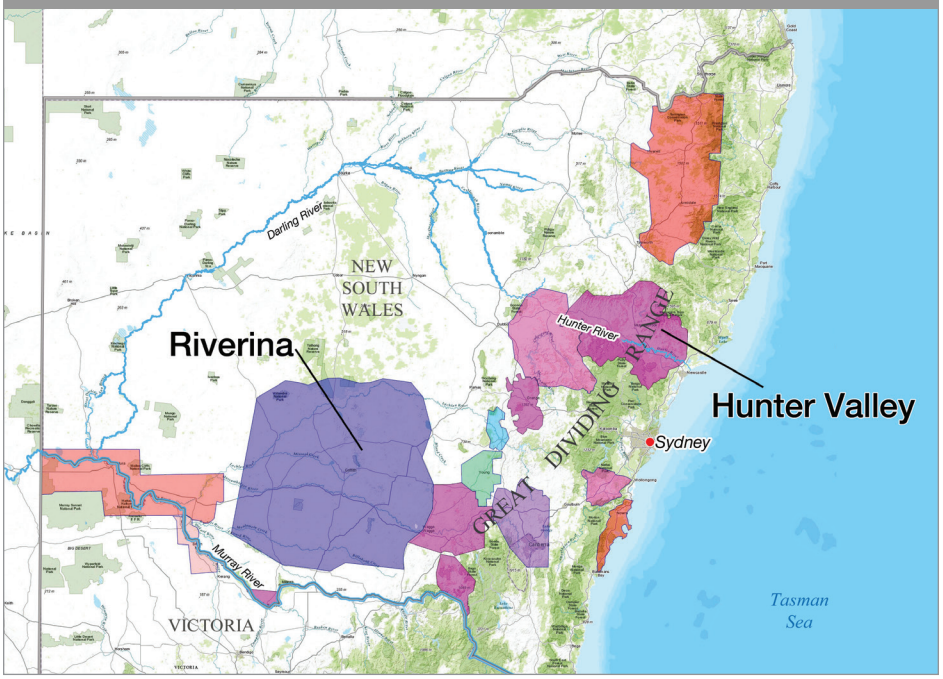
New South Wales

Location/Geography
- Eastern Australia near Sydney

Climate
- Cooler and wetter near the coast; dry and arid inland

Topography
- The Great Dividing Range runs north to south, separating the wet coastal regions from the dry interior

Australia — New South Wales



Hunter Semillon is considered one of the great unique wines of Australia.

Important GIs of New South Wales
- Hunter Valley — Hunter GI
  - Location/Geography
    - North of Sydney
  - Climate
    - Hot and humid; among the warmest climates in Australia
    - Moderated by wind and the cooling effect of the sea
  - Topography
    - Gentle, flat river valley
  - Grape Varieties
    - White (60% of production)
      - Semillon



- Riverina GI
  - Location / Geography
    - Far inland on the western side of the Great Dividing Range in the fertile river lands. Riverina is largest wine region in Australia.
  - Climate
    - Hot and very humid in some areas
  - Grape Varieties
    - White
      - Semillon
      - Chardonnay
    - Red
      - Shiraz
      - Merlot
  - Viticulture
    - Riverina represents 25 percent of Australian wine production
    - Irrigation from nearby rivers is required for viticulture in this area to succeed.
  - Vinification
    - Riverina is most known for bulk table wine production but also produces fortified wines and botrytis-affected dessert wines.

Victoria

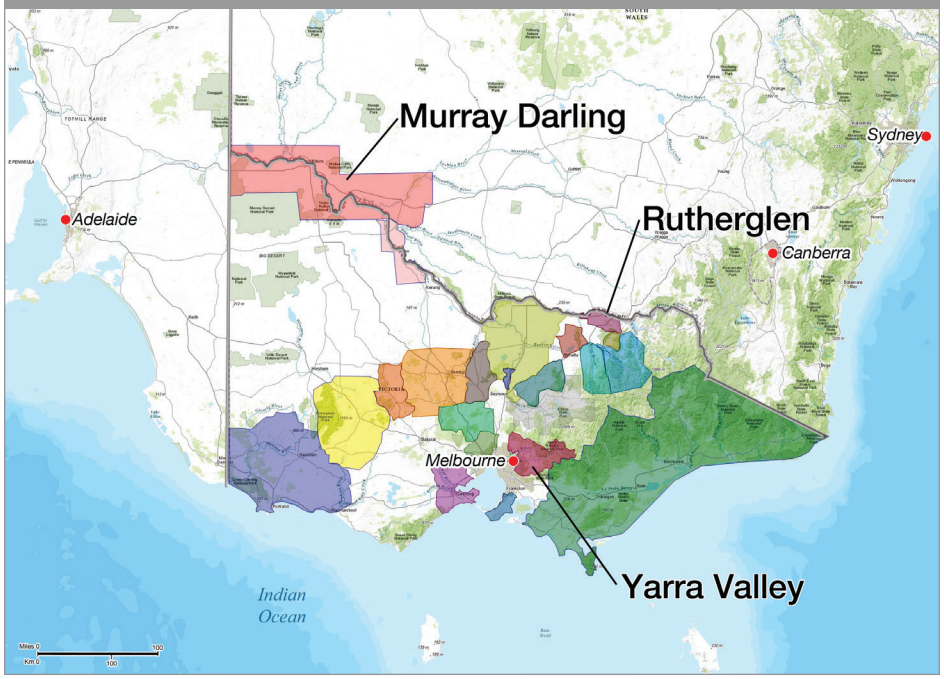
Location/Geography

- Southeastern Australia, with Melbourne being the most important metropolis

Climate

- A broad range extending from cool, coastal maritime to continental, which can be very hot when remote from the cooling influence of the ocean.

Australia — Victoria



Vinification

- Victoria produces a wide range of wine styles depending on location and climate:
  - Sparkling
  - Still
  - Fortified
  - Dessert

Important GIs

- Yarra Valley GI
  - Climate
    - Cool, humid, maritime moderated by the ocean
  - Grape Varieties
    - White
      - Chardonnay
    - Red
      - Pinot Noir
      - Shiraz
  - Vinification
    - Still and sparkling wine production

Rutherglen Muscat is considered one of the world's great sweet wines.

- Rutherglen GI
  - Climate
    - Continental with very hot summers
  - Grape Varieties
    - White
      - Muscadelle
    - Red
      - Shiraz
      - Brown Muscat (Muscat Rouge à Petits Grains)
  - Vinification
    - Still wine production
    - Fortified dessert wines, often referred to locally as "stickies"

- Murray-Darling GI
  - Location/Geography
    - Northwestern Victoria — this GI is partly in New South Wales
  - Climate
    - Very hot
  - Viticulture
    - Riverland planting
    - Irrigation is essential
  - Vinification
    - An important region for bulk wine production

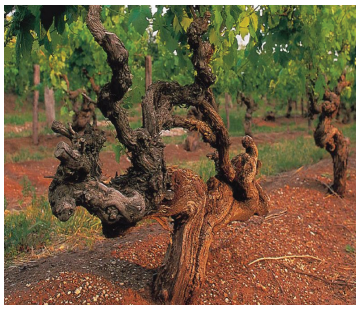
South Australia



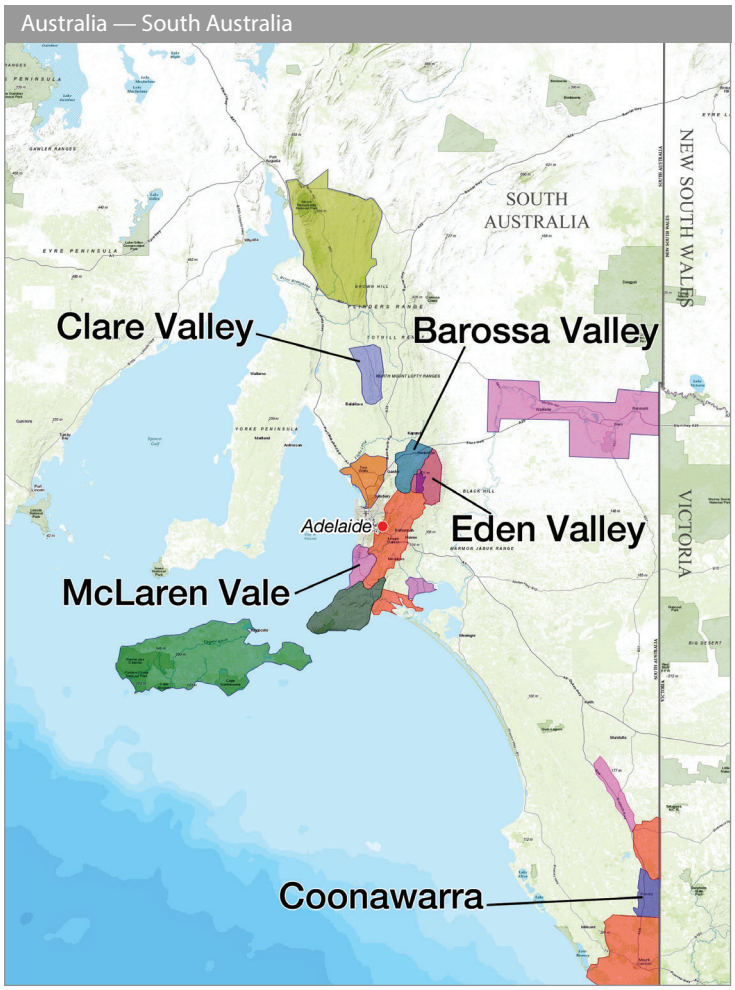
Location/Geography
- Southern Australia, with Adelaide being the most important metropolis

Climate
- Broad range of climates
- Warm, dry and Mediterranean moderated by cool breezes from the ocean
- Cooler climates at higher elevations

Important GIs
- Barossa Valley GI Largest, most important premium wine area
  - Location/Geography
    - Near the city of Adelaide
  - Climate
    - Mediterranean
  - Grape Varieties
    - Red
      - Shiraz
      - Grenache
      - Cabernet Sauvignon
  - Viticulture
    - Extremely old vines; phylloxera has been prevented from reaching this area



Barossa old vines



- Eden Valley GI
  - Climate
    - Cooler, higher elevation
  - Grape Varieties
    - White
      - Riesling
      - Chardonnay
    - Red
      - Shiraz
  - Viticulture
    - High altitude helps retain acidity in grapes
  - Vinification
    - Riesling vinified dry

- McLaren Vale GI
  - Location/Geography
    - South of Adelaide
  - Climate
    - Warm, yet moderated by cool ocean air
  - Grape Varieties
    - Red
      - Shiraz
      - Grenache
  - Viticulture
    - Vineyards slope down toward the sea to maximize exposure to cool breezes

Although the Clare Valley is mainly planted with red grape varieties, Clare Riesling is an iconic New World interpretation of the grape.

- Clare Valley GI
  - Location / Geography
    - 60 miles north of Adelaide
  - Climate
    - Warm continental
    - Hot days and cool nights
  - Topography / Aspect
    - 1,300 – 1,800 feet elevation
  - Grape Varieties
    - White
      - Riesling
    - Red
      - Shiraz
      - Cabernet Sauvignon
  - Viticulture
    - High altitude and cool nights help retain acidity in grapes
  - Vinification
    - Dry Riesling production



- Coonawarra GI
  - Location/Geography
    - Southern strip of land near the sea
  - Climate
    - Cool, Mediterranean climate
  - Soil
    - Best vineyards are on a single, narrow, 9-mile strip with Terra Rossa soil, a vivid red soil over limestone base
  - Grape Varieties
    - Red
      - Cabernet Sauvignon

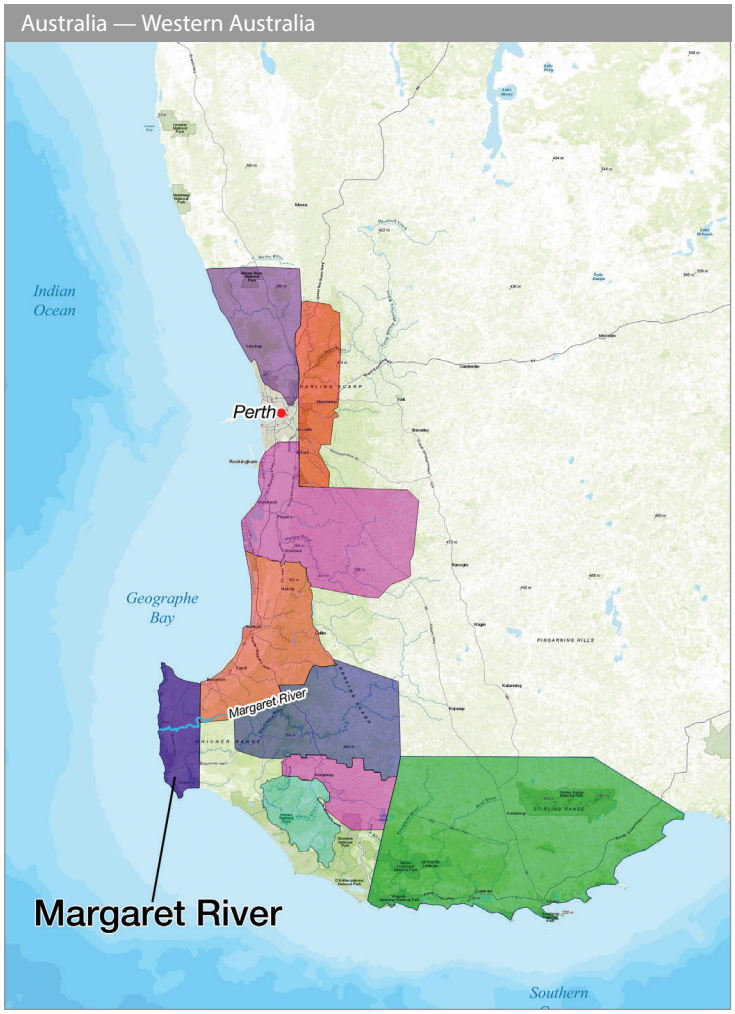


Terra Rossa soil in Coonawarra

Western Australia

Important GIs

- Margaret River GI
  - Location/Geography
    - Western Australia, with Perth being the most important metropolis
  - Climate
    - Warm maritime, with the moderating influences of the Indian Ocean
  - Grape Varieties
    - White
      - Chardonnay
      - Semillon
      - Sauvignon Blanc
    - Red
      - Cabernet Sauvignon
      - Shiraz
      - Merlot



Australia



Quiz Questions

Which of the following is the largest Australian GI?
a. South Australia
b. McLaren Vale
c. Southeastern Australia
d. Western Australia

Which region is famous for its Terra Rossa soil?
a. Hunter Valley
b. Barossa Valley
c. Coonawarra
d. Yarra Valley

The Clare Valley and the Eden Valley are most noted for which style of wine?
a. Dry Semillon
b. Dry Riesling
c. Muscat-based sweet wines
d. Pinot Noir

Sparkling wines production thrives in Victoria due to which factor?
a. Hot inland airflow
b. Rain shadow
c. Proximity to cool ocean breezes
d. Intense wind

Why does the Barossa Valley have many 100+ -year-old vines?
a. Absence of phylloxera
b. Proximity to the ocean
c. Shiraz prefers older vines
d. Careful planting

Match the Australian GI with its most famous style of wine.

Eden Valley ☐	☐ Dry Riesling
Yarra Valley ☐	☐ Dry Semillon
Barossa Valley ☐	☐ Semillon/Sauvignon Blanc blends
Hunter Valley ☐	☐ Bold Shiraz
Margaret River ☐	☐ Chardonnay
Coonawarra ☐	☐ Muscat-based sweet wines
Rutherglen ☐	☐ Cabernet Sauvignon
Clare Valley ☐	☐ Pinot Noir
McLaren Vale ☐	

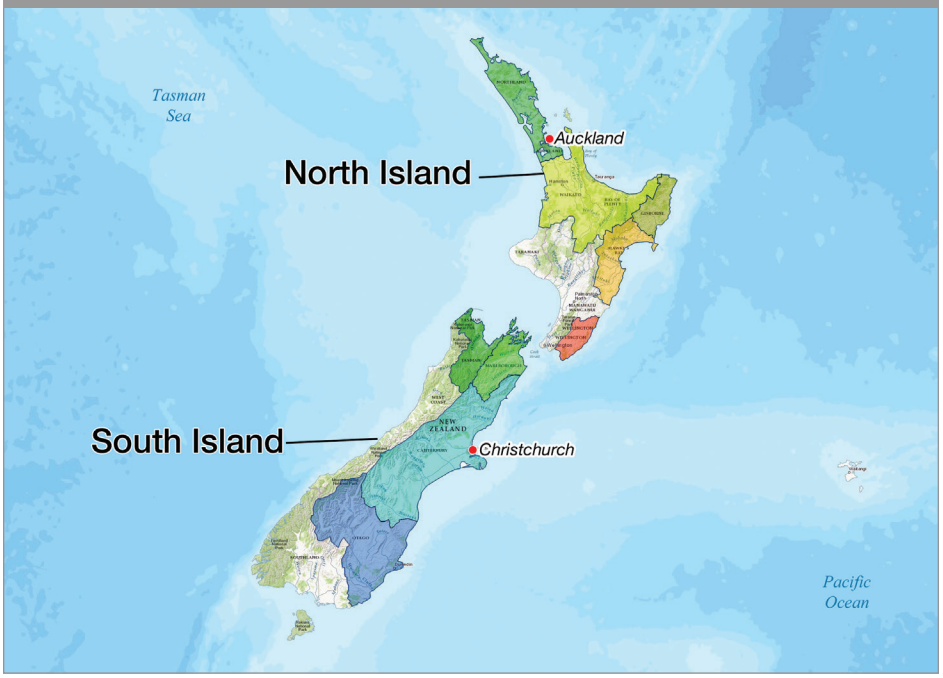
New Zealand

Learning Points

After studying this section, a student should be able to:

- Know the location of New Zealand
- Know the general climate of each island and climate influences
- Know the primary grape varieties of the main growing regions

New Zealand GI — Overview



Factors of Wine Production

Introduction/Historical Background

The first vines in New Zealand were planted in 1819. James Busby, a British resident, was the first to make wine from a vineyard he established in 1836. Momentum built during the remainder of the nineteenth century as other Europeans brought their winemaking traditions to the country. The early decades of the twentieth century saw serious setbacks due to phylloxera, a strong temperance movement between 1910 and 1919, and global economic depression between the two world wars. Wine seeped into the national culture very slowly, it could not be sold in restaurants until 1960 or in supermarkets until 1990. However, by the late 1990s New Zealand's planted acreage and wine production increased many-fold. New Zealand built export markets and gained worldwide fame on the strength of Marlborough's distinctively pungent and flavorful Sauvignon Blanc. Today, thanks to great strides with Pinot Noir, Syrah, and other varieties, New Zealand continues to diversify and strengthen its global presence.



Location/Geography

- Located in the Southern Hemisphere, the New Zealand GI is the world's southernmost and easternmost winemaking country
- New Zealand is about 1,300 miles from the mainland of Australia and is divided into two islands (North and South) surrounded by the Tasman Sea to the west and the South Pacific Ocean to the east.

Climate

- Range of climates from warm, humid, and maritime on the North Island to cool and continental on the South Island. The climate is strongly influenced by the surrounding seas.

Grape Varieties

- White
  - Sauvignon Blanc
  - Chardonnay
- Red
  - Pinot Noir
  - Cabernet Sauvignon
  - Syrah
  - Merlot

Viticulture

- Forefront of innovation in vine training and viticulture

Vinification

- Modern, clean winemaking
- New Zealand producers pioneered the Screwcap Wine Seal Initiative in 2001
- Today, over 85 percent of the country's wines use screw caps

Regional Wine Law

- On par with EU regulations, New Zealand wines must contain a minimum:
  - 85 percent of a stated grape variety
  - 85 percent of a stated vintage

- Geographical Indications (GIs)
  - New Zealand recently implemeted GIs to define geographical areas similar to the system used in Australia
  - GI labeling: In addition to the label regulations noted above, 85 percent of the grapes must come from the stated GI

New Zealand — North Island GI

Important Appellations

Auckland GI

Climate
- Warm, rainy, humid, and maritime

Grape Varieties
- Red
  - Cabernet Sauvignon
  - Merlot

New Zealand — North Island



Wairarapa GI

Location/Geography
- Located on the southern tip of the North Island

Grape Varieties
- White
  - Sauvignon Blanc
- Red
  - Pinot Noir

Important Sub-Region
- Martinborough

Gisborne GI



Climate
- Cool, maritime

Grape Varieties
- White
  - Chardonnay
  - Pinot Gris

Hawke's Bay GI

Climate
- Moderate maritime (this is the North Island's driest climate)

Grape Varieties
- White
  - Chardonnay
  - Sauvignon Blanc
- Red
  - Bordeaux varieties (Merlot and Cabernet Sauvignon)
  - Syrah

Important Sub-Region
- Gimblett Gravels
  - A warmer inland area with a unique gravelly soil type
  - Planted mostly with red Bordeaux varieties and Syrah





New Zealand — South Island GI

Important Appellations

Marlborough GI

Location/Geography
- Located on the northern tip of the South Island

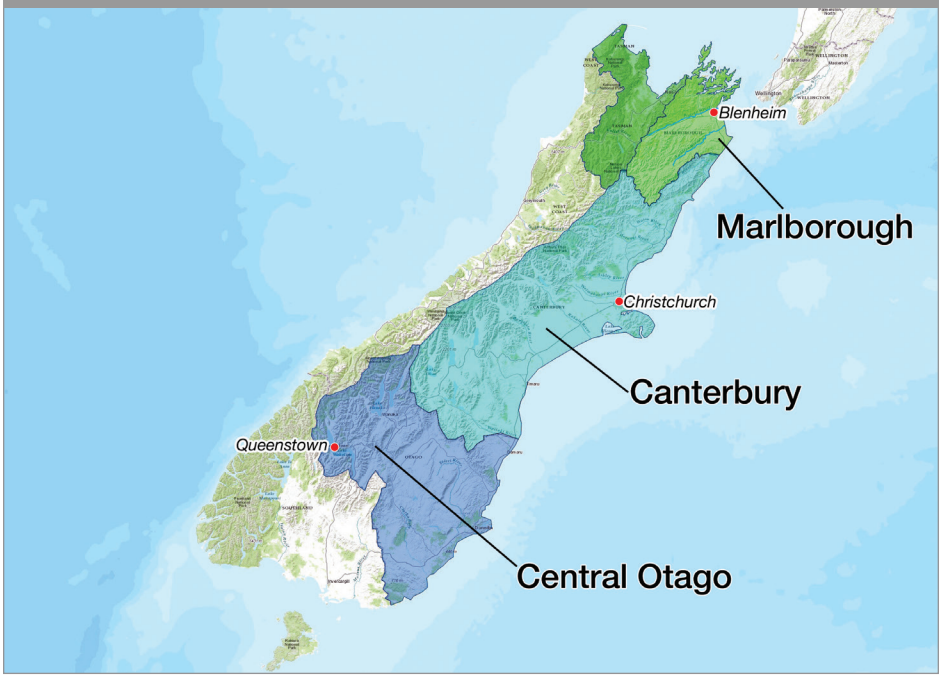
Climate
- Cool, dry and sunny
- The Southern Alps create a rain shadow protecting the South Island from strong winds and weather systems from the west off the Tasman Sea

Grape Varieties
- White
  - Sauvignon Blanc (almost 80 percent of plantings)
- Red
  - Pinot Noir

Viticulture
- Plentiful sunshine hours
- Long, cool growing season with cool nights allowing grapes to retain acidity
- Irrigation is widely used

Vinification
- Marlborough produces more than half of the entire country's wine

New Zealand GI — South Island GI



Canterbury GI



Location/Geography
- South of Marlborough, stretching a long distance along the eastern coast of the South Island
- One of the fastest-growing regions

Climate
- Cool continental
- Long, dry summer

Grape Varieties
- White
  - Sauvignon Blanc
- Red
  - Pinot Noir

Central Otago GI

Location/Geography
- Home to the world's most southerly grape vines, with some planted below the 45th parallel

Climate
- Cool continental
- Low humidity

Topography/Aspect
- Highest altitude vineyards in New Zealand
- Mountain-protected, north-facing slopes, oriented to maximize sun exposure

Grape Varieties
- Red
  - Pinot Noir

Viticulture
- High sun intensity
- Dry growing season

New Zealand

Quiz Questions

What is the primary grape variety of the Marlborough GI?
a. Riesling
b. Müller-Thurgau
c. Cabernet Sauvignon
d. Sauvignon Blanc

What is the primary grape variety of the Central Otago GI?
a. Riesling
b. Müller-Thurgau
c. Pinot Noir
d. Syrah

What do the Southern Alps provide?
a. A rain shadow that protects the vineyard areas of the South Island
b. A rain shadow that protects the vineyard areas of the North Island
c. More wind and rain to the vineyard areas of the South Island
d. More wind and rain to the vineyard areas of the North Island

Which of the following is true about the Gimblett Gravels?
a. It is a well-known for red Bordeaux grape varieties
b. It is a sub-zone of Hawke's Bay
c. It has a unique gravelly soil type
d. All of the above

Match North Island or South Island location of the following New Zealand wine regions:

Marlborough GI ☐	
Martinborough ☐	☐ North Island
Central Otago GI ☐	
Hawke's Bay GI ☐	
Gisborne GI ☐	☐ South Island
Auckland GI ☐	
Wairarapa GI ☐	

Fortified Wines and Sweet Wines

Learning Points

After studying this section, a student should be able to:

- Understand the reasons for fortifying wine
- Describe the ways in which fortified wines are made
- Know the differences in the production methods of sweet and dry fortified wines
- Recognize the main grape varieties used for Sherry, Madeira and Port
- Know what a solera is and how it works
- Define Vin Doux Naturel and give two examples

What is Fortified Wine?

Fortified wines are base wines to which high-proof, neutral grape brandy is added to increase alcoholic strength to 15%- 22%. The purpose of fortifying wine is to add body and increase the wine's ability to age.

Timing of Fortification — Base wines can be fortified at various times during the fermentation process depending on the wine style desired.
Fortified before fermentation No alcohol is created from fermentation of the base wine.
Fortified during fermentation This stops the action of yeast retaining residual sugar in the wine.
Fortified after fermentation Boosts alcohol levels; a dry wine is most often produced.



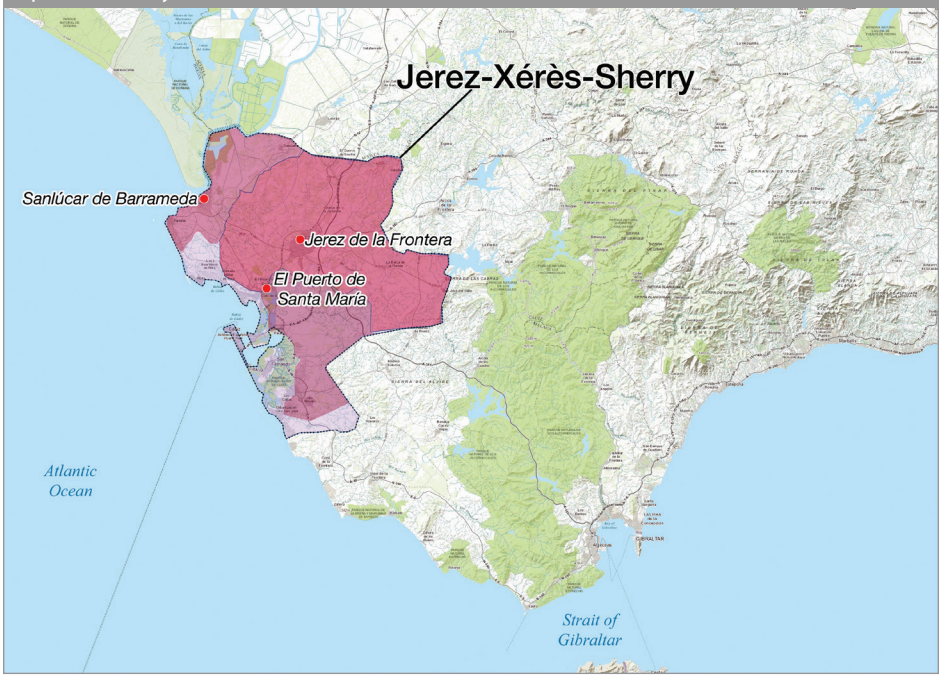
Sherry

Factors of Production

Introduction/Historical Background

- Sherry, also known as Jerez or Xérès, is regarded as one of the world's best fortified wines. It became one of the first protected Spanish appellations in 1933.

Spain — Sherry



Location/Geography

- Jerez is located in Andalusía on the Atlantic Coast of Spain near the tip of North Africa.



Climate

- Hot and windy
- Cooling maritime influence from the Atlantic

Soil

- Albariza
  - The most prized soil is composed of white chalky clay. This soil reflects sunlight up to the vines and retains water during the summer heat.
- Barros
  - Brown clay
- Arenas
  - Sand

Grape Varieties

- White
  - Palomino
    - Major grape for all quality styles of Sherry
    - 95% of all plantings
  - Pedro Ximénez (PX) and Moscatel
    - Mainly used for blending, adding sweetness and color
    - These grapes can also be found as sweet varietal wines

Vinification

- Base Wine Production
  - For most Sherry styles, the base wine is a neutral, dry, white wine from the Palomino grape
- Fortification
  - For dry styles of Sherry, fortification occurs after fermentation
  - The degree of fortification depends on the style of Sherry being made
  - Wines are fortified gently with a mixture of grape spirit and mature Sherry wine



Flor — Barrels of Sherry are not topped up all the way. A film of yeast (Saccharomyces) grows on the surface of the maturing wine and acts like a protective blanket, preventing oxidation and spoilage.



Aging and Maturation of Sherry — The Solera System

- Sherry matures in a complex series of barrels called a solera. While in the solera, young wine is progressively blended together with a series of older more complex wines.
- For Fino-style Sherries, the flor needs new wine to maintain the nutrient levels necessary to keep it alive.

What does a solera do for Sherry?

- The solera method of aging is one aspect that makes Sherry unique and creates its distinctive flavors.
- The solera also ensures continuity and consistency of brand and style by blending multiple vintages over time.

How does it work?



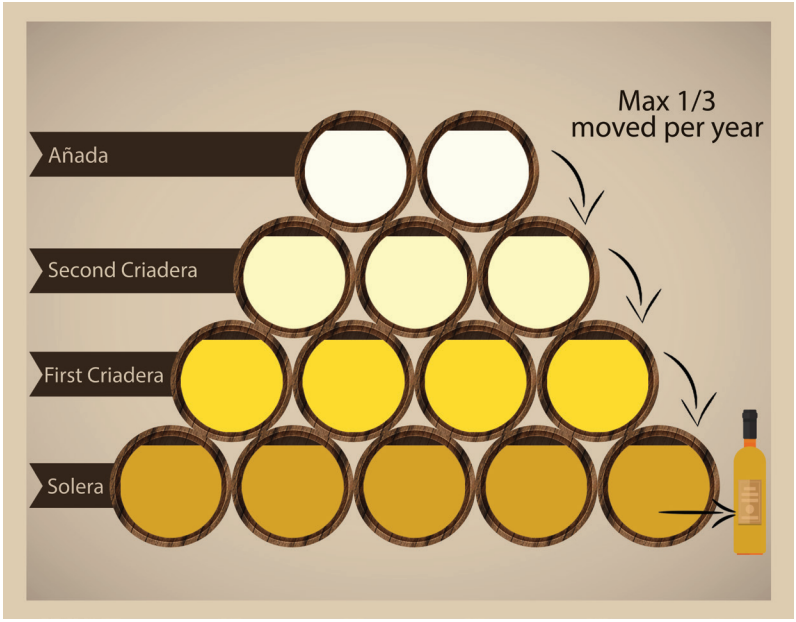
A group of barrels is selected:

- Solera Barrels with the oldest wines usually closest to the floor or the bottom row
- Criadera The "nurseries"
  – First criadera: Holds the wines that are the next oldest after the solera
  – Second criadera: Holds wines younger than the first criadera
- Añada The youngest and freshest wines

Running of the Scales This is the fractional blending process

- A maximum of one-third of the barrel volume is removed per year; no barrel is ever completely emptied
- Wine from the solera row is bottled
- Wine from the first criadera is used to top up the barrels of the solera row
- Wines from the second criadera are used to top up the first criadera, etc.

Solera System



Madeira

Factors of Production

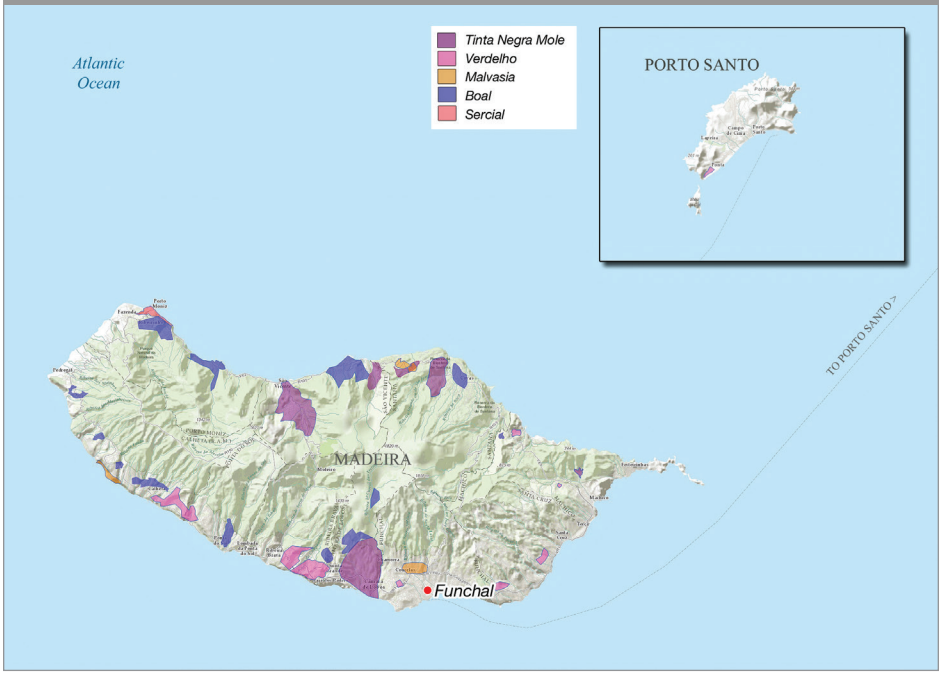
Introduction/Historical Background

- The island of Madeira is a territory of Portugal that was claimed in 1419 during Portugal's Age of Discovery. Madeira became an important refueling station for long ocean voyages to the Americas. The island's wines initially developed their unique character on these expeditions when they were subjected to repeated heating and cooling over month and even years! This historic process is mimicked today by heating the wine during vinification and extensive aging to create the signature flavors of these long-lived, nearly indestructible wines.

Location/Geography

- Madeira is an island in the Atlantic Ocean off the coast of Morocco and 625 miles from the mainland of Portugal.

Portugal — Madeira



Climate

- Subtropical

Topography/Aspect

- The island was created by volcanic action and rises sharply out of the sea
- Madeira is extremely mountainous with very little flat land

Soil

- Volcanic

Grape Varieties

- White
  - Sercial
  - Verdelho
  - Boal
  - Malvasia (Malmsey)
- Red
  - Tinta Negra (85% of plantings)

Viticulture

- Vineyards are planted on steep hillside terraces and tended to by many small family growers.
- Grapes must be hand-harvested on this difficult terrain.



Vinification

- Fortification Timing of fortification is dependent on the style of wine being made:
  - For sweeter wines, fermentation is stopped by the addition of grape spirit.
  - Drier wines are fortified after fermentation
- Heating After fortification, the wine goes through one of two heating processes that give Madeira its distinctive character:
  - Estufagem Most wines are transferred to the estufa, a stainless-steel vat that warms the wine by circulating hot water through coils inside the tank. The wine is heated and held there for at least three months. With this method, the sugars in the wine will gradually caramelize, ensuring thorough oxidation, or maderization. of the wine.
  - Canteiro This method is used for a producer's best wines. These wines are aged in an oak cask for at least two years in attics exposed to the sun's natural warmth and undergo a much slower, gentler maturation process.





Aging and Labeling

- Most Madeira wines are blended; age indications are typically seen as 5, 10, 15, and 20 years old.

Madeira Grape Varieties and Wine Style Connection — The grape name on the label is an indication of a sweet or drier style of Madeira.

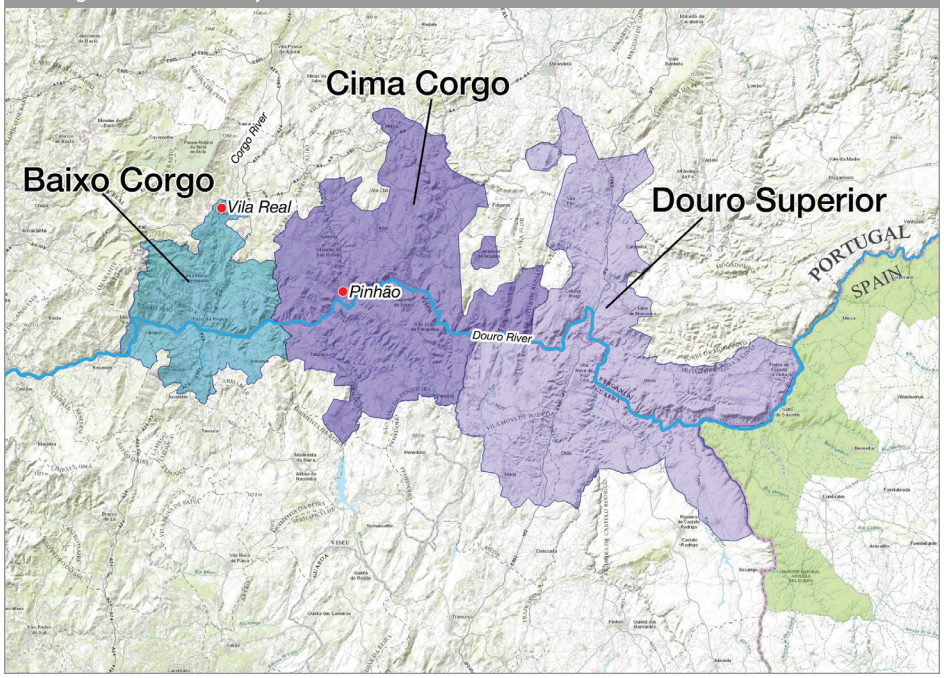
Sercial Verdelho —	Tinta Negra —	Boal Malvasia (Malmsey) —
Dry and semi-dry Madeira; these wines are fortified closer to the end of fermentation	This grape name is not found on labels, but represents 85% of production; can be sweet or dry in style	Semi-sweet and sweet Madeira; these wines are fortified closer to the beginning of fermentation

Port

Factors of Production

Port is the most revered wine of Portugal and is considered one of the most sought-after sweet fortified wines in the world. Ancient Greeks and Romans prized the juicy red wines from the steep banks of the Douro. Centuries passed before the British transformed these wines into what they are today.

Portugal — Douro Valley



Location/Geography
- Northern Portugal along the Douro River

Climate
- Warm to hot maritime depending on the proximity to the Atlantic Ocean
- The climate becomes incredibly hot and dry as one moves inland



Topography/Aspect
- Incredibly steep hillsides, rugged, mountainous

Soil
- The best vineyards are on well-draining schist

Grape Varieties
- Red
  - Touriga Nacional (and many others)

Viticulture
- Steep hillside terraces overlooking the Douro River that were built by hand over centuries
- There are many named quintas, or single vineyards

Vinification
- Port is often a blend of many grape varieties
- Traditionally, lagares, or shallow troughs, were used for foot treading or crushing and maceration of the grapes
- Fermentation is short to maximize extraction of color and flavor
- Wines fortified during fermentation when about one-third of the sugar content has been converted to alcohol
- The wine is fortified to 19% – 22% ABV with the addition of aguardente (neutral grape spirit)

Aging
- Port style is based on the length of time the wine is aged in barrel and/or bottle



Styles of Port	
Ruby Port Bottle-aged Ports	Tawny Port Cask-aged Port
Ruby	Tawny with indication of age
Late-Bottled Vintage (LBV)	10 Year
Vintage	20 Year
Single Quinta	30 Year, 40 Year +

Ruby Port
- House wine of each lodge made from multiple vintages and vineyards
- Created to be an inexpensive, consistent house style or brand

Late-Bottled Vintage (LBV) Port
- Fruit sourced from top quintas and aged 4–6 years in cask

Vintage Port
- The most expensive and age-worthy style
- Produced from top quintas only in exceptional vintages
- Vintage Port spends about two years aging in oak with the remainder in bottle

Single Quinta Port
- Fruit sourced from the best quintas in non-declared vintage years

Aged-Tawny Port
- Wine matured entirely in cask
- These wines take on a nutty, oxidized character over time
- Age declarations on the bottle are approximations

Declared Port Vintages of the Last Decade (indicated in color)



Les Vins Doux Naturels

Vins Doux Naturels are French fortified wines. These wines are fortified during fermentation typically to 15%–16% ABV, thus remaining sweet.

Examples of Vin Doux Naturel

Muscat de Beaumes-de-Venise
- Location/Geography
  – Southern Rhône Valley, France
- Grape Variety
  – White
    – Muscat Blanc



Banyuls
- Location/Geography
  – Roussillon, France

- Grape Variety
  – Red
    – Grenache

Fortified Wine

Quiz Questions

Which of the following wines is matured under a layer of Flor?
a. Sercial Madeira
b. LBV Port
c. Fino Sherry
d. Oloroso Sherry

A solera is used for which part of the vinification process?
a. Fermentation
b. Maturation
c. Distillation
d. Fortification

Which grape variety and soil combination produces the highest quality Sherry?
a. Sercial / Volcanic
b. Palomino / Albariza
c. Pedro Ximénez / Barros
d. Touriga National / Schist

Describe each Madeira grape style below as either sweet or dry.
a. Malmsey -
b. Sercial -
c. Verdelho -
d. Boal -

Which of the following Port styles is simple, inexpensive, and considered a house brand?
a. Ruby
b. Tawny
c. LBV
d. Vintage

Banyuls is a sweet, fortified wine from:
a. France made with the Grenache grape
b. France made with the Muscat grape
c. Spain made with the Palomino grape
d. Spain made with the Pedro Ximenez grape

What type of wine is Muscat de Beaumes-de-Venise?
a. Port
b. Vin Doux Naturel
c. Madeira
d. Sherry

Which of the following is a main grape of Port?
a. Palomino
b. Sercial
c. Muscat
d. Touriga Nacional

Aguardente is defined as:
a. Dried grapes for sweetening and blending
b. Neutral grape spirit used for Port production
c. Yeast layer protecting wine from oxidation
d. Solera

What is the difference between Estufa aging and Canteiro aging with regard to Madeira?

Sweet Wines

Learning Points

After studying this section, a student should be able to:

- Describe the ways in which sweet wines are made
- Know what Botrytis cinerea is and how it affects grapes on the vine
- Recognize important appellations of sweet wine and their method of production
- Recognize the location, main grape variety, and production method of Tokaji Aszú
- Recognize the terms recioto and passito and classic Italian wines that specialize in this style
- Recall which German Prädikatswein are sweet, botrytis-affected wines

How Are Sweet Wines Made?

Sweet wines can be made in a variety of ways, both in the vineyard and in the winery.



Botrytis cinerea does not affect grapes evenly.



In the Vineyard — Viticultural Techniques

The goal is to concentrate sugars in the grapes. This can be done in a few ways.

Late Harvest

Leaving grapes on the vine long into the autumn increases their sugar content.

Noble Rot

Botrytis cinerea is a mold that attacks ripe grapes in humid climates. It causes grapes to shrivel and dehydrate on the vine, concentrating their sugars and drastically reducing yields. Botrytis also causes oxidation, deepening the color of a wine and creating characteristic aromas and flavors of honey, mushroom, and saffron.

Drying Grapes

Late harvested, healthy grapes that are either shriveled on the vine or dried after picking

Freezing Grapes

Icewine/Eiswein is made from healthy (minimal to no botrytis) grapes that are left on the vine far into winter. The water in the grapes freezes, naturally concentrating the sugars. Grapes are hand-harvested frozen and immediately put into the press. Intensely sweet, syrupy juice is released, leaving behind the frozen water.

Classic Appellations for Late Harvest / Botrytis-Affected Wines

France
- Bordeaux
  - Sauternes

- Alsace
  - Vendange Tardive (VT)
  - Sélection de Grains Nobles (SGN)

- Loire Valley
  - Quarts de Chaume
  - Bonnezeaux
  - Vouvray Moelleux



Germany
- Prädikatswein
  - Auslese (may have botrytis)
  - Beerenauslese (BA)
  - Trockenbeerenauslese (TBA)

Hungary
- Tokaji Aszú An incredibly old wine region making sweet wines dating to the fifthteenth century
  - Location / Geography
    - The Tokaj wine region is located in northeastern Hungary
- Grape Varieties
  - White
    - Furmint plus five other white varieties



- Viticulture
  - Aszú The name for grapes picked at high sugar levels that have been affected by botrytis

- Vinification
  - The botrytis-affected grapes are pressed into a paste and then added back to a dry still wine
  - The amount of paste added to the still wine determines the sweetness level
  - Eszencia Wine made from the sugar-laden, syrupy, free-run juice from 100 percent botrytised grapes



Classic Appellations for Sweet Wines Made from Dried Grapes

Italy
- Passito or Recioto are the Italian words most often seen on labels to indicate grapes that were dried
- Examples
  - Vin Santo (Tuscany)
  - Recioto di Soave (Veneto)
  - Recioto della Valpolicella (Veneto)

Classic Appellations for Sweet Wines Made from Frozen Grapes
- Germany (eiswein)
- Canada (icewine)

Making Wine Sweet in the Winery – Vinification Techniques
The goal is to stop the action of the yeast — and therefore fermentation — leaving residual sugar in the wine. This can be done in a few ways:

- Fortification Adding high-alcohol grape spirit to the wine will stop fermentation
- Chilling the wine and filtering out or removing the yeast
- Chilling the wine and adding sulfur dioxide (SO_2) to kill the yeast cells
- Adding sweetness back to a wine
  - This can be done by adding unfermented grape juice to a wine as a sweetening agent.
  - A second way is by adding sweet wine to a dry wine

Sweet Wine

Quiz Questions

What does "Trockenbeerenauslese" (TBA) on a bottle of German Riesling indicate?
a. The wine is made from grapes affected by botrytis
b. The wine is fortified
c. The wine is sparkling
d. The wine is aged

What two countries are famous for icewine production?
a. France and Spain
b. Germany and Canada
c. Italy and Argentina
d. Spain and Portugal

Tokaji Aszú is a famous sweet wine from which country?
a. France
b. Germany
c. Italy
d. Hungary

What is the main grape variety used to make Tokaji Aszú?
a. Riesling
b. Furmint
c. Chenin Blanc
d. Sauvignon Blanc

Recioto is an Italian word referring to which type of wine?
a. Botrytis-affected grapes
b. Dried grapes
c. Frozen grapes
d. Late-harvest grapes

Bonnezeaux is a famous botrytis-affected sweet wine from which wine region?
a. Bordeaux, France
b. Loire Valley, France
c. Alsace, France
d. Champagne, France

Name four ways to concentrate sugars in grapes in the vineyard for sweet wine production.

Beer

Learning Points

After studying this section, a student should be able to:

- Name the four major ingredients of beer
- Understand how each ingredient contributes to the overall flavor and style of a beer
- Name the two main categories of beer and their basic differences
- Name examples of styles and brands of beer in a few selected categories

Essential Ingredients of Beer

Water Accounts for 85 percent to 90percent of beer content. The chemical properties of differing water sources determine the style of beer that is brewed. Today, modern breweries can alter the chemical makeup of their water to brew many styles of beer.



Hops

Cereal Grain and Malt Beer is traditionally made from cereal grains, and barley is the most important for quality. Wheat, rice, corn, rye, and oats are also used in smaller amounts. Starches in the grain must be converted to sugars for fermentation to occur. This is accomplished through germination of the grain, which produces enzymes that turn starch into sugar, creating malt. The malt is then dried in a kiln. The temperature and length of time the malt is kilned are important determinants of the color, flavor, aroma and style of a beer.

Yeast Is responsible for fermentation. Different yeast strains determine if a beer is an ale or lager and often contribute distinctive aromas and flavors to beer.

Hops Resin from the cone of the hop plant imparts bitterness to balance the sweet, malty character of beer. All beers use hops, but some feature them more prominently than others. Hops also provide aroma and flavor and act as a preservative.



Beer Categories
Beer can be divided into two basic categories based on the type of yeast used.

Ales	Lagers
Top-fermenting yeast	Bottom-fermenting yeast
Ferments quickly at warmer temperatures	Ferments slowly at cooler temperatures
Often more fruity aromas and flavors are created	More subtle, crisper and cleaner flavors
CLASSIC EXAMPLES	CLASSIC EXAMPLES
German Hefeweizen	Czech Pilsner
British Pale ale India pale ale (IPA) Porter	German Bock Doppelbock Oktoberfest
Irish Stout	Large-Scale European and American Lagers
Belgian Lambic (spontaneous fermentation) Wit or white bier	

Beer

Quiz Questions

Which of the following is not a primary ingredient in beer?
a. Hops
b. Yeast
c. Malt
d. Oak

Hops contribute which of the following to beer?
a. Bitterness to balance the sweetness of malt
b. Provide aroma and flavor
c. Act as a preservative
d. All of the above

What is malt in beer?
a. Germinated barley that contributes the sugars needed for fermentation
b. Resins that contribute bitterness to beer
c. 90% of the beer and an ingredient that can be chemically altered
d. The ingredient that causes fermentation to happen

What are the two broad beer categories of ale and lager are based on?
a. Color of the malt
b. Strain of yeast used for fermentation
c. Kilning
d. Level of bitterness

Which of the following beer styles is an example of an ale?
a. Stout
b. Pilsner
c. Doppelbock
d. Oktoberfest

Which of the following beer styles is an example of a lager?
a. IPA
b. Stout
c. Pilsner
d. Hefeweizen

Sake

Learning Points

After studying this section, a student should be able to:

- Define what sake is
- Name the primary ingredients of sake
- Know the definition of Junmai
- Understand the quality categories of sake
- Know the important features and flavors of Namazake and Nigori

Introduction

What is Sake?
Sake is a fermented rice beverage. Its origins go back 2,500 years to when rice-growing became prevalent in Japan. Today, there are approximately 1,400 sake breweries in Japan.

Sake can be seen as terroir-driven — very specific, natural ingredients create this unique beverage.

What Are the Primary Ingredients of Sake?

Water Sake breweries are set up in particular areas because of the specific mineral properties of the water source.

Rice There are over 50 types of sake rice grown in Japan with 8 to 10 varieties used for quality sake. This is definitely not your average table rice. The varieties of rice utilized for making sake are often region- or village-specific.

Koji-Kin A fungus native to Asian countries that converts the rice starches into sugar for fermentation to occur. This fungus has many applications in Asian beverage and culinary realms.

Yeast Performs the fermentation that creates alcohol in sake. Different yeast strains provide distinctive aromas and flavors. Sake is usually between 15 percent and 22 percent alcohol.

Added Neutral Distilled Alcohol (Brewer's Alcohol) Cheap sake often has copious amounts of distilled alcohol added to increase yields. Quality sake can have a very small amount of alcohol added at the final stages of brewing — not to increase yields, but rather to increase richness and boost aroma and flavor.



Important Steps in Making Sake

Rice Milling/Polishing
Rice grains for sake production are milled. The kernels are polished to get to the pure flavors at their core can be accessed. Degrees of polishing also determines quality grades. By milling the rice further and further, more unwanted fats, proteins, and other impurities can be removed before fermentation begins. In general, the higher the rate of milling, the cleaner, more refined and more fragrant the flavor of the resulting sake.



Premium Sake Quality Grades — Sake quality grades are based on how much of the grain is milled. The more that is milled away, the smaller the grain, the purer the product, and the higher the quality.

Junmai — Pure rice sake. Nothing is used in its production except rice, water, yeast, and koji-kin. Junmai can be used as a prefix to Ginjo and Daiginjo grades to indicate that no additional alcohol was added during production.
70% of the grain remains
30% of the grain is milled away

Honjozo — A small amount of alcohol is added at the end of fermentation, enhancing aroma and flavor.
70% of the grain remains
30% of the grain is milled away

Ginjo
60% of the grain remains
40% of the grain is milled away

Daiginjo — Junmai Daigingo is the highest grade of sake.
50% of the grain remains (maximum)
50% of the rice milled away (minimum)

Sake quality grade increases as the size of the rice grain decreases.



No Milling | Honjozo 70% | Ginjo 60% | Daiginjo 50%



Other Styles of Sake

Namazake — Unpasteurized sake that requires refrigeration

Nigori — Milky, unfiltered sake, usually off-dry

Sake

Quiz Questions

What is koji-kin?
a. A fungus used to convert starches to sugar in sake rice
b. Unfiltered sake
c. A specific kind of rice
d. A yeast strain

What type of sake is Nigori?
a. Unfiltered
b. Filtered
c. Oaky
d. Unpasteurized

What type of sake is Namazake?
a. Unfiltered
b. Filtered
c. Oaky
d. Unpasteurized

If a sake is labeled Junmai Daigingo:

How much of the rice grain is polished away?

How much of the rice grain is remaining?

Is alcohol added?

Order the following polish levels from highest to lowest quality.

Daigingo
Ginjo
Honjozo

Cider



Learning Points

After studying this section, a student should be able to:

- Name the major ingredient of cider
- Understand how cider is made
- Recognize the major production areas of cider

Introduction

What is Cider?

- Traditional cider is 100 percent fermented apple juice.
- Cider has been made for thousands of years in Europe and is believed to be the first alcoholic drink brought by the British to America in the 1600s.

What Are the Primary Ingredients of Cider?

Apples There are thousands of varieties of apples used with varying levels of bitter and sweet flavors. Apples used for cider-making are not your everyday eating varieties.

Yeast Yeast ferments the apple juice into cider. Native yeast strains can create unique aromas and flavors.



Sugar Can be added to increase alcohol content and balance tartness

How Is Cider Made?

- Although cider is a category unto itself, the production process is similar to that of wine. Apples are crushed and pressed into juice, which is the fermented into cider.
- Cider generally has an alcohol content between 5 percent and 8 percent (closer to beer!).
- Cider can be fermented in large wooden vats or stainless-steel tanks

Styles of Cider

- Old World/ European countries produce distinctive time-honored styles of cider reflecting soil, weather, and culture of a region (terroir).
  - Some styles are very tart and funky using native yeast and bacteria.
- In the New World, styles span the gamut from sweet to dry.
- Cider can be effervescent as Champagne.
  - To make a cider sparkling, it must go through a secondary fermentation or be carbonated to create the bubbles.
  - This can be done in tank or in bottle.

Where is Cider Made?
Cider is most often produced in temperate areas where it is too cold for viticulture.

Europe Cider Production Areas



North America Cider Production Areas



Cider

Quiz Questions

Name three primary cider production areas in North America.

1.

2.

3.

Name three primary cider production areas in Europe.

1.

2.

3.

What are the primary ingredients of Cider?

1.

2.

Apples destined for cider are the same as grocery store eating apples.
a. True
b. False

Spirits

Learning Points

After studying this section, a student should be able to

- Have a basic understanding of the process of distillation
- Understand the process of making spirits, beginning with the choice of raw materials or ingredients, extending to the fermentation of the raw material or ingredients, and culminating in distillation of the fermented liquid
- Know the names of the two major types of stills
- Understand how spirits are aged and the effect of aging on color and flavor
- Recognize the location, base ingredients, and aging vessel for Cognac, Armagnac, and Calvados
- Know the base ingredient and common distillation and aging techniques for rum, Tequila, mezcal, gin, and vodka
- Understand the purpose of apéritifs and digestifs
- Know the flavors of common liqueurs and cordials from around the world
- Know the dominant flavor of Scotch whisky
- Know where Bourbon can be made and its base ingredient minimum requirement

The Process of Making Spirits



Fermentation of the Raw Materials
Spirits can be made from fermented fruits, vegetables, grains, and other plants.

Common raw materials used to create an alcoholic beverage base:

- Grains
  - Barley, corn, rye, rice
- Fruits
  - Grapes, cherries, raspberries, apples, pears
- Other
  - Plants, vegetables, sugar cane

Sugars in fruit-based or many plant-based spirits are fermented directly into alcohol by the action of yeast.

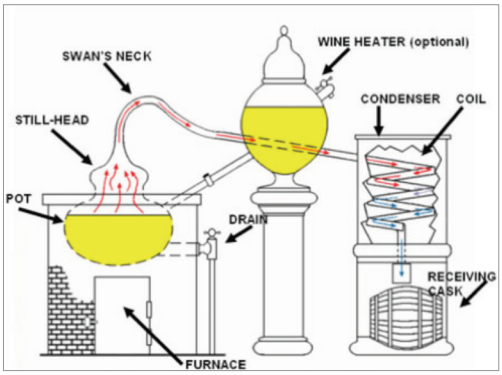
For grain-based and some plant and vegetable-based spirits, the starches must be turned into sugar first, after which fermentation can occur.

Fermented Beverage is Distilled
The purpose of distilling a fermented beverage is to separate and remove diluting components of a liquid, such as water and other impurities, to capture the essence of a beverage.

Alcoholic liquid
▼
Heated to boiling temperature
Alcohol boils at 173°F
Water boils at 212°F
▼
Liquid boils, alcohol evaporates
▼
Alcoholic vapor travels up the still to a condenser
▼
Liquid is cooled
▼
Vapor condenses
▼
New spirit

The type of still used is one determinant of the final flavor of the beverage.

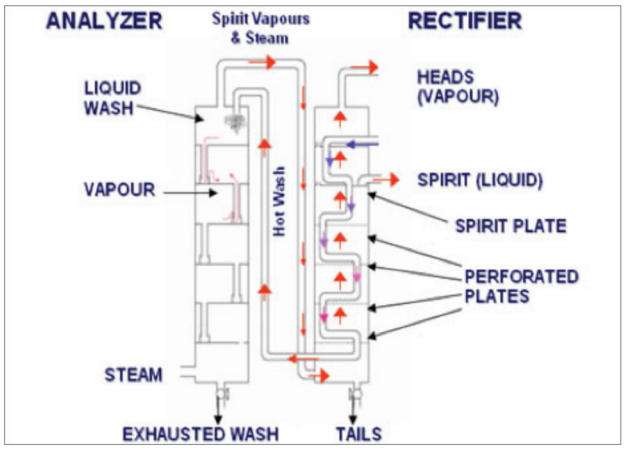
Pot Still
- Provides a slow, gentle distillation
- Flavor from the base ingredient is retained in the final spirit
- Used for richer, generally wood-aged spirits like cognac and single malt scotch





Continuous Still

- Continuously running and is a faster distillation than a pot still
- Has the potential to remove many flavors and impurities, creating a very neutral spirit
- Used for vodka and most bourbons
- Most often used for large-scale distillation





Aging of the Distillate
The liquid that leaves the still is clear; there are two paths the spirit can take once it leaves the still.

Immediately Bottled	Aged in Oak
▼	▼
The spirit remains clear and goes straight into bottle	Aging in oak changes the color, flavor and texture of the spirit
Examples include most vodka, blanco tequila and light rum	This depends on the length, time, and char of the oak barrels used
	Examples include most whiskies and brandies

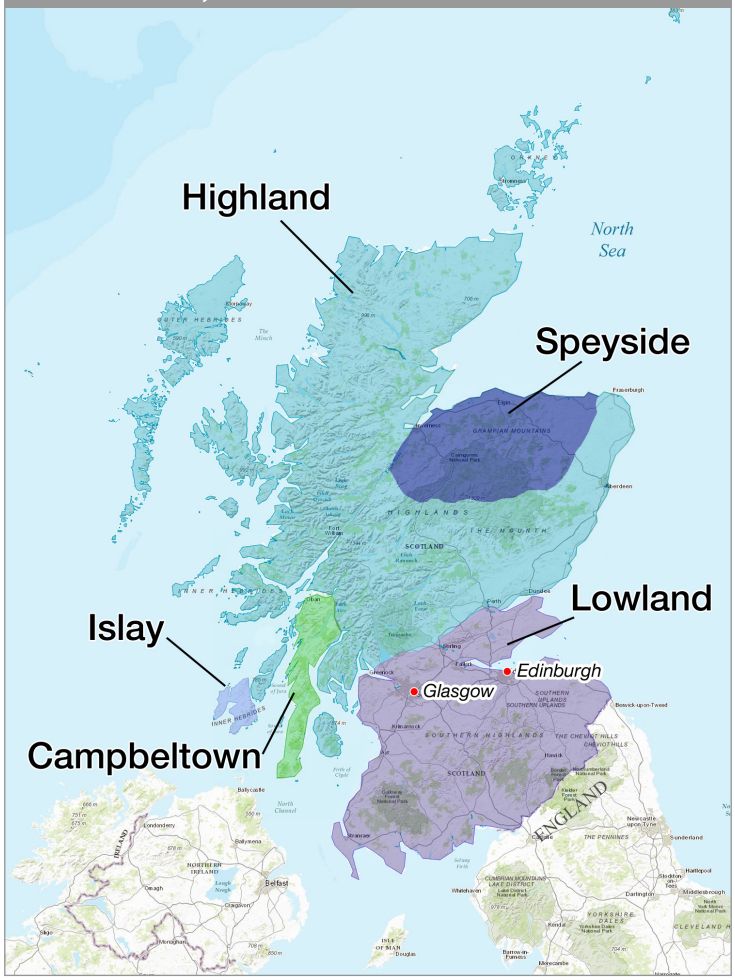
Whiskey

All whiskeys are grain-based spirits.

Scotland

- Location/Geography
  - Whisky produced on the island of Scotland is called Scotch Whisky.
- Flavor
  - A dominant flavor character of Scotch comes from kilning, or drying, the malted barley with peat as the burning fuel. The smoke from the fire infuses the grain with a smoky, peaty aroma. Depending on the region and producer, some Scotch whiskies will have delicate aromas of peat and others will be much more pungent.
- Single Malt Scotch Whisky
  - Distilled from 100% malted barley, in a pot still, at a single distillery
  - Must be bottled in Scotland
- Blended Scotch Whisky
  - Blend of one or more single malt whiskies

Scotland — Whisky Overview



Ireland

- Irish whiskey is a barley-based whiskey made only in Ireland, where it is aged for a minimum of three years in barrels. Portions of the barley will be unmalted, resulting in a lighter style.

Canada

- Canadian whisky can be made of corn, wheat, rye, or barley and must be aged for a minimum of three years.

United States

- Bourbon Whiskey
  - Must be produced in the USA. Most is made in Kentucky.
  - Must have a minimum of 51% corn and be aged in new, charred, American white oak
- Tennessee Whiskey
  - Must be made in Tennessee from a minimum of 51% corn
  - Must be filtered through a bed of Tennessee sugar maple charcoal



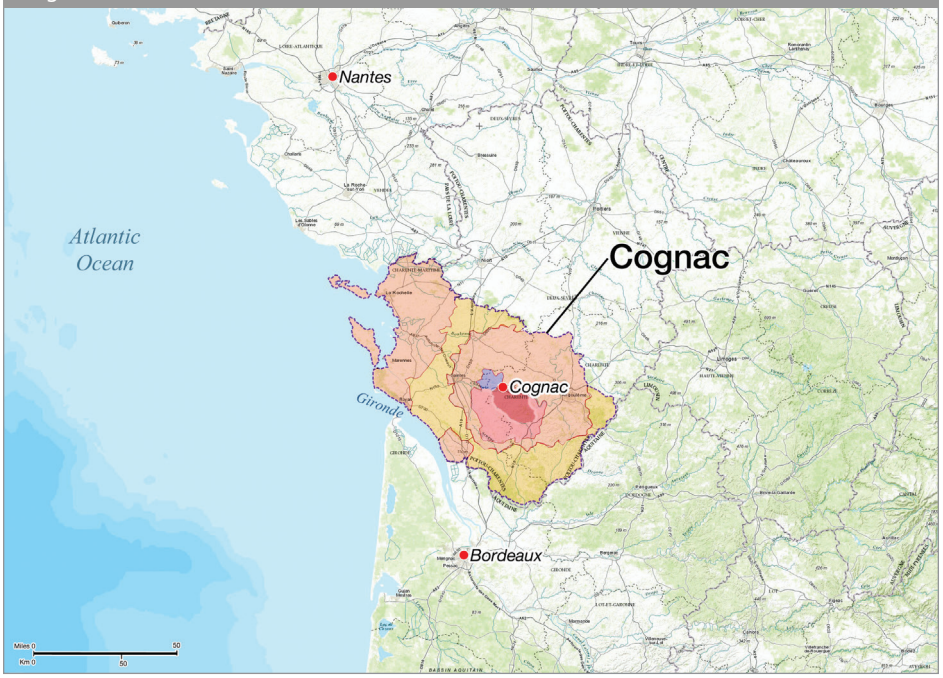
Brandy

Wine-Based Brandies

Cognac AOP

- Location/Geography
  - Atlantic coast of France, south of the Loire and north of Bordeaux
- Fermentation
  - Brandy made from white-grape-based wines (mainly Ugni Blanc)
- Distillation
  - Distilled twice in copper pot stills
- Aging
  - Required to have a minimum of two years aging in French oak casks

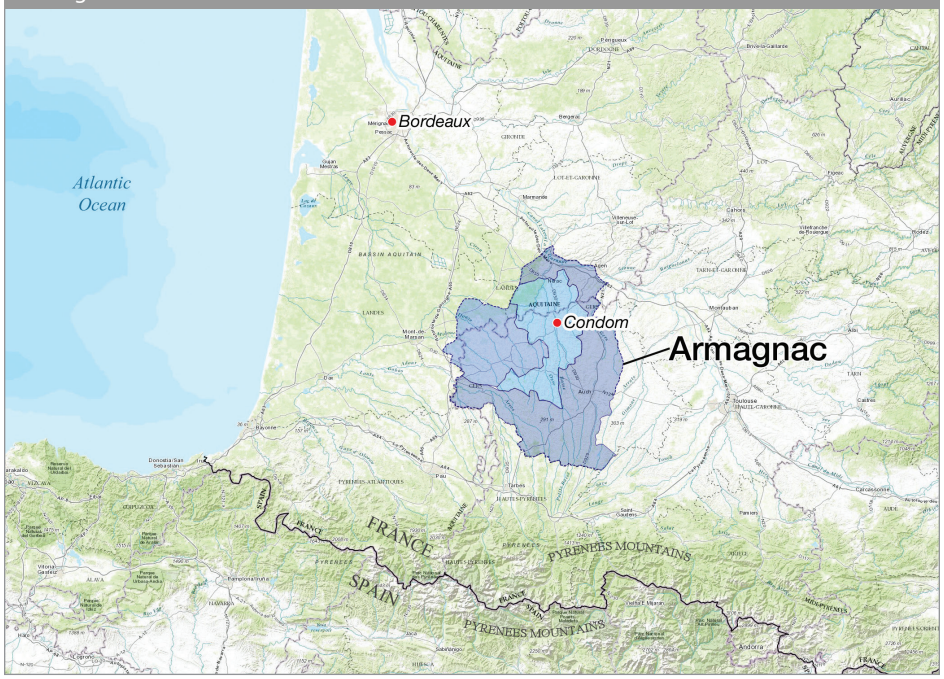
Cognac



Armagnac AOP

- Location/Geography
  - Southwest France, in Gascony, one of the county's gastronomic capitals
- Fermentation
  - Brandy distilled from grape-based wines (a blend of local white grape varieties)
- Distillation
  - Traditionally one distillation in a continuous still — unique to the region
- Aging
  - Required to have a minimum of two years of aging in French oak casks

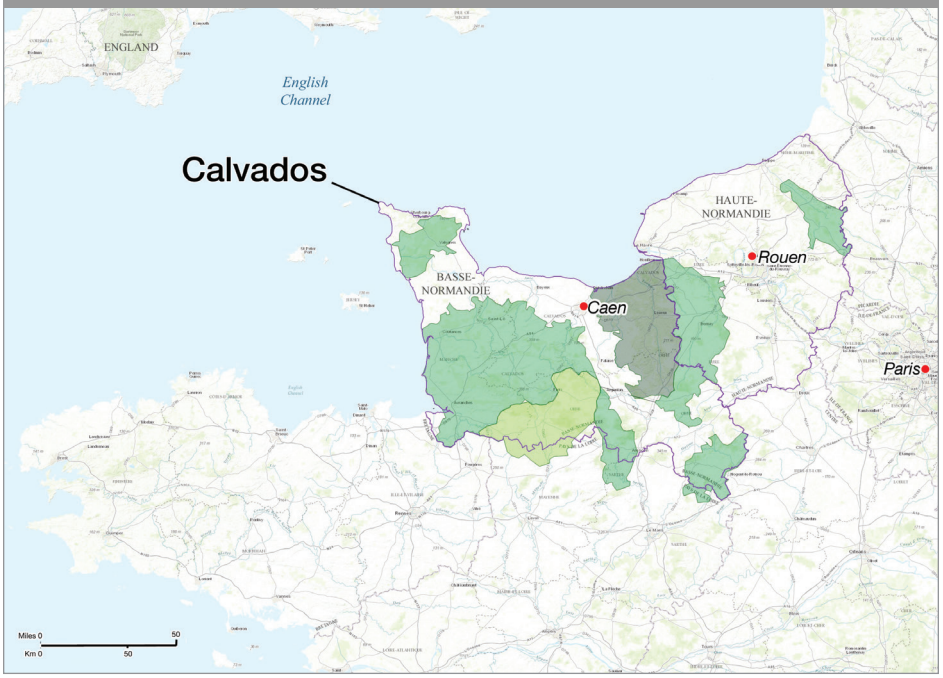
Armagnac



Eau de Vie
A category of French brandy made with a variety of fruits.

Calvados AOP
- Location/Geography
  – Normandy, France (northern France on the Atlantic Coast)
- Fermentation
  – Distilled from fermented apples and pears
- Distillation
  – Traditionally distilled twice in a copper pot still
  – Some areas of the region use a continuous still
- Aging
  – Required to have a minimum of two years of aging in French oak casks

Calvados





Eaux de Vie de Fruits
Eaux de vie are brandies made with any fruit apart from grapes. Translated as "water of life," most eaux de vie are bottled without aging to preserve the integrity of the fruit character.

Examples
- Framboise — Raspberry
- Kirsch — Cherry
- Poire William — Pear

Other Spirits

Vodka

- Location/Geography
  - Vodka can be made anywhere in the world but is most traditionally associated with Eastern Europe.
- Fermentation
  - Traditionally vodka is a distillate of fermented cereal grains or potatoes
  - Today, we find vodka made from many base ingredients including a range of fruits, vegetables, and other plants. (If it is fermentable, it can be made into vodka.)
- Distillation
  - Vodka is distilled multiple times to achieve purity and neutrality.
  - Most often a continuous still is used. However there are numerous well-known, high-end examples made with pot stills
- Aging
  - Vodka is an unaged, clear spirit. There are several barrel-aged vodkas on the market today, but they are exceptions to the traditional style.

Gin

- Location/Geography
  - Gin can be made anywhere in the world, but its origins are Dutch. The popularity of gin and its best-known examples are from Great Britain, crafted in the style of London dry gin.
- Fermentation
  - Traditionally, gin is a neutral distillate of fermented cereal grains, like vodka.
- Botanicals
  - Gin is flavored with a number of herbs, spices, and roots called botanicals. The predominant flavor ingredient is juniper berries. Other traditional botanicals include lemon, lime, and bitter orange peel, anise, angelica root, orris root, licorice root, cinnamon, cassia bark, and many more.
- Distillation
  - To produce gin, a neutral grain spirit is flavored with botanicals and is then redistilled.
- Aging
  - Gin is predominantly an unaged, clear spirit, but a few barrel-aged gins are available.





Tequila

- Location/Geography
  - A protected appellation centered around the state of Jalisco, Mexico
- Fermentation
  - Produced from the fermented juice of cooked piña (pineapple) or the heart of the blue agave plant (Agave tequilana)
- Distillation
  - Can be performed either in a traditional pot still or by the continuous method
- Aging
  - Tequila has aging designations on the label based on time in oak and bottle:
    - Silver/Blanco Bottled immediately after distillation
    - Reposado Aged 60 days to one year in oak casks
    - Añejo Aged 1–3 years in cask

Mezcal

- Location/Geography
  - A protected appellation mainly around Oaxaca, Mexico, although other states are included
- Production
  - The hearts of the agave plants, piñas, are cooked over fire in pits in the ground imparting a distinctive smoky aroma and flavor.
- Fermentation
  - The distilled spirit produced from fermented agave
- Distillation
  - Can be performed either in a traditional pot still or by the continuous method
- Aging
  - Blanco or unaged is the most traditional style of mezcal. However, barrel aged versions with the same label designations as Tequila can be found.

Rum

- Location/Geography
  - Although rum is now produced internationally, the style originated in the Caribbean in the seventeenth century and spread to Central and South America.
- Fermentation
  - A distilled spirit produced from fermented sugarcane or molasses (a by-product of processing sugar cane into sugar).
- Distillation
  - Depending on the tradition, style, and brand, rum can be made with a continuous still to achieve neutrality or with a pot still to retain intensity of the base ingredient.
- Aging
  - Light Rum
    - Little to no aging and bottled straight from the still
    - If the rum is aged for a short time in oak, it is then filtered to remove any color.
  - Dark Rum
    - Higher-end examples are aged for an extended time in oak.

Apéritifs and Digestifs



Apéritifs

- Served before a meal to stimulate the appetite

Digestifs

- Served after a meal to help stimulate digestion. Examples include bitters or Italian Amaro.

Liqueurs and Cordials

Liqueurs and cordials are made with a neutral base spirit to which flavor is added in a variety of ways. Below is a chart for your reference of well-known brands and styles and their primary flavors.

Herb-and Nut-Based Liqueurs	Fruit-Based Liqueurs	Cream-Based Liqueurs	Whisk(e)y Liqueurs	Other
Bénédictine	Orange	Baileys	Drambuie	Elderflower
B&B	Triple sec		Glayva	St- Germain
Chartreuse	Cointreau		Irish Mist	
Crème de menthe	Grand Marnier			Ginger
Frangelico				Canton
	Apricot (pit)			
Anise	Amaretto			Coffee
Anisette				Kahlúa
Galliano	Peaches			
Ouzo	Southern Comfort			
Sambuca				

Spirits

Quiz Questions

With what spirit is the term “reposado” used to describe aging?
a. Rum
b. Tequila
c. Vodka
d. Gin

What can be made by flavoring a neutral spirt with botanicals such as juniper berries and lemon peel can be found in?
a. Tequila
b. Mezcal
c. Gin
d. Cognac

What is the predominant flavor of Kahlúa?
a. Juniper
b. Coffee
c. Peach pit
d. Anise

Apples and pears are the primary fruits of what spirit?
a. Cognac
b. Armagnac
c. Calvados
d. Rum

“Peatiness” is a dominant flavor of what spirit?
a. Bourbon
b. Scotch Whisky
c. Canadian Whisky
d. Irish Whiskey

What is the base ingredient of rum?
a. Sugarcane or molasses
b. Barley
c. Potatoes
d. Agave

Cognac and Armagnac are both:
a. Oak-aged, wine-based spirits
b. Apple- and pear-based spirits
c. Light-colored, sugarcane based spirits
d. Made from a minimum of 51% corn

Cocktails

Take what you have learned from this section and research or list classic cocktails that use the following spirits and liqueurs.
(This exercise is for your personal reference for future study only.)

Vodka

Gin

Cognac

Tequila

Scotch Whisky

Bourbon

Kahlúa

Crème de Menthe

Campari

Triple Sec

Drambuie

COURT OF MASTER SOMMELIERS Americas

INTRODUCTORY SOMMELIER COURSE WINE EVALUATION TECHNIQUE

TASTING JOURNAL

AROMA AND FLAVOR LEXICON	
Presence of Fault(s)	Corked Wine - TCA (**Tri**chloro**a**nisole): Cardboard, wet paper, chlorine, mildew
Fruit - White Wine	**Apple/Pear:** Green, red, yellow
	Citrus Fruit: *Tart Citrus*: Lemon, lime, grapefruit *Sweet Citrus*: Orange
	Stone Fruit: Peach, nectarine, apricot
	Tropical Fruit: Pineapple, mango, passion fruit, banana, lychee
	Other
Fruit - Red Wine	**Red Fruit:** Cherry, raspberry, cranberry, strawberry, pomegranate
	Black Fruit: Blackberry, black cherry, black plum, black currant
	Blue Fruit: Blueberry
	Other
Non-Fruit - White Wine	**From the Grape Variety or Grape Growing:** Flowers: Blossoms, honeysuckle, jasmine, rose, lily Fresh Herbs: Basil, lemongrass Green bell pepper, jalapeño, grass, asparagus Grape Variety Spice: Allspice, white pepper, cardamom Botrytis/Noble Rot: Ginger, saffron, honey, wax Petrol: Gasoline, rubber *Other*
	From Winemaking: Lees Contact: Dough, baked bread, yeast, beer, cheese rind Malolactic Fermentation: butter, cream, yogurt Oxidation: Nuts (almond, peanut, walnut), dried fruit **New Oak:** Vanilla, toast, smoke, cinnamon, nutmeg, clove, caramel
Non-Fruit - Red Wine	**From the Grape Variety or Grape Growing:** Flowers: Lilac, violet, lavender, rose, potpourri Fresh Herbs: Fresh oregano, sage, mint, eucalyptus Green bell pepper, grass, jalapeño Dried Herbs: Dried oregano, thyme, rosemary, sage Black peppercorn Coffee, cocoa, mocha Raw meat, cured meat, leather *Other*
	From Winemaking: Vinegar, Nail Polish, Barnyard Carbonic Maceration: Bubble gum, red fruit candy, banana, stemmy Oxidation: Nuts, dried fruit (figs, prunes, raisins) **New Oak:** Vanilla, toast, smoke, cinnamon, nutmeg, clove, cardamom, caramel, coconut, dill
Earth	Wet Leaves, Forest Floor, Mushrooms, Compost
Mineral	Mineral, Wet Stone, Sulfur, Saline

© Court of Master Sommeliers, Americas 2024

WINE #1

SIGHT / APPEARANCE	
Intensity of Color	Pale, Medium, Deep
Primary Color	**White Wine:** Straw, Yellow, Gold
	Red Wine: Purple, Ruby, Garnet
Other Observations	**Tearing:** Light, Medium, Heavy
	***Red Wines Only Staining** Yes or No
NOSE / AROMAS	
Wine Condition / Presence of Faults	Is the wine in good condition? Yes or No
Aromatic Intensity	Delicate, Medium, Powerful
Age Assessment	Youthful, Developing (showing age), Vinous (aged)
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:

© Court of Master Sommeliers, Americas 2024

WINE #1

PALATE / FLAVORS	
	For all categories, are there differences from the nose to the palate?
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **From New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:
PALATE / STRUCTURE	
Sweetness	Dry, Off-Dry, Sweet
Acidity	Low to Medium Minus, Medium, Medium Plus, High
Alcohol	Low to Medium Minus, Medium, Medium Plus, High
Body	Light, Medium, Full
Phenolic Bitterness	***White Wines Only** Yes or No
Tannin	***Red Wines Only** Low to Medium Minus, Medium, Medium Plus, High

© Court of Master Sommeliers, Americas 2024

WINE #1

WINE INFORMATION REVIEW	
Grape Variety *or* Dominant Grape Variety if a Blend	**Grape Variety Name(s):** **Theory Knowledge:** Review your descriptions and list this wine's unique aromas and flavor characteristics. 1. 2. 3. 4. 5.
Climate	**Cool, Moderate, Warm** *Choose One Answer **Theory Knowledge:** Look at structural elements such as acidity and alcohol to connect to the correct climate type.
Country	 **Theory Knowledge:** Which countries classically grow this grape variety?
Region AND Appellation	 **Theory Knowledge:** Which regions and appellations classically grow this grape variety?
Official Quality Level **where appropriate*	**Burgundy:** Village, Premier Cru, Grand Cru **Beaujolais:** Village, Cru **Alsace:** Village, Grand Cru **Rioja:** Reserva, Gran Reserva **Chianti:** Classico, Riserva **Germany:** Kabinet , Spätlese **Other:** *Choose One Answer Where Appropriate **Theory Knowledge:** Apply knowledge of regional wine law and where quality levels exist and are appropriate
Vintage	

WINE TASTED: _____

© Court of Master Sommeliers, Americas 2024

WINE #2

SIGHT / APPEARANCE	
Intensity of Color	Pale, Medium, Deep
Primary Color	**White Wine:** Straw, Yellow, Gold
	Red Wine: Purple, Ruby, Garnet
Other Observations	**Tearing:** Light, Medium, Heavy
	***Red Wines Only Staining** Yes or No
NOSE / AROMAS	
Wine Condition / Presence of Faults	Is the wine in good condition? Yes or No
Aromatic Intensity	Delicate, Medium, Powerful
Age Assessment	Youthful, Developing (showing age), Vinous (aged)
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:

© Court of Master Sommeliers, Americas 2024

WINE #2

PALATE / FLAVORS	
	For all categories, are there differences from the nose to the palate?
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **From New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:
PALATE / STRUCTURE	
Sweetness	Dry, Off-Dry, Sweet
Acidity	Low to Medium Minus, Medium, Medium Plus, High
Alcohol	Low to Medium Minus, Medium, Medium Plus, High
Body	Light, Medium, Full
Phenolic Bitterness	***White Wines Only** Yes or No
Tannin	***Red Wines Only** Low to Medium Minus, Medium, Medium Plus, High

© Court of Master Sommeliers, Americas 2024

WINE #2

WINE INFORMATION REVIEW	
Grape Variety *or* Dominant Grape Variety if a Blend	**Grape Variety Name(s):** **Theory Knowledge:** Review your descriptions and list this wine's unique aromas and flavor characteristics. 1. 2. 3. 4. 5.
Climate	**Cool, Moderate, Warm** *Choose One Answer **Theory Knowledge:** Look at structural elements such as acidity and alcohol to connect to the correct climate type.
Country	 **Theory Knowledge:** Which countries classically grow this grape variety?
Region AND Appellation	 **Theory Knowledge:** Which regions and appellations classically grow this grape variety?
Official Quality Level **where appropriate*	**Burgundy:** Village, Premier Cru, Grand Cru **Beaujolais:** Village, Cru **Alsace:** Village, Grand Cru **Rioja:** Reserva, Gran Reserva **Chianti:** Classico, Riserva **Germany:** Kabinet , Spätlese **Other:** *Choose One Answer Where Appropriate **Theory Knowledge:** Apply knowledge of regional wine law and where quality levels exist and are appropriate
Vintage	

WINE TASTED: _____

© Court of Master Sommeliers, Americas 2024

WINE #3

SIGHT / APPEARANCE	
Intensity of Color	Pale, Medium, Deep
Primary Color	**White Wine:** Straw, Yellow, Gold
	Red Wine: Purple, Ruby, Garnet
Other Observations	**Tearing:** Light, Medium, Heavy
	***Red Wines Only Staining** Yes or No
NOSE / AROMAS	
Wine Condition / Presence of Faults	Is the wine in good condition? Yes or No
Aromatic Intensity	Delicate, Medium, Powerful
Age Assessment	Youthful, Developing (showing age), Vinous (aged)
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:

© Court of Master Sommeliers, Americas 2024

WINE #3

PALATE / FLAVORS	
	For all categories, are there differences from the nose to the palate?
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **From New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:
PALATE / STRUCTURE	
Sweetness	Dry, Off-Dry, Sweet
Acidity	Low to Medium Minus, Medium, Medium Plus, High
Alcohol	Low to Medium Minus, Medium, Medium Plus, High
Body	Light, Medium, Full
Phenolic Bitterness	***White Wines Only** Yes or No
Tannin	***Red Wines Only** Low to Medium Minus, Medium, Medium Plus, High

© Court of Master Sommeliers, Americas 2024

WINE #3

WINE INFORMATION REVIEW	
Grape Variety *or* Dominant Grape Variety if a Blend	**Grape Variety Name(s):** **Theory Knowledge:** Review your descriptions and list this wine's unique aromas and flavor characteristics. 1. 2. 3. 4. 5.
Climate	**Cool, Moderate, Warm** *Choose One Answer **Theory Knowledge:** Look at structural elements such as acidity and alcohol to connect to the correct climate type.
Country	 **Theory Knowledge:** Which countries classically grow this grape variety?
Region AND Appellation	 **Theory Knowledge:** Which regions and appellations classically grow this grape variety?
Official Quality Level **where appropriate*	**Burgundy:** Village, Premier Cru, Grand Cru **Beaujolais:** Village, Cru **Alsace:** Village, Grand Cru **Rioja:** Reserva, Gran Reserva **Chianti:** Classico, Riserva **Germany:** Kabinet , Spätlese **Other:** *Choose One Answer Where Appropriate **Theory Knowledge:** Apply knowledge of regional wine law and where quality levels exist and are appropriate
Vintage	

WINE TASTED: _____

© Court of Master Sommeliers, Americas 2024

WINE #4

SIGHT / APPEARANCE	
Intensity of Color	Pale, Medium, Deep
Primary Color	**White Wine:** Straw, Yellow, Gold
	Red Wine: Purple, Ruby, Garnet
Other Observations	**Tearing:** Light, Medium, Heavy
	***Red Wines Only Staining** Yes or No
NOSE / AROMAS	
Wine Condition / Presence of Faults	Is the wine in good condition? Yes or No
Aromatic Intensity	Delicate, Medium, Powerful
Age Assessment	Youthful, Developing (showing age), Vinous (aged)
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:

© Court of Master Sommeliers, Americas 2024

WINE #4

PALATE / FLAVORS	
	For all categories, are there differences from the nose to the palate?
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **From New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:
PALATE / STRUCTURE	
Sweetness	Dry, Off-Dry, Sweet
Acidity	Low to Medium Minus, Medium, Medium Plus, High
Alcohol	Low to Medium Minus, Medium, Medium Plus, High
Body	Light, Medium, Full
Phenolic Bitterness	***White Wines Only** Yes or No
Tannin	***Red Wines Only** Low to Medium Minus, Medium, Medium Plus, High

© Court of Master Sommeliers, Americas 2024

WINE #4

WINE INFORMATION REVIEW	
Grape Variety *or* Dominant Grape Variety if a Blend	**Grape Variety Name(s):** **Theory Knowledge:** Review your descriptions and list this wine's unique aromas and flavor characteristics. 1. 2. 3. 4. 5.
Climate	**Cool, Moderate, Warm** *Choose One Answer **Theory Knowledge:** Look at structural elements such as acidity and alcohol to connect to the correct climate type.
Country	 **Theory Knowledge:** Which countries classically grow this grape variety?
Region AND Appellation	 **Theory Knowledge:** Which regions and appellations classically grow this grape variety?
Official Quality Level **where appropriate*	**Burgundy:** Village, Premier Cru, Grand Cru **Beaujolais:** Village, Cru **Alsace:** Village, Grand Cru **Rioja:** Reserva, Gran Reserva **Chianti:** Classico, Riserva **Germany:** Kabinet , Spätlese **Other:** *Choose One Answer Where Appropriate **Theory Knowledge:** Apply knowledge of regional wine law and where quality levels exist and are appropriate
Vintage	

WINE TASTED: _____

© Court of Master Sommeliers, Americas 2024

WINE #5

SIGHT / APPEARANCE	
Intensity of Color	Pale, Medium, Deep
Primary Color	**White Wine:** Straw, Yellow, Gold
	Red Wine: Purple, Ruby, Garnet
Other Observations	**Tearing:** Light, Medium, Heavy
	***Red Wines Only Staining** Yes or No
NOSE / AROMAS	
Wine Condition / Presence of Faults	Is the wine in good condition? Yes or No
Aromatic Intensity	Delicate, Medium, Powerful
Age Assessment	Youthful, Developing (showing age), Vinous (aged)
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:

© Court of Master Sommeliers, Americas 2024

WINE #5

PALATE / FLAVORS	
	For all categories, are there differences from the nose to the palate?
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **From New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:
PALATE / STRUCTURE	
Sweetness	Dry, Off-Dry, Sweet
Acidity	Low to Medium Minus, Medium, Medium Plus, High
Alcohol	Low to Medium Minus, Medium, Medium Plus, High
Body	Light, Medium, Full
Phenolic Bitterness	***White Wines Only** Yes or No
Tannin	***Red Wines Only** Low to Medium Minus, Medium, Medium Plus, High

© Court of Master Sommeliers, Americas 2024

WINE #5

WINE INFORMATION REVIEW	
Grape Variety *or* Dominant Grape Variety if a Blend	**Grape Variety Name(s):** **Theory Knowledge:** Review your descriptions and list this wine's unique aromas and flavor characteristics. 1. 2. 3. 4. 5.
Climate	**Cool, Moderate, Warm** *Choose One Answer **Theory Knowledge:** Look at structural elements such as acidity and alcohol to connect to the correct climate type.
Country	 **Theory Knowledge:** Which countries classically grow this grape variety?
Region AND Appellation	 **Theory Knowledge:** Which regions and appellations classically grow this grape variety?
Official Quality Level **where appropriate*	**Burgundy:** Village, Premier Cru, Grand Cru **Beaujolais:** Village, Cru **Alsace:** Village, Grand Cru **Rioja:** Reserva, Gran Reserva **Chianti:** Classico, Riserva **Germany:** Kabinet , Spätlese **Other:** *Choose One Answer Where Appropriate **Theory Knowledge:** Apply knowledge of regional wine law and where quality levels exist and are appropriate
Vintage	

WINE TASTED: _____

© Court of Master Sommeliers, Americas 2024

WINE #6

SIGHT / APPEARANCE	
Intensity of Color	Pale, Medium, Deep
Primary Color	**White Wine:** Straw, Yellow, Gold
	Red Wine: Purple, Ruby, Garnet
Other Observations	**Tearing:** Light, Medium, Heavy
	***Red Wines Only Staining** Yes or No
NOSE / AROMAS	
Wine Condition / Presence of Faults	Is the wine in good condition? Yes or No
Aromatic Intensity	Delicate, Medium, Powerful
Age Assessment	Youthful, Developing (showing age), Vinous (aged)
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:

© Court of Master Sommeliers, Americas 2024

WINE #6

PALATE / FLAVORS	
	For all categories, are there differences from the nose to the palate?
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **From New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:
PALATE / STRUCTURE	
Sweetness	Dry, Off-Dry, Sweet
Acidity	Low to Medium Minus, Medium, Medium Plus, High
Alcohol	Low to Medium Minus, Medium, Medium Plus, High
Body	Light, Medium, Full
Phenolic Bitterness	***White Wines Only** Yes or No
Tannin	***Red Wines Only** Low to Medium Minus, Medium, Medium Plus, High

© Court of Master Sommeliers, Americas 2024

WINE #6

WINE INFORMATION REVIEW	
Grape Variety *or* Dominant Grape Variety if a Blend	**Grape Variety Name(s):**
	Theory Knowledge: Review your descriptions and list this wine's unique aromas and flavor characteristics. 1. 2. 3. 4. 5.
Climate	**Cool, Moderate, Warm** *Choose One Answer
	Theory Knowledge: Look at structural elements such as acidity and alcohol to connect to the correct climate type.
Country	
	Theory Knowledge: Which countries classically grow this grape variety?
Region AND Appellation	
	Theory Knowledge: Which regions and appellations classically grow this grape variety?
Official Quality Level **where appropriate*	**Burgundy:** Village, Premier Cru, Grand Cru **Beaujolais:** Village, Cru **Alsace:** Village, Grand Cru **Rioja:** Reserva, Gran Reserva **Chianti:** Classico, Riserva **Germany:** Kabinet , Spätlese **Other:** *Choose One Answer Where Appropriate
	Theory Knowledge: Apply knowledge of regional wine law and where quality levels exist and are appropriate
Vintage	

WINE TASTED: _____

© Court of Master Sommeliers, Americas 2024

WINE #7

SIGHT / APPEARANCE	
Intensity of Color	Pale, Medium, Deep
Primary Color	**White Wine:** Straw, Yellow, Gold
	Red Wine: Purple, Ruby, Garnet
Other Observations	**Tearing:** Light, Medium, Heavy
	***Red Wines Only Staining** Yes or No
NOSE / AROMAS	
Wine Condition / Presence of Faults	Is the wine in good condition? Yes or No
Aromatic Intensity	Delicate, Medium, Powerful
Age Assessment	Youthful, Developing (showing age), Vinous (aged)
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:

© Court of Master Sommeliers, Americas 2024

WINE #7

PALATE / FLAVORS	
	For all categories, are there differences from the nose to the palate?
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **From New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:
PALATE / STRUCTURE	
Sweetness	Dry, Off-Dry, Sweet
Acidity	Low to Medium Minus, Medium, Medium Plus, High
Alcohol	Low to Medium Minus, Medium, Medium Plus, High
Body	Light, Medium, Full
Phenolic Bitterness	***White Wines Only** Yes or No
Tannin	***Red Wines Only** Low to Medium Minus, Medium, Medium Plus, High

© Court of Master Sommeliers, Americas 2024

WINE #7

WINE INFORMATION REVIEW	
Grape Variety *or* Dominant Grape Variety if a Blend	**Grape Variety Name(s):**
	Theory Knowledge: Review your descriptions and list this wine's unique aromas and flavor characteristics. 1. 2. 3. 4. 5.
Climate	**Cool, Moderate, Warm** *Choose One Answer
	Theory Knowledge: Look at structural elements such as acidity and alcohol to connect to the correct climate type.
Country	
	Theory Knowledge: Which countries classically grow this grape variety?
Region AND Appellation	
	Theory Knowledge: Which regions and appellations classically grow this grape variety?
Official Quality Level **where appropriate*	**Burgundy:** Village, Premier Cru, Grand Cru **Beaujolais:** Village, Cru **Alsace:** Village, Grand Cru **Rioja:** Reserva, Gran Reserva **Chianti:** Classico, Riserva **Germany:** Kabinet , Spätlese **Other:** *Choose One Answer Where Appropriate
	Theory Knowledge: Apply knowledge of regional wine law and where quality levels exist and are appropriate
Vintage	

WINE TASTED: _____

© Court of Master Sommeliers, Americas 2024

WINE #8

SIGHT / APPEARANCE	
Intensity of Color	Pale, Medium, Deep
Primary Color	**White Wine:** Straw, Yellow, Gold
	Red Wine: Purple, Ruby, Garnet
Other Observations	**Tearing:** Light, Medium, Heavy
	***Red Wines Only Staining** Yes or No
NOSE / AROMAS	
Wine Condition / Presence of Faults	Is the wine in good condition? Yes or No
Aromatic Intensity	Delicate, Medium, Powerful
Age Assessment	Youthful, Developing (showing age), Vinous (aged)
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:

© Court of Master Sommeliers, Americas 2024

WINE #8

PALATE / FLAVORS	
	For all categories, are there differences from the nose to the palate?
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **From New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:
PALATE / STRUCTURE	
Sweetness	Dry, Off-Dry, Sweet
Acidity	Low to Medium Minus, Medium, Medium Plus, High
Alcohol	Low to Medium Minus, Medium, Medium Plus, High
Body	Light, Medium, Full
Phenolic Bitterness	***White Wines Only** Yes or No
Tannin	***Red Wines Only** Low to Medium Minus, Medium, Medium Plus, High

© Court of Master Sommeliers, Americas 2024

WINE #8

WINE INFORMATION REVIEW	
Grape Variety *or* Dominant Grape Variety if a Blend	**Grape Variety Name(s):** **Theory Knowledge:** Review your descriptions and list this wine's unique aromas and flavor characteristics. 1. 2. 3. 4. 5.
Climate	**Cool, Moderate, Warm** *Choose One Answer **Theory Knowledge:** Look at structural elements such as acidity and alcohol to connect to the correct climate type.
Country	 **Theory Knowledge:** Which countries classically grow this grape variety?
Region AND Appellation	 **Theory Knowledge:** Which regions and appellations classically grow this grape variety?
Official Quality Level **where appropriate*	**Burgundy:** Village, Premier Cru, Grand Cru **Beaujolais:** Village, Cru **Alsace:** Village, Grand Cru **Rioja:** Reserva, Gran Reserva **Chianti:** Classico, Riserva **Germany:** Kabinet , Spätlese **Other:** *Choose One Answer Where Appropriate **Theory Knowledge:** Apply knowledge of regional wine law and where quality levels exist and are appropriate
Vintage	

WINE TASTED: _____

© Court of Master Sommeliers, Americas 2024

WINE #9

SIGHT / APPEARANCE	
Intensity of Color	Pale, Medium, Deep
Primary Color	**White Wine:** Straw, Yellow, Gold
	Red Wine: Purple, Ruby, Garnet
Other Observations	**Tearing:** Light, Medium, Heavy
	***Red Wines Only Staining** Yes or No
NOSE / AROMAS	
Wine Condition / Presence of Faults	Is the wine in good condition? Yes or No
Aromatic Intensity	Delicate, Medium, Powerful
Age Assessment	Youthful, Developing (showing age), Vinous (aged)
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:

© Court of Master Sommeliers, Americas 2024

WINE #9

PALATE / FLAVORS	
	For all categories, are there differences from the nose to the palate?
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **From New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:
PALATE / STRUCTURE	
Sweetness	Dry, Off-Dry, Sweet
Acidity	Low to Medium Minus, Medium, Medium Plus, High
Alcohol	Low to Medium Minus, Medium, Medium Plus, High
Body	Light, Medium, Full
Phenolic Bitterness	***White Wines Only** Yes or No
Tannin	***Red Wines Only** Low to Medium Minus, Medium, Medium Plus, High

© Court of Master Sommeliers, Americas 2024

WINE #9

WINE INFORMATION REVIEW	
Grape Variety *or* Dominant Grape Variety if a Blend	**Grape Variety Name(s):**
	Theory Knowledge: Review your descriptions and list this wine's unique aromas and flavor characteristics. 1. 2. 3. 4. 5.
Climate	**Cool, Moderate, Warm** *Choose One Answer
	Theory Knowledge: Look at structural elements such as acidity and alcohol to connect to the correct climate type.
Country	
	Theory Knowledge: Which countries classically grow this grape variety?
Region AND Appellation	
	Theory Knowledge: Which regions and appellations classically grow this grape variety?
Official Quality Level **where appropriate*	**Burgundy:** Village, Premier Cru, Grand Cru **Beaujolais:** Village, Cru **Alsace:** Village, Grand Cru **Rioja:** Reserva, Gran Reserva **Chianti:** Classico, Riserva **Germany:** Kabinet , Spätlese **Other:** *Choose One Answer Where Appropriate
	Theory Knowledge: Apply knowledge of regional wine law and where quality levels exist and are appropriate
Vintage	

WINE TASTED: _____

© Court of Master Sommeliers, Americas 2024

WINE #10

SIGHT / APPEARANCE	
Intensity of Color	Pale, Medium, Deep
Primary Color	**White Wine:** Straw, Yellow, Gold
	Red Wine: Purple, Ruby, Garnet
Other Observations	**Tearing:** Light, Medium, Heavy
	***Red Wines Only Staining** Yes or No
NOSE / AROMAS	
Wine Condition / Presence of Faults	Is the wine in good condition? Yes or No
Aromatic Intensity	Delicate, Medium, Powerful
Age Assessment	Youthful, Developing (showing age), Vinous (aged)
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:

© Court of Master Sommeliers, Americas 2024

WINE #10

PALATE / FLAVORS	
	For all categories, are there differences from the nose to the palate?
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **From New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:
PALATE / STRUCTURE	
Sweetness	Dry, Off-Dry, Sweet
Acidity	Low to Medium Minus, Medium, Medium Plus, High
Alcohol	Low to Medium Minus, Medium, Medium Plus, High
Body	Light, Medium, Full
Phenolic Bitterness	***White Wines Only** Yes or No
Tannin	***Red Wines Only** Low to Medium Minus, Medium, Medium Plus, High

© Court of Master Sommeliers, Americas 2024

WINE #10

WINE INFORMATION REVIEW	
Grape Variety *or* Dominant Grape Variety if a Blend	**Grape Variety Name(s):**
	Theory Knowledge: Review your descriptions and list this wine's unique aromas and flavor characteristics. 1. 2. 3. 4. 5.
Climate	**Cool, Moderate, Warm** *Choose One Answer
	Theory Knowledge: Look at structural elements such as acidity and alcohol to connect to the correct climate type.
Country	
	Theory Knowledge: Which countries classically grow this grape variety?
Region AND Appellation	
	Theory Knowledge: Which regions and appellations classically grow this grape variety?
Official Quality Level **where appropriate*	**Burgundy:** Village, Premier Cru, Grand Cru **Beaujolais:** Village, Cru **Alsace:** Village, Grand Cru **Rioja:** Reserva, Gran Reserva **Chianti:** Classico, Riserva **Germany:** Kabinet , Spätlese **Other:** *Choose One Answer Where Appropriate
	Theory Knowledge: Apply knowledge of regional wine law and where quality levels exist and are appropriate
Vintage	

WINE TASTED: _____

© Court of Master Sommeliers, Americas 2024

WINE #11

SIGHT / APPEARANCE	
Intensity of Color	Pale, Medium, Deep
Primary Color	**White Wine:** Straw, Yellow, Gold
	Red Wine: Purple, Ruby, Garnet
Other Observations	**Tearing:** Light, Medium, Heavy
	***Red Wines Only Staining** Yes or No
NOSE / AROMAS	
Wine Condition / Presence of Faults	Is the wine in good condition? Yes or No
Aromatic Intensity	Delicate, Medium, Powerful
Age Assessment	Youthful, Developing (showing age), Vinous (aged)
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:

© Court of Master Sommeliers, Americas 2024

WINE #11

PALATE / FLAVORS	
	For all categories, are there differences from the nose to the palate?
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **From New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:
PALATE / STRUCTURE	
Sweetness	Dry, Off-Dry, Sweet
Acidity	Low to Medium Minus, Medium, Medium Plus, High
Alcohol	Low to Medium Minus, Medium, Medium Plus, High
Body	Light, Medium, Full
Phenolic Bitterness	***White Wines Only** Yes or No
Tannin	***Red Wines Only** Low to Medium Minus, Medium, Medium Plus, High

© Court of Master Sommeliers, Americas 2024

WINE #11

WINE INFORMATION REVIEW	
Grape Variety *or* Dominant Grape Variety if a Blend	**Grape Variety Name(s):**
	Theory Knowledge: Review your descriptions and list this wine's unique aromas and flavor characteristics. 1. 2. 3. 4. 5.
Climate	**Cool, Moderate, Warm** *Choose One Answer
	Theory Knowledge: Look at structural elements such as acidity and alcohol to connect to the correct climate type.
Country	
	Theory Knowledge: Which countries classically grow this grape variety?
Region AND Appellation	
	Theory Knowledge: Which regions and appellations classically grow this grape variety?
Official Quality Level **where appropriate*	**Burgundy:** Village, Premier Cru, Grand Cru **Beaujolais:** Village, Cru **Alsace:** Village, Grand Cru **Rioja:** Reserva, Gran Reserva **Chianti:** Classico, Riserva **Germany:** Kabinet , Spätlese **Other:** *Choose One Answer Where Appropriate
	Theory Knowledge: Apply knowledge of regional wine law and where quality levels exist and are appropriate
Vintage	

WINE TASTED: _____

© Court of Master Sommeliers, Americas 2024

WINE #12

SIGHT / APPEARANCE	
Intensity of Color	Pale, Medium, Deep
Primary Color	**White Wine:** Straw, Yellow, Gold
	Red Wine: Purple, Ruby, Garnet
Other Observations	**Tearing:** Light, Medium, Heavy
	***Red Wines Only Staining** Yes or No
NOSE / AROMAS	
Wine Condition / Presence of Faults	Is the wine in good condition? Yes or No
Aromatic Intensity	Delicate, Medium, Powerful
Age Assessment	Youthful, Developing (showing age), Vinous (aged)
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:

© Court of Master Sommeliers, Americas 2024

WINE #12

PALATE / FLAVORS	
	For all categories, are there differences from the nose to the palate?
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **From New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:
PALATE / STRUCTURE	
Sweetness	Dry, Off-Dry, Sweet
Acidity	Low to Medium Minus, Medium, Medium Plus, High
Alcohol	Low to Medium Minus, Medium, Medium Plus, High
Body	Light, Medium, Full
Phenolic Bitterness	***White Wines Only** Yes or No
Tannin	***Red Wines Only** Low to Medium Minus, Medium, Medium Plus, High

© Court of Master Sommeliers, Americas 2024

WINE #12

WINE INFORMATION REVIEW	
Grape Variety *or* Dominant Grape Variety if a Blend	**Grape Variety Name(s):** **Theory Knowledge:** Review your descriptions and list this wine's unique aromas and flavor characteristics. 1. 2. 3. 4. 5.
Climate	**Cool, Moderate, Warm** *Choose One Answer **Theory Knowledge:** Look at structural elements such as acidity and alcohol to connect to the correct climate type.
Country	 **Theory Knowledge:** Which countries classically grow this grape variety?
Region AND Appellation	 **Theory Knowledge:** Which regions and appellations classically grow this grape variety?
Official Quality Level **where appropriate*	**Burgundy:** Village, Premier Cru, Grand Cru **Beaujolais:** Village, Cru **Alsace:** Village, Grand Cru **Rioja:** Reserva, Gran Reserva **Chianti:** Classico, Riserva **Germany:** Kabinet , Spätlese **Other:** *Choose One Answer Where Appropriate **Theory Knowledge:** Apply knowledge of regional wine law and where quality levels exist and are appropriate
Vintage	

WINE TASTED: _____

© Court of Master Sommeliers, Americas 2024

WINE #13

SIGHT / APPEARANCE	
Intensity of Color	Pale, Medium, Deep
Primary Color	**White Wine:** Straw, Yellow, Gold
	Red Wine: Purple, Ruby, Garnet
Other Observations	**Tearing:** Light, Medium, Heavy
	***Red Wines Only Staining** Yes or No
NOSE / AROMAS	
Wine Condition / Presence of Faults	Is the wine in good condition? Yes or No
Aromatic Intensity	Delicate, Medium, Powerful
Age Assessment	Youthful, Developing (showing age), Vinous (aged)
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:

© Court of Master Sommeliers, Americas 2024

WINE #13

PALATE / FLAVORS	
	For all categories, are there differences from the nose to the palate?
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **From New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:
PALATE / STRUCTURE	
Sweetness	Dry, Off-Dry, Sweet
Acidity	Low to Medium Minus, Medium, Medium Plus, High
Alcohol	Low to Medium Minus, Medium, Medium Plus, High
Body	Light, Medium, Full
Phenolic Bitterness	***White Wines Only** Yes or No
Tannin	***Red Wines Only** Low to Medium Minus, Medium, Medium Plus, High

© Court of Master Sommeliers, Americas 2024

WINE #13

WINE INFORMATION REVIEW	
Grape Variety *or* Dominant Grape Variety if a Blend	**Grape Variety Name(s):** **Theory Knowledge:** Review your descriptions and list this wine's unique aromas and flavor characteristics. 1. 2. 3. 4. 5.
Climate	**Cool, Moderate, Warm** *Choose One Answer **Theory Knowledge:** Look at structural elements such as acidity and alcohol to connect to the correct climate type.
Country	 **Theory Knowledge:** Which countries classically grow this grape variety?
Region AND Appellation	 **Theory Knowledge:** Which regions and appellations classically grow this grape variety?
Official Quality Level **where appropriate*	**Burgundy:** Village, Premier Cru, Grand Cru **Beaujolais:** Village, Cru **Alsace:** Village, Grand Cru **Rioja:** Reserva, Gran Reserva **Chianti:** Classico, Riserva **Germany:** Kabinet , Spätlese **Other:** *Choose One Answer Where Appropriate **Theory Knowledge:** Apply knowledge of regional wine law and where quality levels exist and are appropriate
Vintage	

WINE TASTED: _____

© Court of Master Sommeliers, Americas 2024

WINE #14

SIGHT / APPEARANCE	
Intensity of Color	Pale, Medium, Deep
Primary Color	**White Wine:** Straw, Yellow, Gold
	Red Wine: Purple, Ruby, Garnet
Other Observations	**Tearing:** Light, Medium, Heavy
	***Red Wines Only Staining** Yes or No
NOSE / AROMAS	
Wine Condition / Presence of Faults	Is the wine in good condition? Yes or No
Aromatic Intensity	Delicate, Medium, Powerful
Age Assessment	Youthful, Developing (showing age), Vinous (aged)
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:

© Court of Master Sommeliers, Americas 2024

WINE #14

PALATE / FLAVORS	
	For all categories, are there differences from the nose to the palate?
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **From New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:
PALATE / STRUCTURE	
Sweetness	Dry, Off-Dry, Sweet
Acidity	Low to Medium Minus, Medium, Medium Plus, High
Alcohol	Low to Medium Minus, Medium, Medium Plus, High
Body	Light, Medium, Full
Phenolic Bitterness	***White Wines Only** Yes or No
Tannin	***Red Wines Only** Low to Medium Minus, Medium, Medium Plus, High

© Court of Master Sommeliers, Americas 2024

WINE #14

WINE INFORMATION REVIEW	
Grape Variety *or* Dominant Grape Variety if a Blend	**Grape Variety Name(s):** **Theory Knowledge:** Review your descriptions and list this wine's unique aromas and flavor characteristics. 1. 2. 3. 4. 5.
Climate	**Cool, Moderate, Warm** *Choose One Answer **Theory Knowledge:** Look at structural elements such as acidity and alcohol to connect to the correct climate type.
Country	 **Theory Knowledge:** Which countries classically grow this grape variety?
Region AND Appellation	 **Theory Knowledge:** Which regions and appellations classically grow this grape variety?
Official Quality Level **where appropriate*	**Burgundy:** Village, Premier Cru, Grand Cru **Beaujolais:** Village, Cru **Alsace:** Village, Grand Cru **Rioja:** Reserva, Gran Reserva **Chianti:** Classico, Riserva **Germany:** Kabinet , Spätlese **Other:** *Choose One Answer Where Appropriate **Theory Knowledge:** Apply knowledge of regional wine law and where quality levels exist and are appropriate
Vintage	

WINE TASTED: _____

© Court of Master Sommeliers, Americas 2024

WINE #15

SIGHT / APPEARANCE	
Intensity of Color	Pale, Medium, Deep
Primary Color	**White Wine:** Straw, Yellow, Gold
	Red Wine: Purple, Ruby, Garnet
Other Observations	**Tearing:** Light, Medium, Heavy
	***Red Wines Only Staining** Yes or No
NOSE / AROMAS	
Wine Condition / Presence of Faults	Is the wine in good condition? Yes or No
Aromatic Intensity	Delicate, Medium, Powerful
Age Assessment	Youthful, Developing (showing age), Vinous (aged)
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:

© Court of Master Sommeliers, Americas 2024

WINE #15

PALATE / FLAVORS	
	For all categories, are there differences from the nose to the palate?
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **From New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:
PALATE / STRUCTURE	
Sweetness	Dry, Off-Dry, Sweet
Acidity	Low to Medium Minus, Medium, Medium Plus, High
Alcohol	Low to Medium Minus, Medium, Medium Plus, High
Body	Light, Medium, Full
Phenolic Bitterness	***White Wines Only** Yes or No
Tannin	***Red Wines Only** Low to Medium Minus, Medium, Medium Plus, High

© Court of Master Sommeliers, Americas 2024

WINE #15

WINE INFORMATION REVIEW	
Grape Variety *or* Dominant Grape Variety if a Blend	**Grape Variety Name(s):**
	Theory Knowledge: Review your descriptions and list this wine's unique aromas and flavor characteristics. 1. 2. 3. 4. 5.
Climate	**Cool, Moderate, Warm** *Choose One Answer
	Theory Knowledge: Look at structural elements such as acidity and alcohol to connect to the correct climate type.
Country	
	Theory Knowledge: Which countries classically grow this grape variety?
Region AND Appellation	
	Theory Knowledge: Which regions and appellations classically grow this grape variety?
Official Quality Level **where appropriate*	**Burgundy:** Village, Premier Cru, Grand Cru **Beaujolais:** Village, Cru **Alsace:** Village, Grand Cru **Rioja:** Reserva, Gran Reserva **Chianti:** Classico, Riserva **Germany:** Kabinet , Spätlese **Other:** *Choose One Answer Where Appropriate
	Theory Knowledge: Apply knowledge of regional wine law and where quality levels exist and are appropriate
Vintage	

WINE TASTED: _____

© Court of Master Sommeliers, Americas 2024

WINE #16

SIGHT / APPEARANCE	
Intensity of Color	Pale, Medium, Deep
Primary Color	**White Wine:** Straw, Yellow, Gold
	Red Wine: Purple, Ruby, Garnet
Other Observations	**Tearing:** Light, Medium, Heavy
	***Red Wines Only Staining** Yes or No
NOSE / AROMAS	
Wine Condition / Presence of Faults	Is the wine in good condition? Yes or No
Aromatic Intensity	Delicate, Medium, Powerful
Age Assessment	Youthful, Developing (showing age), Vinous (aged)
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:

© Court of Master Sommeliers, Americas 2024

WINE #16

PALATE / FLAVORS	
	For all categories, are there differences from the nose to the palate?
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **From New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:
PALATE / STRUCTURE	
Sweetness	Dry, Off-Dry, Sweet
Acidity	Low to Medium Minus, Medium, Medium Plus, High
Alcohol	Low to Medium Minus, Medium, Medium Plus, High
Body	Light, Medium, Full
Phenolic Bitterness	***White Wines Only** Yes or No
Tannin	***Red Wines Only** Low to Medium Minus, Medium, Medium Plus, High

© Court of Master Sommeliers, Americas 2024

WINE #16

WINE INFORMATION REVIEW	
Grape Variety *or* Dominant Grape Variety if a Blend	**Grape Variety Name(s):** **Theory Knowledge:** Review your descriptions and list this wine's unique aromas and flavor characteristics. 1. 2. 3. 4. 5.
Climate	**Cool, Moderate, Warm** *Choose One Answer **Theory Knowledge:** Look at structural elements such as acidity and alcohol to connect to the correct climate type.
Country	 **Theory Knowledge:** Which countries classically grow this grape variety?
Region AND Appellation	 **Theory Knowledge:** Which regions and appellations classically grow this grape variety?
Official Quality Level **where appropriate*	**Burgundy:** Village, Premier Cru, Grand Cru **Beaujolais:** Village, Cru **Alsace:** Village, Grand Cru **Rioja:** Reserva, Gran Reserva **Chianti:** Classico, Riserva **Germany:** Kabinet , Spätlese **Other:** *Choose One Answer Where Appropriate **Theory Knowledge:** Apply knowledge of regional wine law and where quality levels exist and are appropriate
Vintage	

WINE TASTED: _____

© Court of Master Sommeliers, Americas 2024

WINE #17

SIGHT / APPEARANCE	
Intensity of Color	Pale, Medium, Deep
Primary Color	**White Wine:** Straw, Yellow, Gold
	Red Wine: Purple, Ruby, Garnet
Other Observations	**Tearing:** Light, Medium, Heavy
	***Red Wines Only Staining** Yes or No
NOSE / AROMAS	
Wine Condition / Presence of Faults	Is the wine in good condition? Yes or No
Aromatic Intensity	Delicate, Medium, Powerful
Age Assessment	Youthful, Developing (showing age), Vinous (aged)
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:

© Court of Master Sommeliers, Americas 2024

WINE #17

PALATE / FLAVORS	
	For all categories, are there differences from the nose to the palate?
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **From New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:
PALATE / STRUCTURE	
Sweetness	Dry, Off-Dry, Sweet
Acidity	Low to Medium Minus, Medium, Medium Plus, High
Alcohol	Low to Medium Minus, Medium, Medium Plus, High
Body	Light, Medium, Full
Phenolic Bitterness	***White Wines Only** Yes or No
Tannin	***Red Wines Only** Low to Medium Minus, Medium, Medium Plus, High

© Court of Master Sommeliers, Americas 2024

WINE #17

WINE INFORMATION REVIEW	
Grape Variety *or* Dominant Grape Variety if a Blend	**Grape Variety Name(s):** **Theory Knowledge:** Review your descriptions and list this wine's unique aromas and flavor characteristics. 1. 2. 3. 4. 5.
Climate	**Cool, Moderate, Warm** *Choose One Answer **Theory Knowledge:** Look at structural elements such as acidity and alcohol to connect to the correct climate type.
Country	 **Theory Knowledge:** Which countries classically grow this grape variety?
Region AND Appellation	 **Theory Knowledge:** Which regions and appellations classically grow this grape variety?
Official Quality Level **where appropriate*	**Burgundy:** Village, Premier Cru, Grand Cru **Beaujolais:** Village, Cru **Alsace:** Village, Grand Cru **Rioja:** Reserva, Gran Reserva **Chianti:** Classico, Riserva **Germany:** Kabinet , Spätlese **Other:** *Choose One Answer Where Appropriate **Theory Knowledge:** Apply knowledge of regional wine law and where quality levels exist and are appropriate
Vintage	

WINE TASTED: _____

© Court of Master Sommeliers, Americas 2024

WINE #18

SIGHT / APPEARANCE	
Intensity of Color	Pale, Medium, Deep
Primary Color	**White Wine:** Straw, Yellow, Gold
	Red Wine: Purple, Ruby, Garnet
Other Observations	**Tearing:** Light, Medium, Heavy
	***Red Wines Only Staining** Yes or No
NOSE / AROMAS	
Wine Condition / Presence of Faults	Is the wine in good condition? Yes or No
Aromatic Intensity	Delicate, Medium, Powerful
Age Assessment	Youthful, Developing (showing age), Vinous (aged)
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:

© Court of Master Sommeliers, Americas 2024

WINE #18

PALATE / FLAVORS	
	For all categories, are there differences from the nose to the palate?
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **From New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:
PALATE / STRUCTURE	
Sweetness	Dry, Off-Dry, Sweet
Acidity	Low to Medium Minus, Medium, Medium Plus, High
Alcohol	Low to Medium Minus, Medium, Medium Plus, High
Body	Light, Medium, Full
Phenolic Bitterness	***White Wines Only** Yes or No
Tannin	***Red Wines Only** Low to Medium Minus, Medium, Medium Plus, High

© Court of Master Sommeliers, Americas 2024

WINE #18

WINE INFORMATION REVIEW	
Grape Variety *or* Dominant Grape Variety if a Blend	**Grape Variety Name(s):** **Theory Knowledge:** Review your descriptions and list this wine's unique aromas and flavor characteristics. 1. 2. 3. 4. 5.
Climate	**Cool, Moderate, Warm** *Choose One Answer **Theory Knowledge:** Look at structural elements such as acidity and alcohol to connect to the correct climate type.
Country	 **Theory Knowledge:** Which countries classically grow this grape variety?
Region AND Appellation	 **Theory Knowledge:** Which regions and appellations classically grow this grape variety?
Official Quality Level **where appropriate*	**Burgundy:** Village, Premier Cru, Grand Cru **Beaujolais:** Village, Cru **Alsace:** Village, Grand Cru **Rioja:** Reserva, Gran Reserva **Chianti:** Classico, Riserva **Germany:** Kabinet , Spätlese **Other:** *Choose One Answer Where Appropriate **Theory Knowledge:** Apply knowledge of regional wine law and where quality levels exist and are appropriate
Vintage	

WINE TASTED: _____

© Court of Master Sommeliers, Americas 2024

WINE #19

SIGHT / APPEARANCE	
Intensity of Color	Pale, Medium, Deep
Primary Color	**White Wine:** Straw, Yellow, Gold
	Red Wine: Purple, Ruby, Garnet
Other Observations	**Tearing:** Light, Medium, Heavy
	***Red Wines Only Staining** Yes or No
NOSE / AROMAS	
Wine Condition / Presence of Faults	Is the wine in good condition? Yes or No
Aromatic Intensity	Delicate, Medium, Powerful
Age Assessment	Youthful, Developing (showing age), Vinous (aged)
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:

© Court of Master Sommeliers, Americas 2024

WINE #19

PALATE / FLAVORS	
	For all categories, are there differences from the nose to the palate?
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **From New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:
PALATE / STRUCTURE	
Sweetness	Dry, Off-Dry, Sweet
Acidity	Low to Medium Minus, Medium, Medium Plus, High
Alcohol	Low to Medium Minus, Medium, Medium Plus, High
Body	Light, Medium, Full
Phenolic Bitterness	***White Wines Only** Yes or No
Tannin	***Red Wines Only** Low to Medium Minus, Medium, Medium Plus, High

© Court of Master Sommeliers, Americas 2024

WINE #19

WINE INFORMATION REVIEW	
Grape Variety *or* Dominant Grape Variety if a Blend	**Grape Variety Name(s):**
	Theory Knowledge: Review your descriptions and list this wine's unique aromas and flavor characteristics. 1. 2. 3. 4. 5.
Climate	**Cool, Moderate, Warm** *Choose One Answer
	Theory Knowledge: Look at structural elements such as acidity and alcohol to connect to the correct climate type.
Country	
	Theory Knowledge: Which countries classically grow this grape variety?
Region AND Appellation	
	Theory Knowledge: Which regions and appellations classically grow this grape variety?
Official Quality Level **where appropriate*	**Burgundy:** Village, Premier Cru, Grand Cru **Beaujolais:** Village, Cru **Alsace:** Village, Grand Cru **Rioja:** Reserva, Gran Reserva **Chianti:** Classico, Riserva **Germany:** Kabinet , Spätlese **Other:** *Choose One Answer Where Appropriate
	Theory Knowledge: Apply knowledge of regional wine law and where quality levels exist and are appropriate
Vintage	

WINE TASTED: _____

© Court of Master Sommeliers, Americas 2024

WINE #20

SIGHT / APPEARANCE	
Intensity of Color	Pale, Medium, Deep
Primary Color	**White Wine:** Straw, Yellow, Gold
	Red Wine: Purple, Ruby, Garnet
Other Observations	**Tearing:** Light, Medium, Heavy
	***Red Wines Only Staining** Yes or No
NOSE / AROMAS	
Wine Condition / Presence of Faults	Is the wine in good condition? Yes or No
Aromatic Intensity	Delicate, Medium, Powerful
Age Assessment	Youthful, Developing (showing age), Vinous (aged)
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:

© Court of Master Sommeliers, Americas 2024

WINE #20

PALATE / FLAVORS	
	For all categories, are there differences from the nose to the palate?
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **From New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:
PALATE / STRUCTURE	
Sweetness	Dry, Off-Dry, Sweet
Acidity	Low to Medium Minus, Medium, Medium Plus, High
Alcohol	Low to Medium Minus, Medium, Medium Plus, High
Body	Light, Medium, Full
Phenolic Bitterness	***White Wines Only** Yes or No
Tannin	***Red Wines Only** Low to Medium Minus, Medium, Medium Plus, High

© Court of Master Sommeliers, Americas 2024

WINE #20

WINE INFORMATION REVIEW	
Grape Variety *or* Dominant Grape Variety if a Blend	**Grape Variety Name(s):** **Theory Knowledge:** Review your descriptions and list this wine's unique aromas and flavor characteristics. 1. 2. 3. 4. 5.
Climate	**Cool, Moderate, Warm** *Choose One Answer **Theory Knowledge:** Look at structural elements such as acidity and alcohol to connect to the correct climate type.
Country	 **Theory Knowledge:** Which countries classically grow this grape variety?
Region AND Appellation	 **Theory Knowledge:** Which regions and appellations classically grow this grape variety?
Official Quality Level **where appropriate*	**Burgundy:** Village, Premier Cru, Grand Cru **Beaujolais:** Village, Cru **Alsace:** Village, Grand Cru **Rioja:** Reserva, Gran Reserva **Chianti:** Classico, Riserva **Germany:** Kabinet , Spätlese **Other:** *Choose One Answer Where Appropriate **Theory Knowledge:** Apply knowledge of regional wine law and where quality levels exist and are appropriate
Vintage	

WINE TASTED: _____

© Court of Master Sommeliers, Americas 2024

COURT OF MASTER SOMMELIERS Americas

INTRODUCTORY SOMMELIER COURSE INTRODUCTION TO DEDUCTIVE TASTING

TASTING JOURNAL

WINE #1

SIGHT / APPEARANCE	
Intensity of Color	Pale, Medium, Deep
Primary Color	**White Wine:** Straw, Yellow, Gold
	Red Wine: Purple, Ruby, Garnet
Other Observations	**Tearing:** Light, Medium, Heavy
	***Red Wines Only Staining** Yes or No
NOSE / AROMAS	
Wine Condition / Presence of Faults	Is the wine in good condition? Yes or No
Aromatic Intensity	Delicate, Medium, Powerful
Age Assessment	Youthful, Developing (showing age), Vinous (aged)
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:

© Court of Master Sommeliers, Americas 2024

WINE #1

PALATE / FLAVORS	
	For all categories, are there differences from the nose to the palate?
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **From New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:
PALATE / STRUCTURE	
Sweetness	Dry, Off-Dry, Sweet
Acidity	Low to Medium Minus, Medium, Medium Plus, High
Alcohol	Low to Medium Minus, Medium, Medium Plus, High
Body	Light, Medium, Full
Phenolic Bitterness	***White Wines Only** Yes or No
Tannin	***Red Wines Only** Low to Medium Minus, Medium, Medium Plus, High

© Court of Master Sommeliers, Americas 2024

WINE #1

INITIAL CONCLUSION	
Possible Grape Varieties or **Dominant Grape Variety if a Blend**	
	Why? Give specific reasons for your choices from your description/grid. **How?** Review the description of the wine. What elements stand out the most? What makes this wine unique? **Theory Application:** Knowledge of grape variety markers, appropriate structure matches from your description, grape growing, and winemaking/elevage elements.
Climate	**Cool, Moderate, Warm**
	Why? Give specific reasons for your choices from your description/grid. **How?** Look at fruit condition and structural elements such as acidity and alcohol. **Theory Application:** Do your structure calls match the typical nature of the grape variety and the places where the grape variety is grown? Look at the fruit condition and ripeness. Is there a change from the nose to the palate?
Possible Countries	
	Why? Give specific reasons for your choices. **How?** Do the structure calls match the grape variety, do the grape varieties match these countries? **Theory Application:** Connect theory knowledge of wine law and where grapes are typically grown.
Age Range	1-3 years, 3-5 years, 5-10 years, 10 years+
	Why? Give specific reasons for your choice from your description/grid. **How?** Look at fruit condition, color, or lack thereof, focus on fruit or savory elements, and note any sediment present. **Theory Application:** Wine law knowledge, vintage knowledge, and typical élevage. What makes the most sense for the wine?
FINAL CONCLUSION	
Grape Variety or **Dominant Grape Variety if a Blend**	Final Answer:
	Apply Theory Knowledge: Connect your descriptions to typical grape variety markers and what is sensible for the structure of the wine.
Country of Origin	Final Answer:
	Apply Theory Knowledge: What country is classic for this grape variety?
Region AND Appellation	Final Answer:
	Apply Theory Knowledge: Which region and appellation classically grows the grape variety in the country selected and fully matches your description? Take into consideration structure, climate, and winemaking.
Official Quality Level	Village, Premier Cru, Grand Cru, Reserva, Gran Reserva, Classico, Riserva, Kabinet , Spätlese, Other *Choose One Answer Where Appropriate
	Apply Theory Knowledge: Regional wine law application of where quality levels exist and where they are appropriate. Taking into consideration typical wine-making practices for a given quality level.
Vintage	Final Answer:
	Apply Theory Knowledge: Typical élevage, wine law knowledge, and regional vintage knowledge. What makes the most sense for this wine?

© Court of Master Sommeliers, Americas 2024

WINE #2

SIGHT / APPEARANCE	
Intensity of Color	Pale, Medium, Deep
Primary Color	**White Wine:** Straw, Yellow, Gold
	Red Wine: Purple, Ruby, Garnet
Other Observations	**Tearing:** Light, Medium, Heavy
	***Red Wines Only Staining** Yes or No
NOSE / AROMAS	
Wine Condition / Presence of Faults	Is the wine in good condition? Yes or No
Aromatic Intensity	Delicate, Medium, Powerful
Age Assessment	Youthful, Developing (showing age), Vinous (aged)
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:

© Court of Master Sommeliers, Americas 2024

WINE #2

PALATE / FLAVORS	
	For all categories, are there differences from the nose to the palate?
Fruit	Category:
	Describe:
Fruit Condition	Tart, Ripe, Overripe Fresh, Baked, Dried, Stewed, Bruised Juicy, Jammy, Candied, Liqueur
Non-Fruit	From the Grape Variety or Grape Growing:
	From Winemaking: **From New Oak: Yes or No** **If Yes, Describe:**
Earth	Yes or No
	If Yes, Describe:
Mineral	Yes or No
	If Yes, Describe:
PALATE / STRUCTURE	
Sweetness	Dry, Off-Dry, Sweet
Acidity	Low to Medium Minus, Medium, Medium Plus, High
Alcohol	Low to Medium Minus, Medium, Medium Plus, High
Body	Light, Medium, Full
Phenolic Bitterness	***White Wines Only** Yes or No
Tannin	***Red Wines Only** Low to Medium Minus, Medium, Medium Plus, High

© Court of Master Sommeliers, Americas 2024

WINE 2

INITIAL CONCLUSION	
Possible Grape Varieties or **Dominant Grape Variety if a Blend**	
	Why? Give specific reasons for your choices from your description/grid. **How?** Review the description of the wine. What elements stand out the most? What makes this wine unique? **Theory Application:** Knowledge of grape variety markers, appropriate structure matches from your description, grape growing, and winemaking/elevage elements.
Climate	**Cool, Moderate, Warm**
	Why? Give specific reasons for your choices from your description/grid. **How?** Look at fruit condition and structural elements such as acidity and alcohol. **Theory Application:** Do your structure calls match the typical nature of the grape variety and the places where the grape variety is grown? Look at the fruit condition and ripeness. Is there a change from the nose to the palate?
Possible Countries	
	Why? Give specific reasons for your choices. **How?** Do the structure calls match the grape variety, do the grape varieties match these countries? **Theory Application:** Connect theory knowledge of wine law and where grapes are typically grown.
Age Range	1-3 years, 3-5 years, 5-10 years, 10 years+
	Why? Give specific reasons for your choice from your description/grid. **How?** Look at fruit condition, color, or lack thereof, focus on fruit or savory elements, and note any sediment present. **Theory Application:** Wine law knowledge, vintage knowledge, and typical élevage. What makes the most sense for the wine?
FINAL CONCLUSION	
Grape Variety or **Dominant Grape Variety if a Blend**	Final Answer:
	Apply Theory Knowledge: Connect your descriptions to typical grape variety markers and what is sensible for the structure of the wine.
Country of Origin	Final Answer:
	Apply Theory Knowledge: What country is classic for this grape variety?
Region AND Appellation	Final Answer:
	Apply Theory Knowledge: Which region and appellation classically grows the grape variety in the country selected and fully matches your description? Take into consideration structure, climate, and winemaking.
Official Quality Level	Village, Premier Cru, Grand Cru, Reserva, Gran Reserva, Classico, Riserva, Kabinet , Spätlese, Other *Choose One Answer Where Appropriate
	Apply Theory Knowledge: Regional wine law application of where quality levels exist and where they are appropriate. Taking into consideration typical wine-making practices for a given quality level.
Vintage	Final Answer:
	Apply Theory Knowledge: Typical élevage, wine law knowledge, and regional vintage knowledge. What makes the most sense for this wine?

© Court of Master Sommeliers, Americas 2024

COURT OF MASTER SOMMELIERS *Americas*

HOSPITALITY & SERVICE STANDARDS

Mastery of beverage service requires a combination of theoretical knowledge, a trained palate, universal vocabulary, gracious carriage, respectful salesmanship, and sound service mechanics. The Court of Master Sommeliers, Americas has established the following Service Standards as a basis to measure candidates against in CMS-A examinations. The mechanics listed within should be the foundation upon which to provide world-class hospitality in a restaurant situation. Reading the table's needs, understanding guest expectations, and utilizing sound sales strategies to provide a memorable dining experience remains the ultimate goal.

The CMS-A recognizes that its Service Standards are formal and not appropriate for many restaurants. While they should be able to perform all levels of service, candidates must display mastery of highly demanding and exacting formal dining room skills to succeed in CMS-A examinations.

Appearance:

- Pressed and cleaned attire including comfortable, safe shoes
- Personal hygiene and grooming: fingernails clean, , no excessive perfumes or odors

Required Sommelier Tools

- 2 wine bottle openers
- 2 pens
- 1 pad of paper
- 2 odorless lighters or matches

Mise-En-Place - Pre-Service Set Up

- Wine lists are clean, correct, current, and easy to read
- Glassware is clean, spotless, and free of odor
- Glasses are polished with clean linen using a source of steam
- Serviettes or side towels are made of cotton or similar material that do not repel water
- Serviettes are folded and prepared before service
- Underliners are to be cleaned and polished before service
- Other service items such as service trays, ice buckets, stands, and decanters should clean, polished, and ready for service
- Glass stemware is the only thing to touch the tablecloth – bottles, decanters, and corks are to be placed on an underliner
- Glassware and other service items should be brought to the table on a tray lined with a napkin
- Wine opening tools are organized before service
- Wines are stored in an organized fashion
- Wines are stored and served at the correct temperature. Various methods of ensuring proper service temperature exist including ice buckets and decanters



Standard Service – These standards apply to all types of wine

- Beverage service is always performed on the right side of the guest
- The wine list is presented and assistance is offered
- The Sommelier is prepared to offer active and appropriate recommendations - sales skills are an essential element of proper service
- The sommelier is prepared to answer questions on vintages, style, character of wine, food compatibility, and quality
- The order is taken from the host's right and is repeated by the sommelier to confirm the order.
- For the purposes of these service standards the host is defined as the person who orders the wine



- The glassware is to be placed from the right of the guest on to the table in a consistent manner
- Placement starts with either the host or the person to the host's left and continues clockwise regardless of gender
- Space permitting, underliners for the bottle, cork and any decanters are placed to the right and/or in front of the host
- The sommelier presents the bottle and repeats the name and vintage to re-confirm the order
- The bottle is presented underlined by a serviette held in the sommelier's hand or on the forearm
- Serviettes are either held in hand or placed on the forearm during all service
- Serviettes are NEVER placed in pockets or on the shoulder
- The foil is cut at the second or lower lip to prevent the wine from dripping behind the foil and contaminating future pours
- The foil is placed in the sommelier's pocket and the top of the cork is wiped with a clean serviette
- The sommelier inserts a corkscrew or similar tool to remove the cork
- The cork is removed with minimal bottle movement and as quietly as possible
- The top of the bottle is wiped with a clean serviette and the cork is presented to the right of the host on an underliner
- The sommelier holds the bottle with the right hand, label facing the host and pours the host a 1 - 1.5 ounce taste
- The sommelier steps back and waits for the host's approval
- After approval, the sommelier serves the wine moving to the left (clockwise) of the host. If there is a guest of honor, serve that person first and then pour everyone in a clockwise pattern regardless of gender
- The bottle is wiped with a clean serviette after each pour to prevent drips
- The bottle is placed on an underliner or in an ice bucket within reach of the host - if an ice bucket is used, it should be placed so as not to hinder movement around the table
- The sommelier asks to remove the cork

Glassware Placement

- Glassware choice is the appropriate size and shape for each wine
- Glassware is placed to the right of the guest and is keyed off the knife in a consistent manner
- Multiple glasses can be placed in a line, diagonal, diamond or cluster depending on the table space
- It is important that glass placement is consistent among all guests
- If a second bottle is ordered of the same wine, bring the host a fresh glass for the taste
    - *The sommelier should be prepared to replace all the glasses if requested*
    - *The tasting glass should be placed to the right of the first glass and then cleared after service of the new bottle*
- When possible, glasses for additional new wine orders are placed to the right of any previous glasses so that the sommelier is always pouring the glass to the right and not over the existing stemware

Sparkling Wine Service



1st Method – Present the bottle in the air and open in the air

2nd Method – Present the bottle in the air and open in a bucket and stand

3rd Method – Present the bottle in the air and open in the air at a gueridon or side station

- Prepare glassware, ice bucket, stand, and two serviettes. Make sure the bottle is properly chilled
    - *Fill bucket with water and ice so bottle can easily move in and out without overflowing the bucket*
    - *Position bucket to the right and within reach of the host but also so as to not interfere with service or guest movement*
- Place appropriate glassware (tulips or flutes) properly for each guest from a lined tray
- Position the cork and bottle underliners to the host's right
- Place the ice bucket with stand to the host's right with a clean serviette on top (or in the bucket's handle if appropriate)
- Present the bottle to the host and re-confirm the order
- Cut the foil cleanly at the bottom of the cage with the blade of a corkscrew – using the tab is allowed but not preferred
- Remove the foil and place in the sommelier's pocket
- Place a clean serviette held firmly by either thumb or hand over the cage and cork
- Maintain control at all times – always point the bottle away from the guests
- Untwist the wire cage and loosen. **DO NOT** remove the cage - always keep the hand or thumb over the cage **and** cork
- Firm up your grip on the **cage and cork** and twist the bottle (not the cork) while holding at a 45-degree angle – this is done in the air or against the inside of the bucket but never against the body
- Keeping the bottle at the 45-degree angle, release the cork as quietly as possible until the initial rush of CO_2 dissipates
- Remove the cage from the cork and place in the sommelier's pocket
- Place the cork on the underliner to the host's right
- Wipe the lip of the bottle thoroughly before serving
- Hold the bottle with the right hand or by the bottom of the bottle (not the punt) as in still wine service
- Two fingers under the neck for support is acceptable
- Face the label toward the host and pour a 1-1.5 ounce taste, use serviette to prevent drips
- Wait for the host's approval
- Once the host approves the wine, pour for the guests in standard order (see *Standard Service* above)
- Fill glasses evenly (up to 3/4 full), one glass at a time with a maximum of two pours per glass
- After serving the host, place the bottle either in the ice bucket or on the table according to the host's preference
    - *1st Method – place the bottle in the ice bucket to the host's right within their reach*
    - *2nd Method – place the bottle on an underliner on the table within reach of the host*
- Ask the host for permission to remove the cork and bottle underliner if it is not utilized

White Wine Service

1st Method – Open the bottle in hand and return to an ice bucket to the host's right or an underliner on the table to the host's right

2nd Method – Open the bottle in a bucket to the host's right and return to the bucket after serving

3rd Method – Open the bottle on an underliner on the guest's table or a side station, then place the bottle in the ice bucket or on an underliner on the table to the host's right

4th Method – Open the bottle on a gueridon next to or close by the table preferably to the host's right. After serving, place the wine in an ice bucket with stand next to the table to the host's right

- Glasses are to be filled up to 1/2 full depending on the size of the stemware

Young Red Wine Service

1st Method – Open the bottle in hand, then place on an underliner on the table to the host's right

2nd Method – Open the bottle on an underliner on the guest's table or at a side station, then place the bottle on an underliner on the table to the host's right

3rd Method – Open the bottle on a gueridon next to or close by the table preferably to the host's right, then place the bottle on an underliner on the table to the host's right

- Glasses are to be filled up to 1/2 full depending on the size of the stemware

Old Red Wine Service

- A gueridon or room service cart is used for decanting. All materials are to be placed on it before moving to the table side.

Items needed are:

Clean decanter
Matches or odorless lighter
Three serviettes
Three underliners for the cork, bottle, and decanter
Candle (or small flashlight)
Cork removal tools
Decanting basket

- Place appropriate glassware for each guest from a lined tray
- Underliners for the cork, bottle, and decanter may be placed from the lined tray at this time or later from the gueridon
- Line the decanting basket with a clean serviette and bring it to the cellar
- Place the bottle in the decanting basket carefully so as not to disturb the sediment
- Carry the bottle carefully to the gueridon (before or after the gueridon is table-side depending on the situation)
- If bottle has not been stored label up, place it in the decanting basket as is
- Light the candle away from the table whenever possible
- Roll the gueridon to the table, preferably to the host's right
- Gently bring the bottle in the decanting basket from the gueridon and present to the host
    - *If the bottle was not stored label up, present the bottle as is with explanation, decant and then present the label*
- Return the bottle to the gueridon and position it for decanting
- If the angle of the decanting basket is too low, prop it up with an underliner or serviette
- Remove the foil as cleanly possible at the second lip
    - *Removal of the whole foil is acceptable but not preferred*
    - *If the entire foil is to be removed, the guest should be informed*
- Carefully remove the cork with whatever tool is necessary to complete the task
- Wipe the lip of the bottle with a clean serviette a second time
- Carefully remove the bottle from the decanting basket and slowly pour into the decanter in one smooth movement
    - *Hold the bottle a safe distance above the flame*
    - *Use the light of the candle or flashlight to look for sediment at the shoulder of the bottle*
    - *Never look away from the bottle while decanting*
    - *Stop pouring once either fine or gross sediment reaches the shoulder of the bottle*
    - *Avoid touching the bottle to the decanter*
- Wipe any drips on the bottle with a clean serviette
- Place the bottle and cork on underliners with the label of the bottle facing the host
- Pour the host a 1-1.5 ounce taste from the decanter - wait for approval and inquire if the wine can be served
- Serve guests in the standard manner (see *Standard Service* above)
- Wipe the decanter with a serviette after each pour to avoid drips
- After finishing, place the decanter on an underliner within reach of the host
- Ask the host if they would like the cork removed
- Ask the host if they would like the bottle removed or left on the table
- Remove any unused underliners



Screwcap Closures

- Present the bottle in the standard manner (see *Standard Service* above)
- Remove the screw cap as quietly as possible and place in the sommelier's pocket
- The screw cap is not presented
- Wipe the lip of the bottle with a clean serviette
- Pour a taste for the host and continue with standard service

Synthetic Corks

- Synthetic corks are to be treated in the same manner as natural corks in all service procedures

Cordial, Port, and Brandy Service

- A gueridon or tray is used for the sales and service of after dinner drinks
- All materials are to be placed on it before moving to tableside

Items needed are:

Measuring jiggers
Lined service tray
Beverage selections
Appropriate selection of glassware
Three serviettes

- Offer assistance in selection
- Make recommendations and answer questions on beverage styles, types, countries of origins, specific pairings with desserts, and cheeses as necessary

1st Method – On the gueridon, measure the proper amount with a jigger and pour into the appropriate glass

- *Place the beverage on a lined tray and present to the guest from the right*

2nd Method – On a lined tray, bring the appropriate glassware, the bottle and clean serviette to the table

- *Position the glassware to the right of the guest and then serve the proper amount of the beverage*

Storage

- Wines must be stored correctly if they are to show their best
- All wines should be cellared at a constant temperature
- A range of 50-60°F / 10-15°C is ideal for long-term storage
- Store wines in an organized and accessible manner
- Store wines away from unpleasant odors
- Store wines away from insect and rodent pests that can damage labels, corks, and boxes
- Store cork finished table wines on their side
- Store spirits and fortified wines standing up
- Avoid storing wine: in a direct source of light, near source of vibration, overly damp conditions or upright for over a few weeks
- Avoid excessive heat or extreme temperature fluctuation

Purchasing Older Wines

- Inquire as to the provenance-or history of ownership-of the wine
- Inquire as to how the bottles were stored
- Inquire when the bottle was shipped from the winery's cellar
- Inquire as to how many times the bottle has been sold or shipped
- Inspect the bottles for label damage, leakage, and ullage

Suggested Serving Temperatures

These are guidelines. Wine styles and consumer preference will ultimately dictate actual service temperatures. For exam standards we have defined the following:

Mineral Water: 42°- 50°F // 5.5°- 10°C

Sweet White Wine: 42°- 50F° // 5.5°- 10°C

Dry Sherry and Dry Madeira: 48°- 55°F // 9°- 13°C

Champagne and Sparkling Wine: 42°- 50°F // 5.5°- 10°C

Light-Bodied White Wine: 42°- 50° F // 5.5°- 10°C

Dry Rose: 45°- 55°F // 7°- 13°C

Full-bodied White Wine: 50-59°F // 10°- 15°C

Light-Bodied Red Wine: 50-59°F // 10°- 15°C

Medium-Bodied Red Wine: 55°- 62°F // 13°- 17°C

Full-Bodied Red Wine: 58°- 65°F // 14.5°- 18°C

Tawny Port and Sweet Sherry: 55°- 62°F // 13°- 17°C

Sweet Madeira and Vintage Port: 55°- 62°F // 13°- 17°C

Draught and Bottled Domestic and Specialty Lager: 40°- 45°F // 4.5°- 7 °C (Lagers, Pilsner etc.)

Specialty Ale: 45°- 50°F // 7°- 10°C (Belgian Pale Ale, Wheat, APA, IPA, Cream, Abbey etc.)

English Style Ale: 50°- 55° F// 10°- 13°C

Cask-Conditioned Ales: Cellar Temp 50°-55°F // 10°- 13°C

Porter and Stout: 50°-55°F // 10°- 13°C

Belgian Dubbel: 50°- 55°F // 10°- 13°C

Lambic Ale: 45°-50°F // 7°- 10°C

© Court of Master Sommeliers, Americas 1.2023

QUIZ ANSWER KEY

Viticulture

Quiz Questions

Which of the following terms refers to the climate of a single vineyard site?

a. Mesoclimate

b. Macroclimate

c. Microclimate

d. Zone

The majority of the world's vineyards are planted:

a. Between the 30° and 50° latitude lines

b. As far north and as far south as possible

c. As close to the equator as possible

d. In wind-prone areas

Which of these is not a moderator that can help warm a microclimate?

a. Wind

b. Rivers

c. Soil

d. Vine training system

Which type of climate is defined by its proximity to a large body of water?

a. Maritime

b. Mediterranean

c. Continental

d. High Desert

What is phylloxera?

a. A soil type

b. A vine louse that destroyed many of the world's vineyards in the mid-to-late 1800s

c. A hybrid

d. A species of vines

Name three positive effects of wind in a vineyard.

Dries a vineyard to prevent disease, can warm a vineyard, can cool a vineyard

---

What is a rain shadow?

A dry area on one side of a mountain opposite the wind, rain, and generally poor weather.

Name three wine regions of the world that are affected by rain shadows.
(Come back to this question as we progress through the wine regions of the world.)
Alsace, Rioja, Washington State

Most quality grape varieties we see today are made from which vine species?
Vitis Vinifera

Explain why "green harvesting" is practiced.
Green harvesting reduces the amount of fruit being produced by the vine and concentrates what remains

---

Vinification

Quiz Questions

American oak barrels are generally characterized by more intense aromas of coconut and vanilla than French oak barrels.

a. True

b. False

Vinification is defined as:

a. Activities and decisions made in the vineyard

b. Dealing with pests

c. Organic farming

d. Activities and decisions occurring in the winery

Which of the following does not potentially add flavor to wine?

a. Oak aging

b. Malolactic fermentation

c. Lees contact

d. Stainless-steel vinification

What process involves intracellular fermentation of whole berries, in which sugars inside grapes are converted to alcohol in the absence of oxygen?

a. Alcoholic fermentation

b. Carbonic maceration

c. Cold stabilization

d. Malolactic fermentation

In the process of fermentation, yeasts metabolize grape sugars and produce:

1. **Alcohol**
2. **Carbon Dioxide**
3. **Heat**

Name three aromas and flavors associated with sur lie aging.

Yeast, Dough, Beer

What wine region is most associated with the use of carbonic maceration?

Beaujolais

Why is sorting grapes an important part of the vinification process?

Sorts out undesirable damaged or rotting fruit plus leaves, branches and pests from entering the fermentation vessel.

The Deductive Tasting Method

Quiz Questions

Tannin in wine:
a. Is sweet on the palate
b. Creates a mouth-watering sensation
c. Dries the palate out
d. Creates a burning sensation in the chest and throat

Acidity in wine:
a. Is sweet on the palate
b. Creates a mouth-watering sensation
c. Dries the palate out
d. Creates a burning sensation in the chest and throat

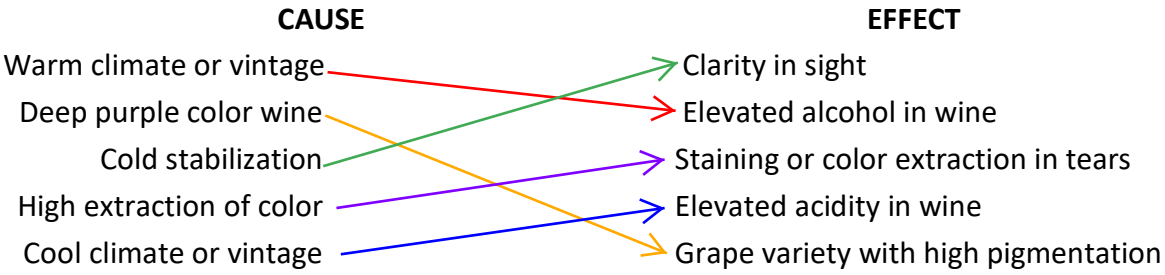
Which of the following descriptors potentially indicates oak use in a wine?
a. Apple/pear flavors
b. Leather
c. Wet rock
d. Clove and cinnamon

Sweetness in wine is due to:
a. The presence of sugar in the wine
b. Aromas of fruit
c. Aromas of earth
d. Elevated acidity

TCA or tricholoranisol in wine is due to:
a. Aging wine, which produces TCA
b. The cork being infected with TCA
c. Screwcaps
d. Extract of color

A wine would be hazy or cloudy due to:
a. Sediment in the wine
b. High alcohol
c. Sweetness
d. Being from the Old World

Match the CAUSE with the EFFECT (there may be multiple answers)



The Basics of Food and Beverage Pairing

Quiz Questions

Animal fat in food can:

a. Make a wine seem more tart

b. Make a wine seem sweeter

c. Decrease the palate's perception of tannin in wine

d. Increase the palate's perception of tannin in wine

Spicy heat in food can:

a. Be inflamed by high-alcohol beverages

b. Be softened by low-alcohol beverages

c. Be softened by sweetness in beverages

d. All the above

Salt in food can:

a. Decreases the palate's perception of acidity

b. Increases the palate's perception of acidity

c. Make food taste sweeter

d. Make wine taste more tannic

When pairing a sweet wine and a sweet food:

a. The wine should be sweeter than the food

b. The food should be sweeter than the wine

c. The food and wine should be equal in sweetness

d. This pairing does not work and should be avoided

Which of the following wines is a classic pairing with Stilton?

a. Port

b. Bordeaux

c. Burgundy

d. Manzanilla Sherry

Think of two of your favorite food and beverage pairings.
Why do they work so well?

When did you enjoy them?

Burgundy

Quiz Questions

What is the main grape of the Morgon AOP?

a. Chardonnay

b. Gamay

c. Pinot Noir

d. Aligoté

How are the very best vineyards in the Côte d'Or designated?

a. Grands Crus

b. Classico

c. Crémant

d. Village

Which of the following is not a classic region or village for Chardonnay in Burgundy?

a. Chablis

b. Mâcon

c. Pouilly-Fuissé

d. Pommard

Which of the following is an example of a designated Chablis Grand Cru?

a. Montrachet

b. Musigny

c. Romanée

d. Les Clos

Which of the following is not in the Côte Chalonnais?

a. Mercurey

b. Givry

c. Rully

d. Chassagne-Montrachet

Burgundy…continued

Quiz Questions

What were the Cistercian monks in Burgundy responsible for first doing?

Mapping soil and perceived terroir

How did Napoléon's Code of Inheritance affect the vineyards of Burgundy?

Split up the vineyards into smaller and smaller parcels over time giving rise to the négociant

---

Describe the difference between Négociant and Domaine bottling.

Négociant: Merchants buy grapes, juice, and/or finished wine for blending and bottling under their own label

Domaine: Grower/producers that own the vineyards of which they are producing wine.

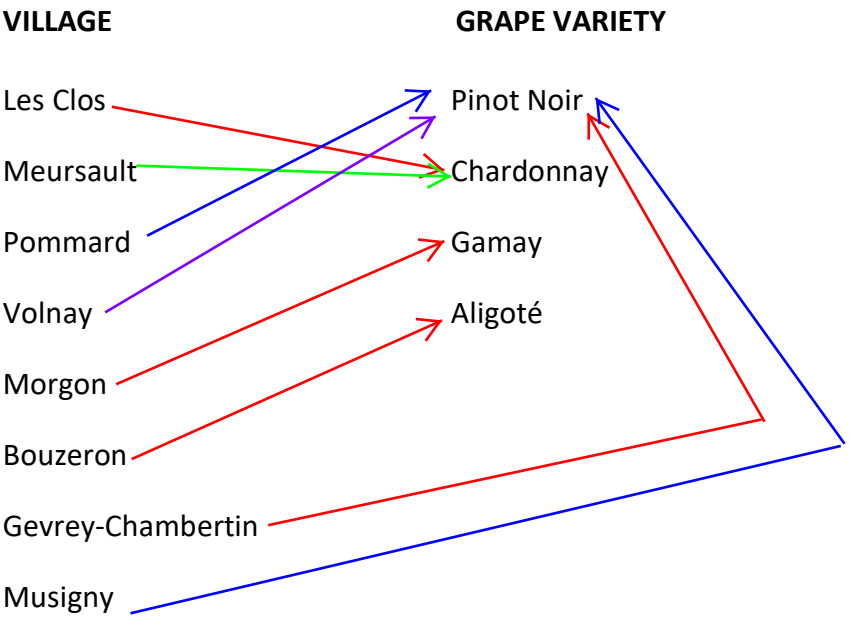
Define the following in your own words and give an example for each.

a. Clos: A plot of vineyard land traditionally surrounded by dry-stone walls

b. Côte: Hillside or slope

c. Monopole: Parcel of land with single ownership

Match the following villages, regions, or grands crus with their primary grape variety.



Bordeaux

Quiz Questions

Which of the following is considered the most important grape variety in the Médoc?

a. Cabernet Sauvignon

b. Cabernet Franc

c. Malbec

d. Sauvignon Blanc

What soil in Bordeaux is most suitable for Cabernet Sauvignon?

a. Granite

b. Gravel

c. Sandy/Silt

d. Clay

In what year were the wines of the Médoc first classified?

a. 2012

b. 1855

c. 1959

d. 1953

Where is Château Haut-Brion is located?

a. Pessac-Léognan

b. Médoc

c. Pomerol

d. Saint-Émilion

Which of the following regions produces only dry, white AOP wines?

a. Pomerol

b. Margaux

c. Entre-Deux-Mers

d. Sauternes

What grape typically dominates the wines of Pomerol?

a. Merlot

b. Sauvignon Blanc

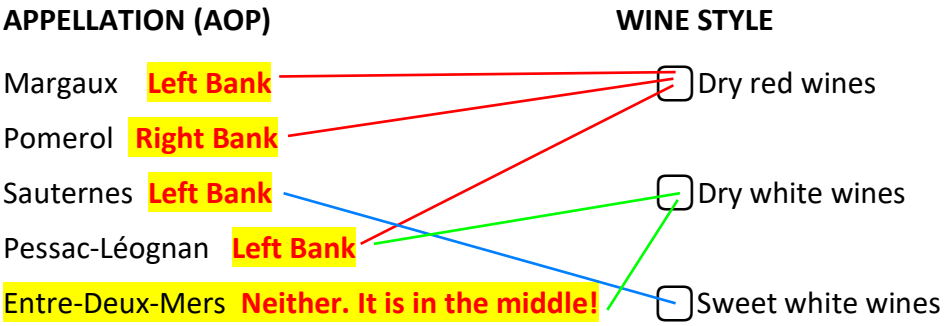
c. Sémillon

d. Petit Verdot

Bordeaux…continued

Quiz Questions

Next to each AOP list if it is Left Bank or Right Bank. Then draw a line to the primary wine style. Some regions have more than one.



Which area of Bordeaux is best known for not having a classification of its châteaux?

Pomerol

Why were the wines of Bordeaux better known internationally than most other French wine?

The proximity to the Atlantic plus the wide Gironde Estuary was large enough for ships to sail inland into the region for international trade

Describe the difference between how the wines of Bordeaux and the wines of Burgundy are classified.

Bordeaux classifies by chateau or producer

Burgundy classifies based on land and vineyard terroir

List the five first growths of the 1855 Classification

1. **Château Lafite Rothschild**
2. **Château Latour**
3. **Château Margaux**
4. **Château Haut-Brion**
5. **Château Mouton Rothschild**

Champagne and World Sparkling Wines

Quiz Questions

Which of the following is not a grape grown in Champagne?

a. Pinot Noir

b. Meunier

c. Riesling

d. Chardonnay

Sur lie **aging refers to:**

a. Botrytis-affected dessert wines

b. Wines aged in new, French oak

c. Fortified wines

d. Aging wines on broken-down yeast cells

How does *sur lie* **aging affect the flavor of Champagne?**

a. Increases the alcohol

b. Makes a wine sweeter

c. Makes a wine drier

d. Gives the wine a yeasty, fresh-baked-bread aroma and flavor

If a Champagne is labeled Blanc de Blancs, which grape variety has been used?

a. Pinot Noir

b. Meunier

c. Merlot

d. Chardonnay

Champagne vineyards are best known for which soil type?

a. Sand

b. Clay

c. Granite

d. Chalk

Prosecco is made by which method of sparkling wine production?

a. Méthode Champenoise

b. Tank method/Charmat method

c. Transfer method

d. None of the above

Loire Valley

Quiz Questions

Which of the following is not a style of Vouvray AOP?

a. Sparkling

b. Dry white

c. Sweet

d. Dry red

What does *sur lie* aging refer to?

a. Botrytis dessert wines

b. Wines aged in new French oak

c. Fortified wines

d. Aging wines on the lees

How does *sur lie* aging affect a finished wine?

a. Increases the alcohol

b. Makes a wine sweeter

c. Makes a wine drier

d. Gives a wine additional expressiveness and richness

Which of the following is a sweet wine appellation of Anjou-Saumur?

a. Sancerre

b. Chinon

c. Quarts-de-Chaume

d. Muscadet

Tuffeau is an important soil type of which area?

a. Pays Nantais

b. Anjou-Saumur

c. Touraine

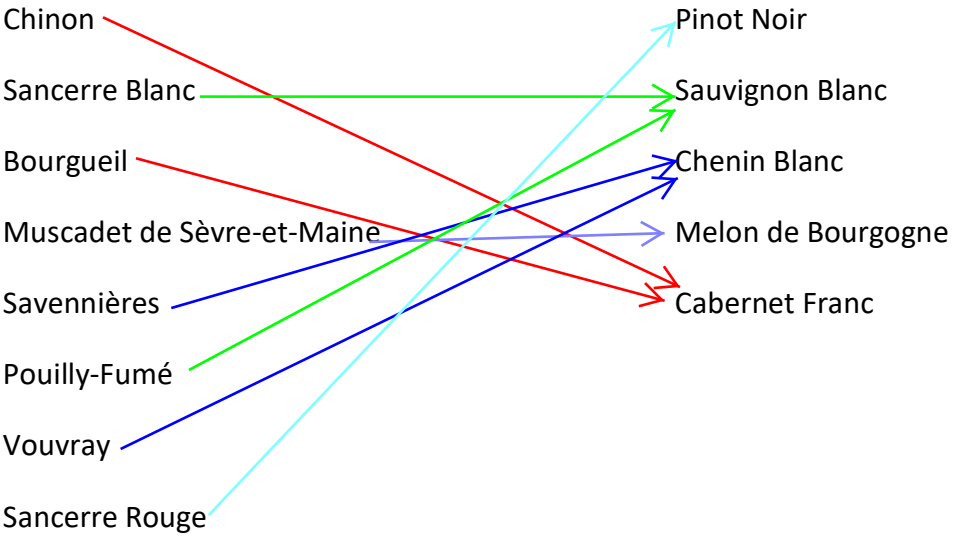
d. Central Vineyards

Loire Valley continued….

Quiz Questions

Match the appellation with the grape variety. Some grapes may be used more than once.

APPELLATION (AOP)	GRAPE VARIETY
Chinon	Pinot Noir
Sancerre Blanc	Sauvignon Blanc
Bourgueil	Chenin Blanc
Muscadet de Sèvre-et-Maine	Melon de Bourgogne
Savennières	Cabernet Franc
Pouilly-Fumé	
Vouvray	
Sancerre Rouge	



Alsace

Quiz Questions

What is the name of the mountain range that protects Alsace?

a. Vosges

b. Massif Central

c. Pyrenees

d. Alps

What is the name of the river that flows to the east of Alsace?

a. Loire

b. Rhône

c. Mosel

d. Rhine

What does a rain shadow provide?

a. Protection from harsh weather

b. More rain

c. More wind

d. Hail

Which of the following grapes is not allowed in Alsace Grand Cru AOP wines?

a. Gewurztraminer

b. Muscat

c. Pinot Noir

d. Pinot Gris

What type of wine is Sélection de Grains Nobles (SGN)?

a. Sparkling wine

b. Fortified wine

c. Dry red wine

d. Botrytis-affected sweet wine

What type of wine is Crémant d'Alsace?

a. Sparkling wine

b. Fortified wine

c. Dry red wine

d. Botrytis-affected sweet wine

If a wine from Alsace is labeled by grape variety, it must contain ____ of that variety.

a. 100%

b. 90%

c. 85%

d. 75%

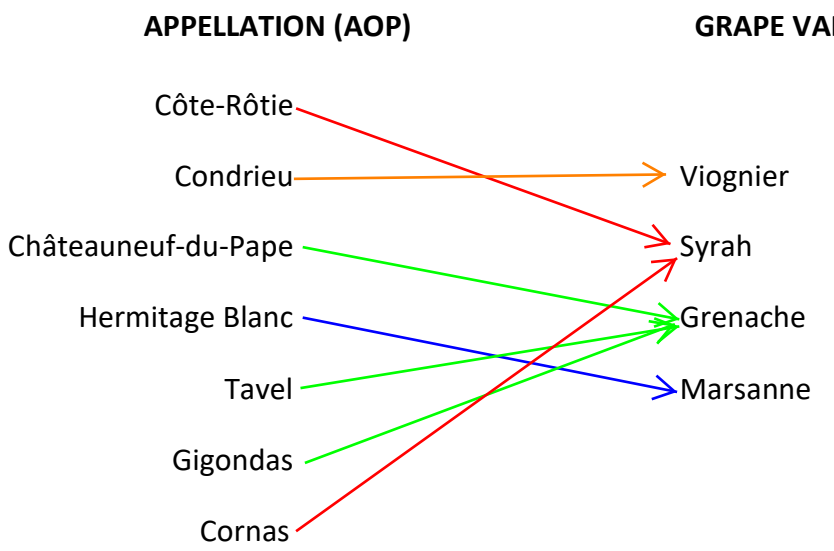
Rhône Valley

Quiz Questions

For each of the following, note the difference between the Northern Rhône and the Southern Rhône.

Factor of Production	Northern Rhône	Southern Rhône
Climate	Cool/ Continental	Warm Mediterranean
Vineyard Topography	Steep hillsides	Flatter plains
Important Soil Types	Granite / schist	Large river stones (galets)
Main Red Grape Variety	Syrah	Grenache
Main White Grape Variety(s)	Viognier	Grenache Blanc, Clairette, Roussanne
Blends or Single-Variety Wines	Single variety wines	Blends
Mistral Wind	Warms and dries vineyards	Cools and dries the vineyards

Match the appellation with the grape variety. Some grapes may be used more than once.



Day Two

Italy

Quiz Questions

The Alps provide _____ to the Piedmont wine region.

a. A rain shadow

b. Storms

c. Heat

d. A cooling affect

What does metodo classico refer to?

a. Drying grapes

b. Oak aging

c. Special way of making sweet wines

d. Sparkling wines made using the Classic Method

What is Italy's most important river in Piedmont?

a. Loire

b. Danube

c. Rhine

d. Po

Which of the following wines is made by the appassimento process?

a. Prosecco

b. Soave

c. Amarone

d. Barolo

By law, when can Brunello di Montalcino wines be released for sale?

a. After January 1st following the harvest

b. After January 1st of the second year following the harvest

c. After January 1st of the fifth year following the harvest

d. After January 1st of the tenth year following the harvest

Which of the following DOCG zones is located in Piedmont?

a. Taurasi

b. Soave

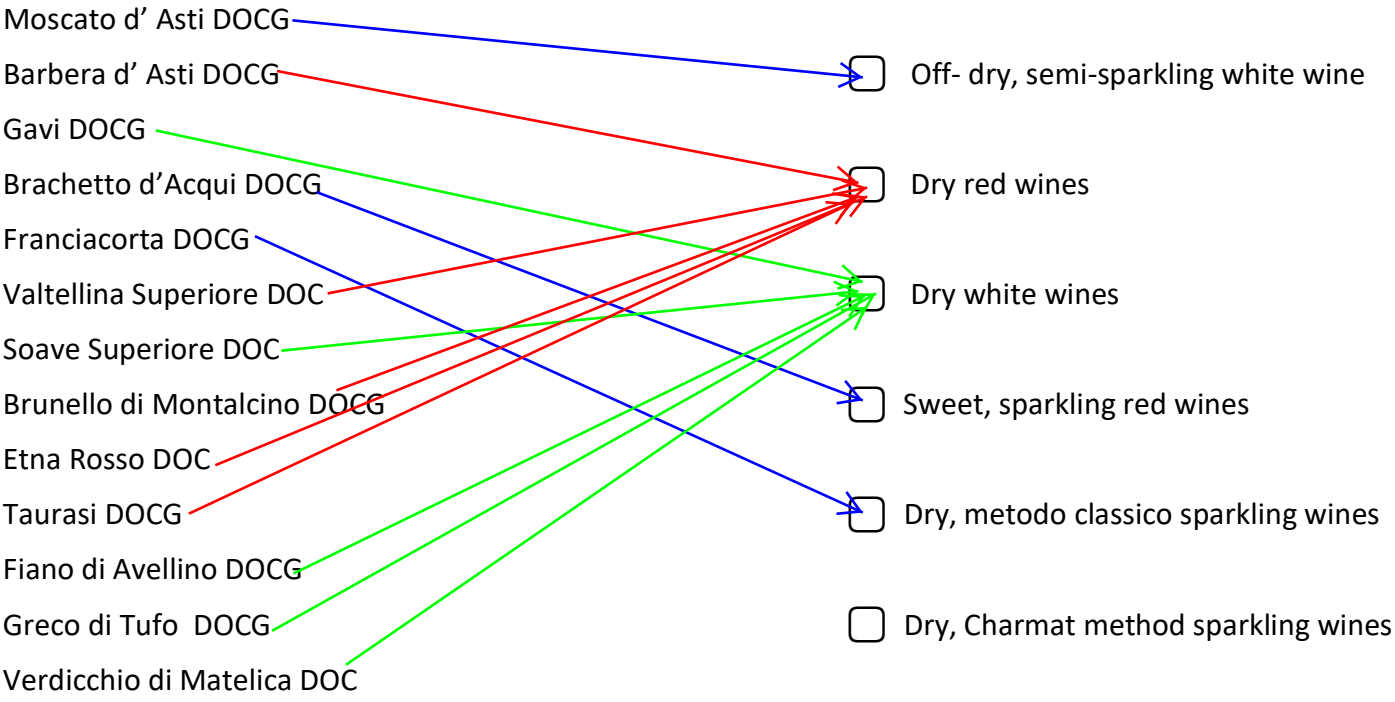
c. Amarone

d. Barolo

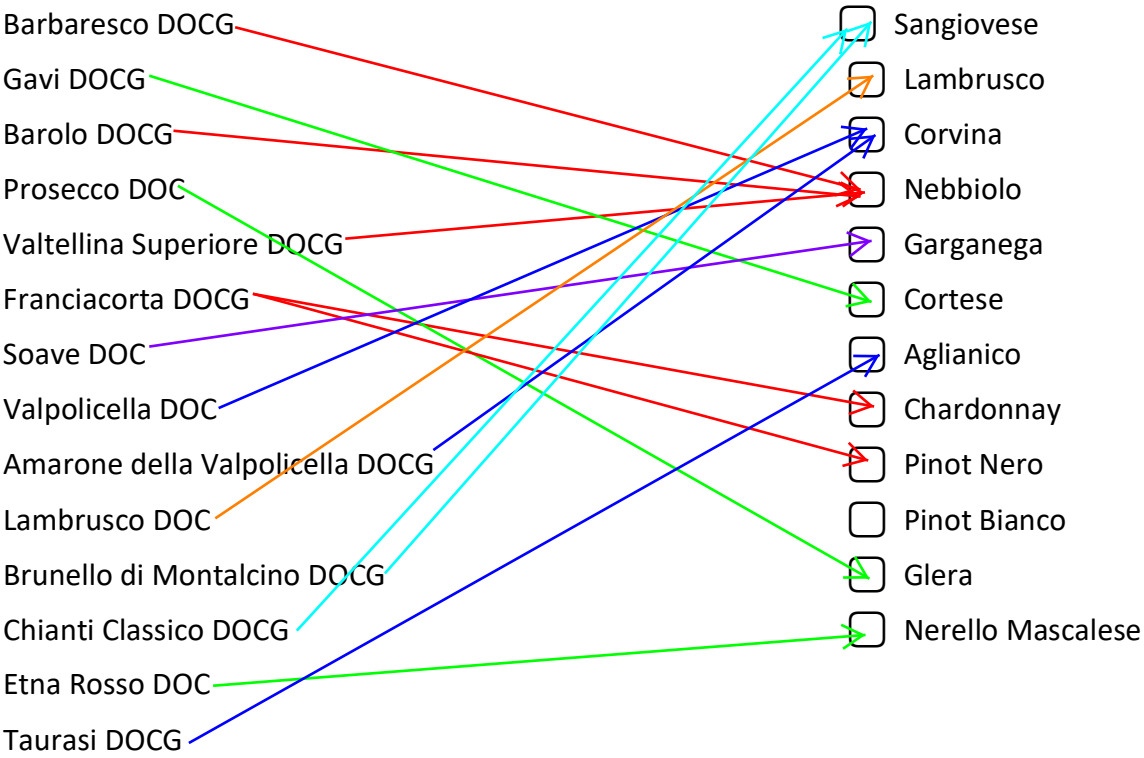
Italy continued…..

Quiz Questions

Match the DOC/ DOCG with the primary style of wine. Some styles may be used more than once.



Match the DOC/ DOCG with its dominant grape variety
Some grapes may be used more than once.



Germany

Quiz Questions

What is the Prädikat system is based on?

a. Ripeness of grapes at harvest

b. Sweetness of the wine when it is bottled

c. Alcohol level

d. Oaky character

Which of the following is an important river in one of Germany's wine regions?

a. Loire

b. Rhine

c. Danube

d. Rhône

All GG wines are:

a. Sweet

b. Dry (Trocken)

c. Oaky

d. Sparkling

Spätburgunder is the German word for which grape variety?

a. Pinot Gris

b. Cabernet Sauvignon

c. Riesling

d. Pinot Noir

Rank the following Prädikat in order of ripeness (least ripe to most ripe)

5__ Eiswein

4__ Beerenauslese (BA)

3__ Auslese

2__ Spätlese

6__ Trockenbeerenauslese (TBA)

1__ Kabinett

Name 5 of the 13 German anbaugebiete: Mosel, Rheingau, Rheinhessen, Pfalz, Nahe

What is an Einzellage? A vineyard name

Name three ways vineyards in the Mosel attain extra warmth to help grapes ripen.

Sun reflecting from rivers, steep slopes, heat retaining properties of slate soil

Austria

Quiz Questions

Which of the following is not one of the four major wine-growing regions of Austria?

a. Wien (Vienna)

b. Pfalz

c. Burgenland

d. Niederösterreich

Which of the following is Austria's signature white grape variety?

a. Chardonnay

b. Pinot Grigio

c. Grüner Veltliner

d. Pinot Gris

Which styles of wine are mainly produced in Austria?

a**. Either very dry or very sweet**

b. Off-dry

c. Sparkling and sweet

d. Sparkling and dry

Smaragd is a quality term used in which wine region?

a. Wachau

b. Wien

c. Mosel

d. Alsace

Which of the following rivers is most important to Austrian viticulture?

a. Russian

b. Mosel

c. Rhine

d. Danube

Spain

Quiz Questions

In which DO will you find wines made from the Albariño grape?

a. Rías Baixas DO

b. Penedès DO

c. Rueda DO

d. Cava DO

What are the two DOCa regions of Spain?

a. Rioja and Ribera del Duero

b. Rioja and Cava

c. Rioja and Priorat

d. Cava and Rueda

Priorat DOQ produces which of the following styles of wine?

a. Sparkling wine made in the traditional method

b. Powerful, dry red wines

c. Sweet white wines

d. Fortified wines

Which aspect of topography affects the climate of Ribera del Duero?

a. Strong diurnal difference

b. Warm to hot summer

c. High elevation of the Meseta

d. All of the above

The main white grape variety of Rueda is:

a. Verdejo

b. Chardonnay

c. Riesling

d. Xarel-lo

Which combination of region and grape variety is not correct?

a. Rioja and Tempranillo

b. Ribera del Duero and Tempranillo

c. Toro and Tempranillo

d. Priorat and Tempranillo

What does "Gran Reserva" on a label of Rioja refer to?

a. Sweetness level

b. Aging requirements for time in barrel and bottle

c. Location

d. Estate bottled

Portugal

Quiz Questions

In which DOP will you find wines made from the Alvarinho, Trajadura, and Loureiro grapes?

a. Cava

b. Vinho Verde

c. Rueda

d. Douro

The Douro DOP shares the same appellation boundaries as which fortified wine?

a. Sherry

b. Port

c. Madeira

d. Banyuls

What description best characterizes the white wines from the Vinho Verde DOP?

a. Youthful, high acid, low alcohol, slightly effervescent

b. Youthful, moderate acid, moderate alcohol, oak aged

c. Youthful, high acid, low alcohol, fully sparkling

d. Aged in oak for a minimum of one year

Baixo Corgo is a sub-zone of which wine region?

a. Rioja DOCa

b. Toro DO

c. Rueda DO

d. Douro DOP

The best vineyards are planted on which soil type in the Douro DOP?

a. Slate

b. Volcanic

c. Tufo

d. Schist

What description best characterizes the red wines from the Douro DOP?

a. Earthy and elegant

b. Rich, intense, and full-bodied

c. Soft and earthy

d. Fruity and light

North America- United States

Quiz Questions

Which governmental body controls the production and sale of beverage alcohol?

a. FDA
b. TTB
c. IRS
d. FAA

For a Rutherford AVA Merlot, what is the minimum percentage of Merlot that must be in the wine?

a. 75%
b. 85%
c. 95%
d. 100%

Which of the following best describes the climate of the Anderson Valley and its best-known style of wine?

a. Cool climate/sparkling wines
b. Cool climate/sweet wines
c. Warm climate/fortified wines
d. Warm climate/red wines

Which of the following is an AVA in Sonoma County?

a. Rutherford
b. Stags Leap
c. Monterey
d. Russian River Valley

Who is credited with importing European vinifera vines to California?

a. Agoston Haraszthy
b. Dr. Konstantin Frank
c. Robert Mondavi
d. David Lett

The Willamette Valley is best known for which grape variety?

a. Cabernet Sauvignon
b. Grenache
c. Merlot
d. Pinot Noir

What has the most dramatic influence on the climate of Columbia Valley AVAs?

a. Hail
b. Fog from the Pacific Ocean
c. Moderation from the lakes and rivers
d. Rain shadow from the Cascade Mountains

South America — Chile

Quiz Questions

What makes up most of the vineyard plantings in Chile?

a. Hybrids

b. White grape varieties

c. Red grape varieties

d. Grapes for fortified wine production

The Valle Central DO is the largest wine-growing area in Chile.

a. True

b. False

Both the San Antonio and Casablanca DOs share this trait.

a. Cool climate regions near the Pacific Coast

b. Cool climate, high elevation regions near the Andes

c. Warm climate regions in the Valle Central

d. Warm climate regions in northern Chile

What is the best-known grape variety produced in the Maipo Valley?

a. Cabernet Sauvignon

b. Pinot Noir

c. Malbec

d. Merlot

Which of the following brings cool, moist air and fog to the coastal regions of Chile?

a. Humboldt Current

b. Mistral

c. Zonda

d. Andes snow

Carmenère is a grape brought to Chile from the Bordeaux region of France.

a. True

b. False

Which of the following is not a sub-region of the Valle Central DO

a. Rapel Valley

b. Mendoza

c. Maipo Valley

d. Maule Valley

South America — Chile… continued

Quiz Questions

For a long time, Carmenère was mistaken for which grape variety?
Merlot

In order to bear the name of a grape, vintage, or region, a wine must contain a minimum what percent according to Chilean wine law? 75%

Most producers use what percent in order to adhere to European law for export? 85%

South America — Argentina

Quiz Questions

What is the primary red grape variety of Argentina?
a. Pinot Noir
b. Cabernet Sauvignon
c. Torrontés
d. Malbec

What is the primary white grape variety of Argentina?
a. Pinot Noir
b. Cabernet Sauvignon
c. Torrontés
d. Malbec

Which is a prominent area in Argentina for Torrontés?
a. Salta
b. Mendoza
c. Patagonia
d. Casablanca

What is an important feature of the Salta vineyards?
a. Rain shadow
b. High altitude
c. Proximity to the sea
d. Low-lying plains

What is the Zonda?
a. A type of vineyard rot
b. A fierce wind from the Andes
c. A current from the Pacific Ocean
d. A type of vineyard pest

Where is the Luján de Cuyo DOC located?
a. Chile
b. Patagonia
c. Salta
d. Mendoza

Choose the major hazard to the vineyards of Mendoza.
a. Snow
b. Tornados
c. Hail
d. Rain

List one pro and one con for how the Zonda affects viticulture in Mendoza.

Pro: **Keeps vineyards dry to prevent mildew and other diseases**

Con: **The wind is very strong and can affect springtime vine flowering**

South Africa

Quiz Questions

Steen is a local name for which grape variety?

a. Chardonnay
b. Riesling
c. Chenin Blanc
d. Pinot Noir

The grape variety Pinotage is a _____ of Cinsault and Pinot Noir.

a. Crossing
b. Hybrid
c. Clone
d. Blend

The Benguela Current can help:

a. Cool coastal South African vineyards
b. Warm coastal South African vineyards
c. Prevent rot
d. Prevent phylloxera

Which of the following is a district in South Africa?

a. Mendoza
b. Stellenbosch
c. Maipo
d. Salta

Order the following South African Geographic Wine of Origin designations from smallest to largest:

1. Geographical Units	**(Smallest)**	**1. Estate**
2. Estates		**2. Ward**
3. Regions		**3. District**
4. Wards		**4. Region**
5. Districts	**(Largest)**	**5. Geographical Units**

What is the KWV?

Former cooperative that has historically helped to standardize the wine industry. Now a private company focused on quality.

Name three effects of the Cape Doctor wind on the vineyards of South Africa:

1. Helps suppress fungal disease
2. Helps moderate temperatures
3. A very strong wind that can injure the vines and disturb flowering

Australia

Quiz Questions

Which of the following is the largest Australian GI?
a. South Australia
b. McLaren Vale
c. Southeastern Australia
d. Western Australia

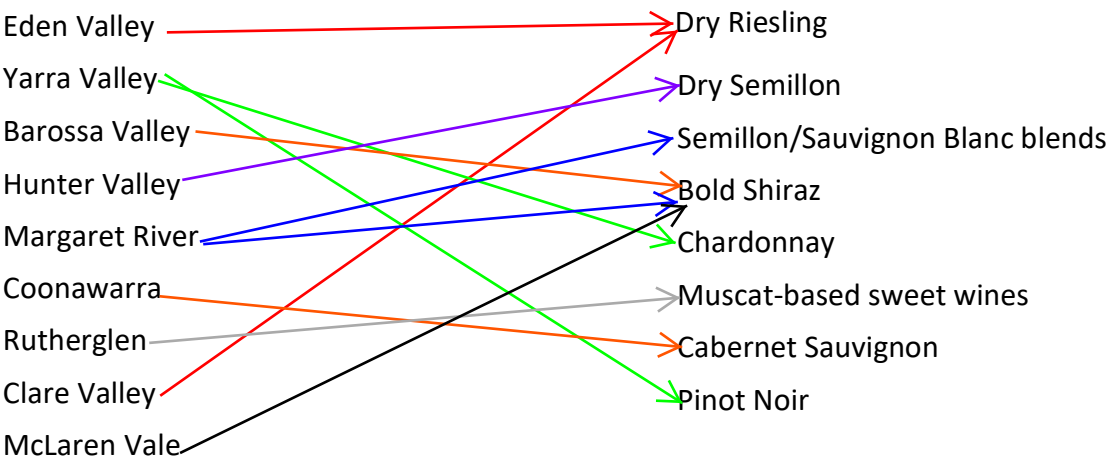
Which region is famous for its Terra Rossa soil?
a. Hunter Valley
b. Barossa Valley
c. Coonawarra
d. Yarra Valley

The Clare Valley and the Eden Valley are most noted for which style of wine?
a. Dry Semillon
b. Dry Riesling
c. Muscat-based sweet wines
d. Pinot Noir

Sparkling wines production thrives in Victoria due to which factor?
a. Hot inland airflow
b. Rain shadow
c. Proximity to cool ocean breezes
d. Intense wind

Why does the Barossa Valley have many 100+ -year-old vines?
a. Absence of phylloxera
b. Proximity to the ocean
c. Shiraz prefers older vines
d. Careful planting

Match the Australian GI with its most famous style of wine.



New Zealand

Quiz Questions

What is the primary grape variety of the Marlborough GI?

a. Riesling

b. Müller-Thurgau

c. Cabernet Sauvignon

d. Sauvignon Blanc

What is the primary grape variety of the Central Otago GI?

a. Riesling

b. Müller-Thurgau

c. Pinot Noir

d. Syrah

What do the Southern Alps provide?

a. A rain shadow that protects the vineyard areas of the South Island

b. A rain shadow that protects the vineyard areas of the North Island

c. More wind and rain to the vineyard areas of the South Island

d. More wind and rain to the vineyard areas of the North Island

Which of the following is true about the Gimblett Gravels?

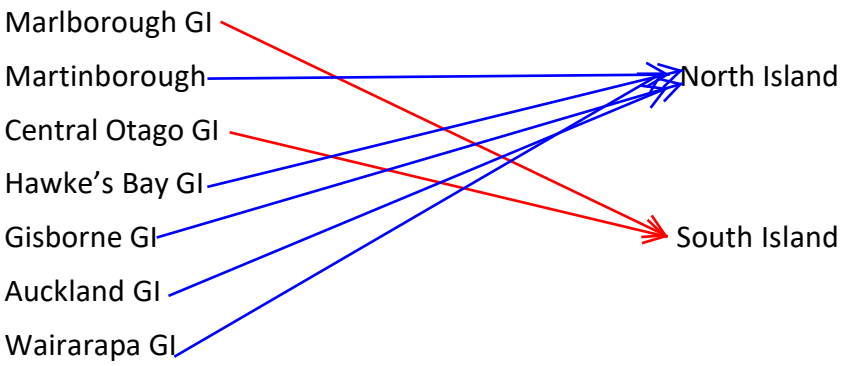
a. It is a well-known for red Bordeaux grape varieties

b. It is a sub-zone of Hawke's Bay

c. It has a unique gravelly soil type

d. All of the above

Match North Island or South Island location of the following New Zealand wine regions:



Fortified Wine

Quiz Questions

Which of the following wines is matured under a layer of Flor?

a. Sercial Madeira

b. LBV Port

c. Fino Sherry

d. Oloroso Sherry

A solera is used for which part of the vinification process?

a. Fermentation

b. Maturation

c. Distillation

d. Fortification

Which grape variety and soil combination produces the highest quality Sherry?

a. Sercial / Volcanic

b. Palomino / Albariza

c. Pedro Ximénez / Barros

d. Touriga National / Schist

Describe each Madeira grape style below as either sweet or dry.

a. Malmsey – **Sweet**

b. Sercial - **Dry**

c. Verdelho – **Dry**

d. Boal - **Sweet**

Which of the following Port styles is simple, inexpensive, and considered a house brand?

a. Ruby

b. Tawny

c. LBV

d. Vintage

Banyuls is a sweet, fortified wine from:

a. France made with the Grenache grape

b. France made with the Muscat grape

c. Spain made with the Palomino grape

d. Spain made with the Pedro Ximenez grape

Fortified Wine continued…..

Quiz Questions

What type of wine is Muscat de Beaumes-de-Venise?

a. Port

b. Vin Doux Naturel

c. Madeira

d. Sherry

Which of the following is a main grape of Port?

a. Palomino

b. Sercial

c. Muscat

d. Touriga Nacional

Aguardente is defined as:

a. Dried grapes for sweetening and blending

b. Neutral grape spirit used for Port production

c. Yeast layer protecting wine from oxidation

d. Solera

What is the difference between Estufa aging and Canteiro aging with regard to Madeira?

Estufa Aging: Stainless steel tanks fit with heating coils circulate warm water to heat the wine over the course of months.

Canteiro Aging: Wines are aged in oak casks for at least two years in attics exposed to the sun's natural warmth undergoing a much slower and gentler maturation process.

Sweet Wine

Quiz Questions

What does "Trockenbeerenauslese" (TBA) on a bottle of German Riesling indicate?

a. The wine is made from grapes affected by botrytis

b. The wine is fortified

c. The wine is sparkling

d. The wine is aged

What two countries are famous for icewine production?

a. France and Spain

b. Germany and Canada

c. Italy and Argentina

d. Spain and Portugal

Tokaji Aszú is a famous sweet wine from which country?

a. France

b. Germany

c. Italy

d. Hungary

What is the main grape variety used to make Tokaji Aszú?

a. Riesling

b. Furmint

c. Chenin Blanc

d. Sauvignon Blanc

Recioto is an Italian word referring to which type of wine?

a. Botrytis-affected grapes

b. Dried grapes

c. Frozen grapes

d. Late-harvest grapes

Bonnezeaux is a famous botrytis-affected sweet wine from which wine region?

a. Bordeaux, France

b. Loire Valley, France

c. Alsace, France

d. Champagne, France

Name four ways to concentrate sugars in grapes in the vineyard for sweet wine production.

Harvesting Late, Botrytis, Drying Grapes, Freezing Grapes

Beer

Quiz Questions

Which of the following is not a primary ingredient in beer?

a. Hops

b. Yeast

c. Malt

d. Oak

Hops contribute which of the following to beer?

a. Bitterness to balance the sweetness of malt

b. Provide aroma and flavor

c. Act as a preservative

d. All of the above

What is malt in beer?

a. Germinated barley that contributes the sugars needed for fermentation

b. Resins that contribute bitterness to beer

c. 90% of the beer and an ingredient that can be chemically altered

d. The ingredient that causes fermentation to happen

What are the two broad beer categories of ale and lager are based on?

a. Color of the malt

b. Strain of yeast used for fermentation

c. Kilning

d. Level of bitterness

Which of the following beer styles is an example of an ale?

a. Stout

b. Pilsner

c. Doppelbock

d. Oktoberfest

Which of the following beer styles is an example of a lager?

a. IPA

b. Stout

c. Pilsner

d. Hefeweizen

Sake

Quiz Questions

What is koji-kin?

a. A fungus used to convert starches to sugar in sake rice

b. Unfiltered sake

c. A specific kind of rice

d. A yeast strain

What type of sake is Nigori?

a. Unfiltered

b. Filtered

c. Oaky

d. Unpasteurized

What type of sake is Namazake?

a. Unfiltered

b. Filtered

c. Oaky

d. Unpasteurized

If a sake is labeled Junmai Daigingo:

How much of the rice grain is polished away? 50%

How much of the rice grain is remaining? 50%

Is alcohol added? No

Order the following polish levels from highest to lowest quality.

Daigingo 1

Ginjo 2

Honjozo 3

Cider

Quiz Questions

Name three primary cider production areas in North America.

1. **Great Lakes/ Midwest**
2. **Pacific Northwest**
3. **Hudson Valley, New York**

Name three primary cider production areas in Europe.

1. **Normandy, France**
2. **Asturias, Spain**
3. **England**

What are the primary ingredients of Cider?

1. **Apples**
2. **Yeast**
3. **Sugar**

Apples destined for cider are the same as grocery store eating apples.

a. True

b. False

Spirits

Quiz Questions

With what spirit is the term "reposado" used to describe aging?

a. Rum
b. Tequila
c. Vodka
d. Gin

Flavoring a neutral spirt with botanicals such as juniper berries and lemon peel is common for_____?

a. Tequila
b. Mezcal
c. Gin
d. Cognac

What is the predominant flavor of Kahlúa?

a. Juniper
b. Coffee
c. Peach pit
d. Anise

Apples and pears are the primary fruits of what spirit?

a. Cognac
b. Armagnac
c. Calvados
d. Rum

"Peatiness" is a dominant flavor of what spirit?

a. Bourbon
b. Scotch Whisky
c. Canadian Whisky
d. Irish Whiskey

What is the base ingredient of rum?

a. Sugarcane or molasses
b. Barley
c. Potatoes
d. Agave

Cognac and Armagnac are both:

a. Oak-aged, wine-based spirits
b. Apple- and pear-based spirits
c. Light-colored, sugarcane-based spirits
d. Made from a minimum of 51% corn