

WINE



a drink with deep roots

agriculture, culture, history

History of Wine: The Journey of a Millennia-Old Beverage

Wine, as a drink with deep roots in human history, has a fascinating story that spans thousands of years. From its earliest beginnings to modern production and culture, wine has played a key role in many societies around the world.

The Beginnings of Winemaking

The oldest known evidence of winemaking comes from the area of present-day Caucasus, primarily Georgia, where findings date back to around 6000 BC. Archaeologists discovered ceramic vessels with traces of grape must, proving that people made wine long before historical records began.

*Gradually, the grapevine (*Vitis vinifera*) spread to other parts of the world, including ancient Egypt, Mesopotamia, and Greece. In these cultures, wine became part of religious ceremonies and social rituals.*

In ancient Egypt, wine held a privileged position. It was considered the drink of the gods, and its consumption was linked to religious practices. Egyptians cultivated grapevines in the Nile Valley and produced both white and red wine. Pharaohs' tombs were often stocked with wine for the afterlife, highlighting its importance.

In ancient Greece, considered the cradle of Western civilization, wine became a symbol of culture. The Greeks developed a wine culture and wine trade, which led to its spread throughout the Mediterranean. The gods Dionysus (in Greece) and Bacchus (in Rome) were associated with wine, which played a key role in religious ceremonies and festivals.

With the expansion of the Roman Empire, wine reached new areas, including France, Spain, and Germany. The Romans introduced advanced cultivation and winemaking techniques, including vineyard systems and improved fermentation methods. At this time, wine became accessible even to lower social classes, and its consumption expanded.

After the fall of the Roman Empire in the 5th century AD, wine production became the domain of monasteries, where monks preserved knowledge of viticulture and winemaking. Wine was used in masses and other religious ceremonies. During this period, wines also developed in regions such as Burgundy and Champagne.

In the 15th and 16th centuries, winemaking in Europe further developed, particularly due to discoveries and colonization of the New World. Europeans brought grapevines to the Americas, Australia, and South Africa. This led to diversity and innovation in wine production, including new varieties and production methods.

The 19th century was marked by scientific discoveries that influenced winemaking. Louis Pasteur described the fermentation process, leading to better quality control of wine. During this period, Phylloxera (grapevine louse) appeared, devastating European vineyards at the turn of the 19th and 20th centuries. Protecting and restoring grapevines became an important task, leading winemakers to engage in international trade of vines.

Today, wine is a global industry with significant impact on both economy and culture. Wines from different regions of the world are recognized for their unique characteristics, and winemaking has become both an art and a science. Modern technology enables innovation in production, while traditional methods still play an important role.

The history of wine is a fascinating story that reflects not only technical knowledge and innovation but also the cultural and religious aspects of human civilization. Wine, as a beverage with a millennia-old tradition, remains an important part of our lives and continues to inspire generations worldwide. Each bottle of wine carries a story, history, place, and people involved in its production.





Winemaking: Art and Science in One

Winemaking is a fascinating process that combines tradition with modern technology. From grape harvesting to bottling the finished wine, every step in this process influences the final product.

Grape Harvesting

Grape harvesting is the first and essential step in winemaking. Grapes are typically harvested in autumn, when they reach optimal ripeness. Important factors determining the best harvest time include sugar content, acidity, phenolic compounds, and many other indicators.

Harvesting can be done either by hand or mechanically. Hand harvesting is more common in quality wineries, where the best grapes are carefully selected. Mechanical harvesting is more efficient and usually used in larger vineyards.

Pressing

After harvesting comes pressing, the process of extracting must from grapes. For white wines, grapes are pressed immediately to separate juice from skins and seeds. For red wines, fermentation occurs with skins, which gives the wine color and tannins. The grape color does not determine the wine color. Simply put, white wines can be made from white, red, or blue grapes, while rosé and red wines are made only from blue grapes.

There are various types of presses, differing in size and juice extraction method. Modern presses often use a pneumatic system that gently separates must from solids.

Fermentation

Fermentation is the key process during which sugars in the must are converted into alcohol and carbon dioxide by yeast. There are two main types of fermentation:

Alcoholic Fermentation

- This process begins immediately after pressing. Yeast can be added artificially or come from the environment (spontaneous fermentation). The fermentation temperature is important as it affects the wine's aromatic profile.

Malolactic Fermentation

- This type of fermentation usually occurs in red wines and some white wines. Bacteria convert malic acid into softer lactic acid, reducing acidity and improving taste.



Aging

After fermentation, wine ages in containers, which may be wooden barrels or stainless steel tanks. Aging can last from several months to several years, depending on the wine style and winemaker's intentions.

Aging in wooden barrels gives wine complexity and character. Barrels allow micro-oxygenation, which can soften tannins and add aromatic notes like vanilla or spice. Stainless steel tanks, on the other hand, preserve the wine's freshness and fruitiness.

Filtration and Stabilization

Before bottling, wine is often filtered to remove unwanted particles and stabilize it. Several filtration methods exist, including diatomaceous earth, paper filters, or membrane filters. Stabilization may also involve adding sulfur, which helps prevent oxidation and bacterial contamination.

Bottling

Bottling is the final step in winemaking. Before bottling, wines from different barrels are usually blended, if the winemaker deems it appropriate. Then the wine is poured into bottles, sealed with corks or alternative closures.

Wine can continue aging in the bottle, adding further depth and complexity.

Sparkling Wine Production

Harvesting and pressing occur as with still wines, but the production process changes during fermentation.

Fermentation

The first fermentation occurs under controlled temperature, converting sugars into alcohol and carbon dioxide. This process usually lasts several weeks. After the first fermentation, the wine is clarified and filtered.

Blending (Cuvée)

This is the process of preparing the final cuvée, reflecting the winemaker's style, region, or terroir. At this stage, the winemaker blends already fermented wines, often from several grape varieties.

Second Fermentation (Traditional Method)

In the traditional method, sugar and yeast are added to the bottles, initiating secondary fermentation. During this fermentation, carbon dioxide forms, remaining in the bottle and creating bubbles. The longer the wine remains after fermentation in the bottle, the finer the effervescence. Bottles are usually stored horizontally in wooden racks shaped like an "A," called pupitres, in a cool, dark environment for 9 months or more. Nowadays, mechanized methods, such as gyro pallets, are increasingly used.

Riddling (Remuage – Shaking Sediment)

To move sediment (yeast deposit) toward the bottle neck, bottles are gradually rotated and tilted. This process, known as riddling or remuage, takes several weeks.

Disgorging (Sediment Removal)

After riddling, the bottle neck is frozen so the sediment solidifies. Then the neck is opened, and the pressure in the bottle ejects the sediment. This step is called disgorging.

Dosage

After sediment removal, a dosage (a mix of sugar and wine) is added to the bottle, which affects the sweetness of the final product. This process is called dosage. The wine is then sealed with a cork and wire cage to preserve the bubbles.

Aging

Sparkling wine usually continues to age in the bottle for several months after dosage, adding complexity and richness of flavor.

Bottling

After aging, the wine is ready for bottling and distribution.

Sparkling wine can be sold under different sweetness categories (valid throughout the EU):

- **Brut nature (0–3 g/l)**, sometimes called non-dosage or brut zero
- **Extra brut (3–6 g/l)**
- **Brut (6–12 g/l)**
- **Extra dry (12–17 g/l)**
- **Sec (17–32 g/l)**
- **Demi-sec (32–50 g/l)**
- **Doux (50+ g/l)**

Charmat Method

The Charmat method, used for Prosecco, involves fermentation in large stainless steel tanks, reducing production time and cost. Once the base cuvée of finished wines is created, a tirage (yeast and sugar) is added to start secondary fermentation in these tanks, producing less fine bubbles while preserving freshness and fruity notes.



Wine Styles, Types, and Flavor Diversity

Wine is produced in many styles and types, varying by grape variety, production method, and region. Each type of wine has its specific characteristics, aroma, and flavor profile. Here is an overview of the most common types of wine:

White Wine

Characteristics:

- Mainly made from white grapes but can also be made from blue or red grapes if skins are removed before fermentation.
- Usually has a fresh, fruity taste and lower tannin content.

Grape Varieties:

- Chardonnay
- Sauvignon Blanc
- Riesling
- Pinot Grigio

Styles:

Dry

e.g., Riesling, Sauvignon Blanc, or Chardonnay

Semi-dry and sweet

e.g., Pálava, Tramín, or wines from Hungary's Tokaj or France's Sauternes

Red Wine

Characteristics:

- *Made from blue grapes, fermented with skins to give color, tannins, and complexity.*
- *Usually richer in flavor and higher in tannins.*

Grape Varieties:

- **Cabernet Sauvignon**
- **Merlot**
- **Pinot Noir**
- **Syrah/Shiraz**

Styles:

Dry

Most red wines are dry, e.g., Cabernet Sauvignon and Merlot

Sweet

Some wines, like Port or Madeira, are sweeter



Rosé Wine

Characteristics:

- *Made either by short contact with blue grape skins or by blending white and red wines (in the EU, only Champagne allows blending).*
- *Has a lighter, refreshing taste, often with fruity and floral notes.*

Grape Varieties:

- **Grenache**
- **Sangiovese**
- **Zinfandel**

Styles:

Dry

Increasingly preferred

Semi-dry and sweet

Some rosé wines, mainly from the Czech Republic

Sparkling Wines

Characteristics:

- Contain carbon dioxide, creating bubbles, produced naturally or artificially.
- Can be made from any grape type.
- Usually have a refreshing and delicate taste.

Examples:

Champagne

Sparkling wine from the Champagne region in France, made by the traditional method

Prosecco

Italian sparkling wine, light and fruity, made by the Charmat method

Cava

Spanish sparkling wine from Catalonia, made by the traditional method

Dessert Wines

Vlastnosti:

- Typically sweeter and often higher in alcohol.
- Usually have complex flavors that develop during aging.

Examples:

Port

- Fortified wine from Portugal, usually sweet

Sauternes

- Sweet wine from Bordeaux, made from noble rot-affected grapes (*Botrytis cinerea*)

Tokaji Aszu

- Hungarian sweet wine, known for its rich and honeyed profile

Fortified Wines

Characteristics:

- Wines with added alcohol (usually grape spirit), increasing alcohol content and stability.

Examples:

Sherry

- Spanish fortified wine, made in various styles (fino, amontillado, oloroso)

Madeira

- Wine from Madeira, known for its durability and complex taste.



The Most Famous Wine Regions in the World

Winemaking is widespread across the globe, and some regions have become famous for their unique wines, terroir, and tradition. Here is an overview of the most renowned wine regions:

Bordeaux, France

- Bordeaux is one of the most prestigious wine regions in the world.*
- Known for red wines, mainly produced from Cabernet Sauvignon, Merlot, and Cabernet Franc.*

Main appellations:

- Médoc*
- Saint-Émilion*
- Pomerol*

Wines:

- Bordeaux wines are usually blends of different grape varieties and age in oak barrels, adding complexity and depth.*

Burgundy, France

- Burgundy is known for its exceptional white wines from Chardonnay and red wines from Pinot Noir.*
- The region is characterized by diverse microclimates and soils, which influence the taste of its wines.*

Main appellations:

- Côte d'Or (Côte de Nuits a Côte de Beaune)*
- Chablis*

Wines:

- Burgundy wines are valued for their elegance and aging potential.*

Champagne, France

- The Champagne region is home to the world's most famous sparkling wines, produced using the méthode champenoise (traditional bottle fermentation method).*
- The main grape varieties are Chardonnay, Pinot Noir, and Meunier.*

Wines:

- Champagne is often associated with celebrations and significant events.*

Tuscany, Italy

- Tuscany is known for its red wines, especially those made from Sangiovese.
- The region has a rich history and beautiful landscapes, contributing to its popularity.

Main appellations:

- **Chianti**
- **Brunello di Montalcino**
- **Vino Nobile di Montepulciano**

Wines:

- Tuscan wines are often bold and full-bodied, ideal with Italian cuisine.

Piedmont, Italy

- Piedmont is home to some of Italy's most renowned wines, such as Barolo and Barbaresco, both made from Nebbiolo.
- The region is known for its wine diversity and terroir.

Wines:

- Piedmont wines are usually full-bodied and tannic, with pronounced aromas and long aging potential.

Rioja, Spain

- Rioja is one of Spain's most famous wine regions, renowned for its red wines.
- Main grape varieties include Tempranillo and Garnacha.

Wines:

- Rioja wines often age in oak barrels, adding complexity and aroma.

Napa Valley, USA, California

- Napa Valley is the most famous wine region in the USA, known for high-quality wines, especially reds.
- Main grape varieties include Cabernet Sauvignon and Chardonnay.

Wines:

- Napa Valley wines are often robust and full-bodied, with higher alcohol content and pronounced flavors, though recent vintages have approached European elegance.



Mendoza, Argentina

- *Mendoza is Argentina's largest wine region, known primarily for Malbec.*
- *The region lies at the foothills of the Andes, providing ideal conditions for viticulture.*

Wines:

- *Argentine wines are usually rich and fruity, with soft tannins.*

Barossa Valley, Austrália

- *Barossa Valley is one of Australia's oldest wine regions, mainly known for Shiraz.*
- *The region has a diverse climate supporting a wide range of grape varieties.*

Wines:

- *Barossa wines are often full-bodied, with pronounced fruit and spice notes.*

Douro Valley, Portugal

- Douro Valley is famous as the home of Port wine, with terraced vineyards along the Douro River.
- Main grape varieties include Touriga Nacional, Tinta Roriz, and Tinta Barroca.

Wines:

- Port wine is usually sweet and fortified, ideal for desserts.

Wachau, Austria

- Probably the best region for Grüner Veltliner, vineyards along the Danube River.
- Typically mineral, spicy, and fruity Veltliners, excellent with lighter dishes.

Mosel & Rheingau, Germany

- World power of Riesling, vineyards along the Mosel or Rhine.
- Typically mineral, rich, fruity-spicy wines with firm acidity, making them among the most versatile wines for food pairing.

These wine regions are just a few examples from the rich and diverse world of wine. Each region brings its unique characteristics, influencing the taste and character of wines. For wine lovers, discovering different regions and their wines is an exciting journey to understanding the complexity and beauty of this beverage.



Wines of the Czech Republic

Although the Czech Republic is not among the most famous wine countries, it has a rich winemaking tradition and produces wines with unique characteristics. Let's look at the main wine regions, grape varieties grown in the Czech Republic, and specifics of Czech winemaking.

History of Winemaking in the Czech Republic

Winemaking in the Czech lands has a long history, dating back to Roman times. The first written records of vineyards come from the 9th century, though some sources mention the 2nd or 3rd century. Over the centuries, winemaking evolved, with significant influence from monasteries that maintained the tradition of grape cultivation and wine production.

Main Wine Regions

The Czech Republic is divided into two wine regions:

Bohemia

- This region includes the northern and western parts of the Czech Republic. Major wine towns and subregions are Mělník and Litoměřice. Bohemia is primarily known for white wines.

Moravia

- The most important wine region in the Czech Republic, divided into several subregions: Znojmo, Mikulov, Slovácko, and Velkopavlovicko. Moravia is home to most Czech vineyards and produces a wide range of wines.



Grape Varieties

A wide spectrum of both white and red grape varieties is grown in the Czech Republic. The most notable include:

White Varieties:

Riesling (Ryzlink rýnský)

- Characterized by aromatic citrus notes and minerality.

Grüner Veltliner (Veltlínské zelené)

- Offers fresh acidity and fruity flavor.

Chardonnay

- Produced in various styles, from fresh to mature and buttery.

Pinot Gris (Rulandské šedé)

- Noted for its finesse, fruitiness, and wide range of styles from dry wines to sweet botrytized selections.

Müller Thurgau

- Valued for early ripening, ease of cultivation, and light, fresh wines that mature quickly.

Welschriesling (Ryzlink vlašský)

- Plays a key role in Central European winemaking, particularly in Moravia, Austria, Slovenia, and Hungary. Despite its name, it is not genetically related to Riesling.

Red Varieties:

Blaufränkisch (Frankovka)

- Very popular, producing full-bodied wines with fruity notes.

St. Laurent (Svatovavřinecké)

- Characteristic for Moravia, with soft tannins and fruity aroma.

Cabernet Sauvignon

- Though an international variety, it is also grown in the Czech Republic, producing wines with pronounced tannins.

Pinot Noir (Rulandské modré)

- One of the oldest and most respected red varieties in the world. Originally from Burgundy, it is now grown worldwide, including Moravia, where it produces elegant, refined, and highly prized red wines.

Modrý Portugal

- A traditional Central European red grape variety, long popular in the Czech Republic. Light, fruity, and early-ripening, often used for young, easy-drinking wines, e.g., St. Martin's wines.

Zweigeltrebe

- Originating from Austria, it has found a solid place in Moravian vineyards. Produces medium to full-bodied, fruity, and harmonious red wines with softer tannins, suitable for drinking or short-term aging.

Wine Classification Systems

In the wine world, two main classification methods are used: Romanic (appellation-based) and Germanic.

- The Germanic method (also used in the Czech Republic and neighboring countries) tracks sugar content—the natural sugar in grapes, must, etc.—with various measuring methods.
- The Romanic system (used in France, Italy, Spain, etc.) focuses primarily on the origin of the grapes, i.e., where they were grown, rather than sugar content, which is considered automatic. To clarify: appellation = region, subregion, terroir.

Specifics of Czech Winemaking

- **Northern European climate** → more suitable for white grape varieties.
- **History** → Decades of communism led to uniformity in wine production, affecting multiple generations of winemakers.
- **“Young guns”** → Enthusiastic young enologists, not only the Young Winemakers association, show that history can be changed and Czech and Moravian winemaking has a future.
- **Global wines** → Czech wines have received numerous awards in international competitions.

Wine and Food Pairing

Czech wines pair excellently with local dishes like *svíčková*, roast duck, or fish. White wines, such as **Grüner Veltliner**, often pair with poultry, vegetables, or fried fish, while red wines, like *Blafränkisch*, complement heavier meat dishes. A simple guideline—white wines = light meats, red wines = dark meats—can help, but preferences vary.



Wine Breeding Stations in the Czech Republic

The Czech Republic has a long and rich winemaking tradition, dating back to the Middle Ages. Wine breeding stations play a key role in developing and improving grape varieties, focusing on quality, resilience, and adaptation to local conditions.

Viticultural Breeding Station in Velké Pavlovice

• Known for research and breeding, supporting winemakers, and positively impacting regional wine quality. The most famous variety bred here is the red grape André.

Breeding Station in Perná

• Home to many disease-resistant new varieties. Famous varieties include Pálava and Aurelius.

Wine Institute in Znojmo

• Focuses on breeding varieties adapted to local climate and soil, maintaining the gene pool of traditional varieties.

Breeding Station in Valtice

• Part of the Research Institute of Viticulture and Winemaking, focused on new cultivation and processing technologies.

Most Famous Czech Hybrids:

- Pálava, Aurelius, Malverina
- Cabernet Moravia, André



Importance for Czech Winemaking



Breeding stations contribute to biodiversity and sustainable viticulture. Their work increases the competitiveness of Czech wine domestically and internationally and supports the local economy and tourism. Quality wines attract wine lovers from all over the world.

Czech wines exemplify tradition, care, and passion. Although the Czech Republic is less famous on the wine map than some countries, its wines offer unique taste experiences worth discovering. Picturesque vineyards and hospitable winemakers make Czech winemaking an interesting destination for any wine lover.

Winemaking is a complex and fascinating process, combining traditional techniques with modern innovations. Every step, from harvest to bottling, plays a crucial role in the final character of the wine. This blend of art and science makes wine a unique beverage capable of telling stories and connecting people across cultures and generations.