

GERMAN WINE MANUAL

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Today, German Riesling is an integral part of the wine lists of the finest restaurants worldwide. At the same time, interest in other German grapes, such as Pinots (Spätburgunder, Grauburgunder, Weissburgunder), Silvaner, and Gewürztraminer, is growing. High time to publish this handbook to help wine enthusiasts learn more about our wines – from their beginnings 2,000 years ago to the present. Germany’s new generation of young winemakers has vision and a goal: to make some of the best white and red wines of the world.

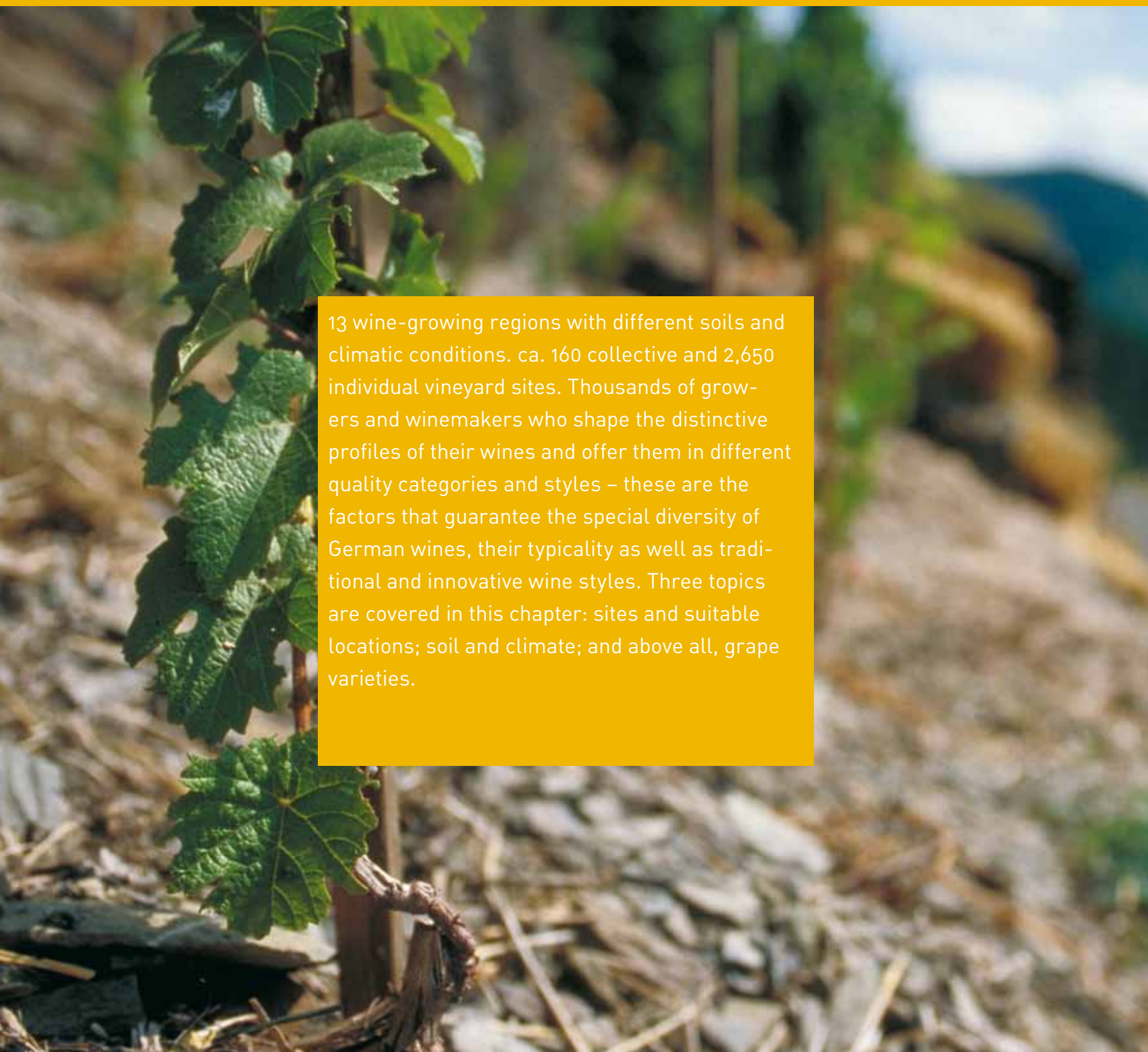
When it comes to quality and image, German wines have earned high marks, especially in recent years. Only a century ago, German Rieslings were as highly acclaimed – and as expensive – as the wines from the leading châteaux of Bordeaux. In the course of the turbulent 20th century, German wines fell out of fashion internationally. There has been a great turnabout during the past decade, marking one of the most successful periods in the history of winemaking along the Rhine, Mosel, and their tributaries. Fewer than 2% of the world’s vineyards are located in Germany; the majority of German wines are consumed domestically. Yet, demand from other countries is growing. On average, some 20% of Germany’s wine production is exported.

At this writing, the USA is by far the most important export market for German wine. Nearly 100 million euros, equal to nearly 30% of all export earnings, are achieved in this market alone, followed by Great Britain and the Netherlands. Scandinavian countries show increasing growth. Asian markets, particularly China, Japan, and India, are promising markets for the future, not least due to the “perfect pairing” of Asian cuisines with the cool climate wines of Germany, white and red.

This handbook provides fundamental, comprehensive knowledge about German wines. More information can be found on www.germanwines.de and in the German Wine Institute’s many publications in numerous languages. We hope you’ll enjoy reading and using this handbook. Please don’t hesitate to contact us (info@deutscheweine.de) if you need additional information or have any questions. Our multilingual team is always pleased to be of assistance.

Monika Reule

*Director of the German Wine Institute
April 2012*



13 wine-growing regions with different soils and climatic conditions. ca. 160 collective and 2,650 individual vineyard sites. Thousands of growers and winemakers who shape the distinctive profiles of their wines and offer them in different quality categories and styles – these are the factors that guarantee the special diversity of German wines, their typicality as well as traditional and innovative wine styles. Three topics are covered in this chapter: sites and suitable locations; soil and climate; and above all, grape varieties.

SOIL

In general, only soils that have sufficient depth and a concomitant amount of fine earth lead to satisfactory results in viticulture. Suitable soil conditions enable vine roots to penetrate and spread out in order to supply the vine with water and nutrients. Soil not only governs vine growth, but also influences the taste of the grapes, and the character of the resultant wines.

From a physical point of view, the aeration, porosity, and water supply of a vineyard's soil are measures of its potential for viticultural success. Wet soil tends to be cold; moderately moist and dry soil, warm. Dark soil absorbs thermal radiation; light-colored soil reflects it. As such, dark soil warms up more quickly and retains more heat than light-colored soil.

In practice, a wide variety of soil types support viticulture, with one exception: soil consisting solely of humus. It's too acidic to provide vines with optimal growing conditions. Suitable soil must have a balanced proportion of primary nutrients, such as calcium, potassium, nitrogen, phosphoric acid, and magnesium. Yet, choice of grape refines these general parameters, i.e., optimal soil conditions vary from varietal to varietal – the key is finding the right fit. Sustainable land use can be fostered by implementing remedial measures to restore nutrients depleted by vines and through efforts to increase biodiversity by sowing plants that retard erosion and supply nitrogen.

The soil types that are most prevalent in our wine-growing regions include:

- colored sandstone
- gneiss and granite
- graywacke
- Keuper (colored marl, gypsum marl)
- loam (clayish, sandy, and stony)
- marl
- loess
- shell-limestone
- slate, weathered slate
- gravel
- primary rock
- volcanic tuff.

Of course, the list above is not exhaustive. Many soils are in transition. Rootstocks and their specific demands on soil play an important role. Last but not least, the influence of soil can only be seen in conjunction with the overall makeup of a particular location.

CLIMATE AND WEATHER

Climatic factors (sunshine duration, precipitation, and temperatures) play a key role in all biological and biochemical processes of a vine. Furthermore, they influence the buildup and depletion of the substances in a berry during ripening and thus, the quality status of the grapes and the resultant wines. As a reservoir for water, nutrients, and warmth, soil more or less shapes the character of a wine depending on grape variety.

As one of the most northerly viticultural areas of the world, Germany numbers among the “cool climate” wine-growing countries. That grapes are even able to grow and ripen here is primarily due to the Gulf Stream that favorably influences the climate in western Europe. Nevertheless, the climate and weather in Germany’s wine-growing regions pose ecological challenges that are unknown to Mediterranean vintners. The fundamental differences are as follows:

- There is considerably less sunshine in Germany’s wine regions than in wine-growing countries in southern Europe.
- Average temperatures in Germany are also lower.
- Rainfall in Germany’s wine regions occurs primarily as the grapes develop in summer.
- Southern wine-growing countries suffer from a lack of precipitation as the grapes ripen.
- As the grapes increase in ripeness, rainfall decreases in Germany.
- In southern Europe, there is a sharp increase in rainfall at harvest time.

The effects of these climatic factors are significant for German wine. The temperate climate and high

precipitation enable grapes to ripen slowly and benefit from nutrients in the soil. This fosters the development of fruity, well-structured acidity that enhances the longevity of white wines, in particular.

Slopes facing south, southeast or southwest in protective valleys provide particularly favorable climatic conditions for viticulture. Solar radiation is more intense in sites on slopes or steep hillsides than in flatter sites. Slopes with a southern exposure also profit from increased sunshine duration. The microclimate of a vineyard also depends on the soil’s ability to retain heat, the presence of flora, vine density, as well as how vines are trained and cared for. Too much wind can have a negative impact on a vineyard’s microclimate.

Successful grape cultivation greatly depends on climate. Weather conditions affect the outcome of every vintage, whereby some years are qualitatively better than others. In general, though, the farther south one goes, the lower the likelihood of vintage fluctuations.

[TERROIR]

Terroir is neither a clearly defined nor a universally understood concept that can be measured according to objective criteria. Not even renowned specialist authors, wine writers, and growers agree on a uniform interpretation of terroir. On the one hand, it is described as the sum of all natural factors (soil and climate) and the human factor (e.g., pruning, vine training or soil management) that lend a wine its unmistakable identity. This takes into account not only environmental conditions, but also vineyard and cellar practices, knowledge handed down from generation to generation, and the cultural heritage of the grower. Another school of thought maintains that the elements that constitute terroir are determined primarily by Mother Nature and scarcely subject to the influence of humans or various winemaking techniques. Suffice it to say that there is no scientific evidence to show that terroir is more than “just” a site-specific or regional trait. Others view the concept of terroir as an overblown, philosophical, and intangible approach that lacks foundation.

GRAPE VARIETIES

The great diversity of grape varieties in Germany is impressive and ranges from “A, as in Acolon” to “Z, as in Zweigeltrebe.” The data compiled by the Federal Statistical Office (Destatis) lists some 140 grape varieties, some of which are still waiting to be added to the list of varieties officially permitted for quality wine production. Of those permitted, about 35 are suitable for producing red wine; more than 100, for white wine. However, only about two dozen have any real market significance, above all, the white wine grapes Riesling and Müller-Thurgau, also known as Rivaner. These two varieties account for a good third of Germany’s total vineyard area. Riesling (ca. 22,600 ha) and Müller-Thurgau (ca. 13,600 ha) are cultivated in all 13 German wine-growing regions. The third most widely planted varietal is the red wine grape Spätburgunder, or Pinot Noir (ca. 11,300 ha). Nearly half of Germany’s vineyard area is devoted to just these three varieties. An individual varietal’s rank (area and percentage) on the overall list is not only an indicator of its popularity, but also a measure of its economic importance and marketing success. In general, the majority of German growers have realized that it pays to replace varieties that are not in demand with those that are more popular.

Among white wine grapes, Silvaner ranks third (ca. 5,200 ha), followed by Grauburgunder, or Pinot Gris, (ca. 4,700 ha), Weissburgunder, or Pinot Blanc, (ca. 4,100 ha), and Kerner (ca. 3,500 ha). While the

majority of the very successful new crossings of the 1960s and 1970s are steadily losing market significance, traditional varieties are winning back lost terrain.

Market globalization also influences viticulture. Varietals with a large international following, such as Chardonnay, have been added to the list of officially approved varieties, as have promising new red wine grapes with Mediterranean flair, such as Cabernet Sauvignon and Merlot. In the course of growing demand for German red wine, many growers replaced white varieties that were generating little interest with red wine grapes. Although the red wine boom that began in the mid-1980s has already slowed down, the area planted with red varieties has doubled since then and now accounts for 36% of Germany’s total vineyard area. With more than 11,300 ha, Spätburgunder is clearly the leading red wine grape, followed by Dornfelder with about 8,000 ha, Portugieser (ca. 4,000 ha), Trollinger, and Schwarzriesling (also known as Müllerrebe and Pinot Meunier), with 2,400 and 2,300 ha, respectively. Regent, which has spread considerably in recent years and now covers more than 2,000 ha, and Lemberger (ca. 1,700 ha) also number among the top reds cultivated in Germany today. The lucrative red wine business has inspired the young generation of growers to return to traditional vineyard and cellar practices, as well as adapt international wine styles.

Germany’s contemporary wine scene is rich in excellent red wines. Their only drawback: due to the small quantities available, they are at a competitive disadvantage on the international market. The real strength of the German wine industry lies in white wine production. German Riesling – be it a filigree Kabinett, a fruit-driven Spätlese or a botrytized wine with great aging potential – is world famous. Juicy Müller-Thurgau, or Rivaner, ensures a sufficient supply of reasonably priced

and uncomplicated wines for everyday enjoyment. Silvaner, with its expressive earthiness, is the third most popular white varietal. It can be viewed as a link with the white Pinots Weissburgunder and Grauburgunder. Both varieties continue to gain ground. Thanks to their versatility, their wines are prized as ideal food wines.

THE MOST IMPORTANT GRAPE VARIETIES IN GERMANY (TOP 15)

Grape Varieties	Vineyard area	
	2010 in ha	2010 in %
Riesling	22,601	22.1
Müller-Thurgau	13,554	13.3
Spätburgunder	11,334	11.1
Dornfelder	7,952	7.8
Silvaner	5,217	5.1
Grauburgunder	4,705	4.6
Weissburgunder	4,106	4.0
Portugieser	4,098	4.0
Kerner	3,474	3.4
Trollinger	2,403	2.4
Schwarzriesling	2,263	2.2
Regent	2,090	2.0
Bacchus	1,943	1.9
Lemberger	1,768	1.7
Scheurebe	1,624	1.6
Total vineyard area	102,197	100.0
White varieties	65,557	64.0
Red varieties	36,639	36.0

	
COLOR	AROMA
greenish yellow to light golden yellow	reminiscent of apple, peach, apricot
TASTE	BODY, SUBSTANCE
delicately fruity, usually pronounced acidity	light to medium-bodied

WHITE VARIETALS

RIESLING

Riesling is doubtlessly Germany’s most celebrated grape variety and numbers among the economic mainstays of the German wine industry. With 22,600 ha, Germany is the home of the world’s largest vineyard area devoted to Riesling, well ahead of Australia and France, which rank second and third, respectively.

The origin of the variety remains obscure. It probably evolved from a natural crossing of Weisser Heunisch (in French, Gouais Blanc) x *Vitis vinifera sylvestris* or Weisser Heunisch x Traminer. Equally ambiguous is the origin of the name itself. Perhaps a derivation of the German words “verrieseln” (poor fruit set after blossoming), “Russling” (dark wood), “reissende Säure” (harsh acidity) or “edles Reis” (noble scion)? The earliest documented mention of Riesling is an invoice from 1345 in Rüsselsheim, just east of Hochheim/Rheingau. Authentic Riesling is known worldwide as “Rhine Riesling,” or in Baden, as “Klingelberger.” The varietal Welschriesling, which is cultivated in Austria, Italy or Slovenia, for example, is neither synonymous with, nor related to, genuine “white Riesling.”

Significance

In all, 22% of Germany’s vineyard area is planted with Riesling. As such, it is the most important German wine grape. Riesling is grown in all 13 German wine-growing regions, but the extent of its presence varies from region to region. In the Rheingau, for example, the ca. 2,400 ha of Riesling are equal to 80% of the region’s vineyard area. Other Riesling strongholds are the Pfalz (5,500 ha), the Mosel (5,300 ha), Rheinhessen (3,900 ha), Württemberg (2,100 ha), Baden (1,100 ha), and the Nahe (1,100 ha).

Cultivation

Slow to ripen, Riesling’s hallmark is fruity acidity. As such, it is predestined for northerly wine-growing regions, where it can finish ripening completely under the late autumn sun. It is very demanding of site, yet able to thrive in a wide range of soils. Depending on site (type of soil and microclimate), it yields grapes from which wines with extremely diverse nuances can be produced. Heat-retaining, steep, stony sites along river valleys provide optimal conditions.

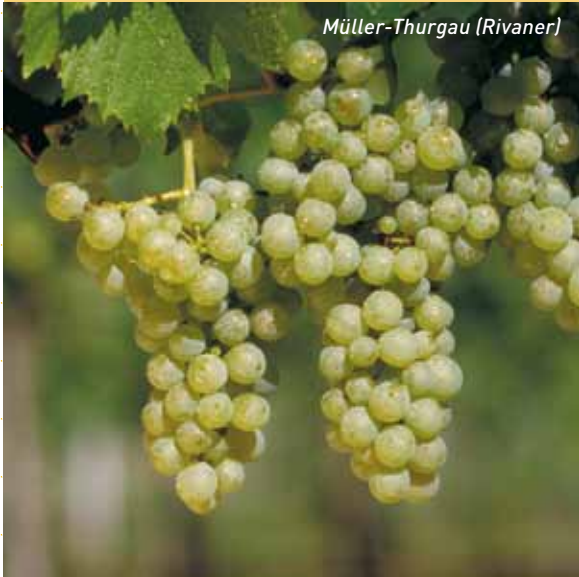
Vinification/Style

The spectrum of Riesling wines ranges from simple to sublime, from dry to to lusciously sweet. Some are vinified in traditional oak casks. In addition to uncomplicated everyday wines, there is a wealth of Prädikat wines available. Wines with varying levels of natural, ripe sweetness are frequently found in the higher Prädikat levels. Numerous QbA or Kabinett wines, particularly from the more northerly regions, also have some sweetness, which helps compensate for their higher acidity and thus, achieve a well-balanced wine. A “typical” Riesling is pale to greenish yellow in color; reminiscent of peach or apple on the nose; and has a pronounced acidity. Rieslings from grapes grown in slaty soils are often said to have mineral notes; some smell

of flintstone; mature growths can show interesting petrol overtones. Riesling’s natural acidity makes it a promising candidate for sparkling wine production. Lusciously sweet Beerenauslese and Eiswein (ice wine) number among the most highly sought-after German wines on the international market. Rieslings benefit from at least a year of bottle aging, yet many need several years to reach their peak. The very finest Rieslings have tremendous aging potential.

Food affinities

Light, young Rieslings – whether dry or with fruity sweetness – are ideal summer wines. More mature Rieslings are better food partners, and in fact, some Riesling Spätlese wines with considerable age show some of their youth when enjoyed with food. Dry and off-dry Rieslings go especially well with light dishes, steamed salt- and freshwater fish, meat with light sauces, and small poultry. An off-dry to slightly sweet Spätlese harmonizes well with fresh, unripened cheese. Spätlese with natural, fruity sweetness and lusciously sweet Auslese are excellent with fruit-based desserts. Mature, lusciously sweet Auslese and Beerenauslese are ideal apéritifs at the start of a festive meal.



Müller-Thurgau (Rivaner)

MÜLLER-THURGAU (RIVANER)

These are usually uncomplicated wines for every-day drinking...easy on the palate, youthful, light, and refreshing.

The varietal was named after Professor Hermann Müller (1850-1927) from the Swiss canton Thurgau, who bred it at the research institute in Geisenheim/Rheingau in 1882. Originally assumed to be a crossing of Riesling x Silvaner, a theory that has been disproved by genetic profiling, Müller-Thurgau is actually a crossing of Riesling x Madeleine Royale (a Gutedel seedling).

Significance

Müller-Thurgau played a leading position in the German wine industry in the 1980s and most of the 1990s, but was supplanted by Riesling shortly before 2000. Nevertheless, it still accounts for a respectable 13.3% of Germany’s vineyard area, or 13,550 ha, not least because of its versatility and its appeal even to wine novices. It is not terribly demanding with regard to site and yields are consistently reliable. The shift to young, light, refreshing, dry Müller-Thurgau wines labeled under the synonym Rivaner have been a marketing success, not least with ambitious restaurateurs.

Cultivation

Müller-Thurgau is cultivated in all 13 German wine-growing regions. Rheinhessen, with 4.400 ha, and Baden, with 2,700 ha, are foremost, followed by the Pfalz with 2,300 ha. There are also considerable plantings in Franken (ca. 1,800 ha), the Mosel (ca. 1,200 ha), and the Nahe (ca. 550 ha). The yield limitations introduced in the 1980s had a very positive effect on Müller-Thurgau, which tends to be prolific if left unchecked. Stringent pruning brings out the potential quality of this varietal.

Vinification/Style

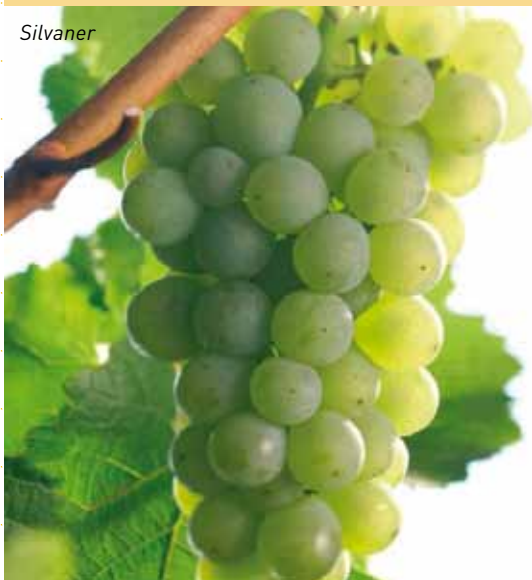
The grape ripens early and yields uncomplicated wines with a light Muscat tone and sometimes, a flowery bouquet. The acidity is usually mild, and somewhat higher in the wines from more northerly regions. Normally, fermentation takes place in stainless steel tanks, which helps preserve freshness and varietal aromas. The majority of wines are QbA wines vinified either dry or sweet. Müller-Thurgau, with few exceptions, has little aging potential and tastes best in its youth. Occasionally, “sur lie” versions are offered, i.e., the wines remain on the lees until shortly before bottling.

Food affinities

The wines are popular because they are easy on the palate and harmonious in character. They’re usually medium-bodied and pale yellow in color. If marketed under the synonym Rivaner, one can expect a fresh, light, dry, youthful wine. The majority of Müller-Thurgau wines are uncomplicated, everyday wines and go well with delicately aromatic dishes.

COLOR	AROMA
pale yellow	reminiscent of delicate herbs, apple, pear
TASTE	BODY, SUBSTANCE
mild acidity	light to medium-bodied

Silvaner



SILVANER

SILVANER
Subtle in aroma and mild in acidity, hearty Silvaner wines go well with down-home country cooking; more elegant versions enhance many dishes with a refined touch. It is probably the offspring of a spontaneous crossing of Traminer and Österreichisch-Weiss (literally, Austrian white).

Significance
The widespread cultivation of Silvaner dates from the early 19th century. It displaced old, inferior varieties, but also Gutedel and Elbling, for example, in the Pfalz. By the middle of the 20th century, it was the most important grape variety in Germany: more than half of the country’s vineyard area was planted with Silvaner. In the decades since then – not least due to the upswing of Müller-Thurgau – this area continually declined and now stands at five percent, but holding steady at 5,200 ha. Silvaner has long been a traditional variety in Rheinhessen and Franken, today, with some 2,500 ha and ca. 1,300 ha, respectively. About 800 ha of Silvaner are also cultivated in the Pfalz.

Cultivation
In terms of soil conditions, Silvaner is even more demanding than Riesling. It does not do well in dry or stony soils and is susceptible to winter frost – often, a challenge for wine-growers in Franken. If left unchecked, it is a prolific bearer of grapes suitable for uncomplicated everyday wines. With quality-oriented vineyard maintenance, including stringent pruning, Silvaner grapes can produce very good and excellent Prädikat wines.

Vinification/Style
In frost-free sites, Silvaner yields are reliable. It ripens later than Müller-Thurgau, but earlier than Riesling. The wines are fairly neutral and compared with Riesling, mild in acidity. Wine color is pale to deep. Aromas are fairly restrained, sometimes earthy. Neither light nor heavy – somewhere in between – Silvaner wines are prized for being juicy and mouth-filling, and if produced from grapes grown in deep soils, powerful. They are usually vinified in stainless steel tanks; Spätlese and Auslese, sometimes in oak casks.

Food affinities
Silvaner is an excellent food partner. Depending on origin and vinification, it goes well with freshwater fish, mussels, potato or vegetable casseroles, asparagus or mild cheese.

COLOR	AROMA
very pale to deep yellow	reminiscent of apple, pear, fresh hay
TASTE	BODY, SUBSTANCE
mild to average acidity	light to medium-bodied



Grauburgunder

GRAUBURGUNDER (PINOT GRIS)

Grauburgunder numbers among the finest varietals cultivated in Germany. It was more often known by its synonym, Ruländer, in the past. Although it is a mutation of Spätburgunder (Pinot Noir), it is a white wine grape.

Significance

Grauburgunder has increasingly resumed importance in Germany, which now ranks third worldwide – after Italy and the USA – in terms of vineyard area devoted to this Pinot. With more than 4,700 ha, Grauburgunder now accounts for nearly five percent of Germany’s entire vineyard area. In Baden, it is cultivated in 11% of the region’s vineyards, with more than 1,700 ha. Rheinhessen and the Pfalz have 1,200 and 1,100 ha, respectively, and there are 200 ha in the Nahe region.

Cultivation

The grape yields decent quantity and is capable of achieving high must weights. Its dense clusters foster the development of noble rot, which is key to producing lusciously sweet wines. Grauburgunder grows particularly well on loess terraces, as well as in chalky soils and sites with stony subsoils. Loamy soils are less suitable. Measures to reduce

yields, including bunch pruning, can be implemented to improve quality, and are widely practiced.

Vinification/Style

Grauburgunder is vinified in stainless steel tanks or large oak casks, as well as in small barriques for a malolactic fermentation. Usually, Grauburgunder denotes a dry, medium-bodied wine with a fairly lively acidity, while Ruländer often signifies a richer, fuller-bodied wine with considerable sweetness. Depending on method of vinification and quality level, wine color ranges from pale to golden yellow or even amber. Grauburgunder is often associated with the scent of green (unripe) walnuts, almonds, fresh butter or, on a fruitier note, pear, dried fruit, raisins, pineapple, and citrus fruits.

Food affinities

A young, light, dry or off-dry Grauburgunder is a great summer wine. Dry Kabinett or Spätlese wines harmonize well with seafood, hearty saltwater fish, pasta, game birds and young game, as well as soft, ripe cheese. Barrique wines go well with lamb dishes with intense flavors and light game dishes, such as game birds or venison. Spätlese with a naturally ripe, fruity sweetness or lusciously sweet Auslese are especially tasty with high-fat blue cheese or desserts made with honey, almonds or marzipan.

COLOR

intense, pale to golden yellow

AROMA

reminiscent of mango, nuts, almonds, quince

TASTE

mild to average acidity

BODY, SUBSTANCE

powerful, full-bodied



Weissburgunder

WEISSBURGUNDER (PINOT BLANC)

A dry Weissburgunder wine with fresh acidity and delicate fruitiness is not only an ideal food wine, but also a light summer wine. If Grauburgunder is a lighter-berried mutation of Spätburgunder, Weissburgunder can be regarded as a white mutation of Grauburgunder.

Significance

Among white wine varieties, the area planted with Weissburgunder and Grauburgunder has increased the most in recent years. More than 4,100 ha, or nearly 4%, of Germany’s vineyards are planted with Weissburgunder, which grows in sites that are too warm for Riesling. The grape has shown a steady upswing for several decades; its area has doubled within the past ten years. In the meantime, Germany has the second highest number of plantings after Italy, concentrated in Baden with about 1,200 ha, as well as the Pfalz and Rheinhessen with more than 950 ha each. Significant amounts are also cultivated in the Mosel and Nahe regions.

Cultivation

Like its relative, Spätburgunder, it makes high demands on soil and climate. It prefers warm, vigor-

ous soils that are as deep as possible, as well as sites with good exposure that are warm and dry. Weissburgunder is not difficult to grow and can achieve high must weights if the ripening period is long.

Vinification/Style

In a glass, Weissburgunder is pale to straw yellow in color, and delicate, restrained on the nose. A slightly nutlike aroma is typical. Vinified dry, its medium to full body and fine acidity complement many types of food. Aging in barrique casks is not unusual for wines of high quality. In addition, lusciously sweet wines as well as refreshing sparkling Weissburgunder are available in limited quantities.

Food affinities

Dry Weissburgunder wines with fresh acidity and delicate fruitiness are ideal food wines. In addition to light summer wines, there are fuller, richer versions up to dry Spätlese. Not overly high in alcohol, Weissburgunder has a delicate aroma that is often reminiscent of unripe nuts, apple, pear, quince, apricot, citrus fruits or fresh pineapple. It pairs well with seafood, fish, veal and pork, as well as poultry. Well chilled, it’s also a wonderful sipping wine on the terrace. Weissburgunder wines that are high in extract or have been aged in barrique are delicious with lamb or delicate dishes prepared with young game.

COLOR	AROMA
pale to straw yellow	reminiscent of apple, pear, mango, nuts, quince
TASTE	BODY, SUBSTANCE
somewhat pronounced acidity	medium-bodied

Kerner



KERNER

The Trollinger x Riesling crossing is named after the poet and physician Justinus Kerner (1786-1862) from Weinsberg/Württemberg.

Significance

Wine-growers and consumers took interest in the distinctive new crossing in the early 1970s. Starting in the Pfalz, the varietal spread to all German wine-growing regions. Its popularity peaked in 1992 with 7,826 ha. Since then, the number of plantings has declined. Today, there are still about 3,500 ha of Kerner, with ca. 1,150 ha in Rheinhessen; 1,100 ha in the Pfalz; and 330 ha in Württemberg.

Cultivation

Kerner thrives in soils that are neither too wet nor too dry. A long ripening period, well into late autumn, enables it to achieve higher must weights than Riesling. Yields are good and reliable; must weights are usually sufficient for Prädikat wines.

Vinification/Style

Riesling’s “little cousin” is produced and sold in all quality categories up to Spätlese. There is uncomplicated Qualitätswein for everyday drinking as

well as Spätlese, and sometimes, sparkling wine. Kerner wines are usually pale yellow in color, pronounced in acidity, and more aromatic than Riesling. Its fine, fruity aromas are reminiscent of pear, apple, currant, apricot, menthol candy, and occasionally, there’s a hint of Muscat.

Food affinities

Dry or off-dry Kerner wines go well with light and subtly seasoned appetizers, such as fish or vegetable terrines/pâtés. It also pairs well with summer salads, fish, poultry, and veal as well as asparagus dishes, mild semihard cheese, and fresh or cream cheese. A Kerner Spätlese with the sweetness of natural, ripe fruit is particularly tasty with apple-based desserts.

COLOR

pale yellow

AROMA

reminiscent of apple, peach, menthol candy

TASTE

pronounced acidity

BODY, SUBSTANCE

light to medium-bodied



Chardonnay

CHARDONNAY

Like many other ancient varieties, the Chardonnay grape traces its beginnings to the Middle East. As viticulture spread, it came to France and found a new home, particularly in Burgundy. “Chardonnay,” a village near Tournus/Mâconnais, might have lent its name to the grape. In Germany, the grape was added to the list of officially permitted varieties in 1991.

Significance

Chardonnay, one of the most popular grape varieties in the world, is cultivated in virtually all wine-growing countries. In all, there are some 180,000 ha planted worldwide. Slowly but surely it has gained ground in Germany, and with more than 1,300 ha in 2010, it now accounts for more than one percent of Germany’s total vineyard area. Thus far, results have been particularly good and even impressive in areas where members of the Pinot family have traditionally played an important role, such as the Kaiserstuhl district in Baden or in the southern half of the Pfalz.

Cultivation

Chardonnay is no less demanding than Weissburgunder (Pinot Blanc) or Riesling when it comes to choice of site. Marginal sites are not suitable. It

does best in deep, chalky, and warm soils. Like Weissburgunder, it ripens relatively late and can be harvested shortly before Riesling. Must weights are on a par with Weissburgunder, and even higher if yields are low. If planted in good sites, acidity levels are quite good.

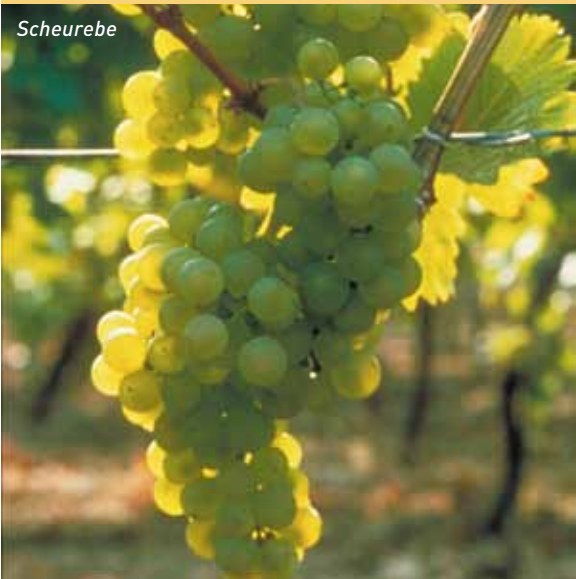
Vinification/Style

Most Chardonnays are vinified dry. In addition to stainless steel, barrique casks are widely used for fermentation and/or aging, especially for the finest wines. Fresh, fruity wines are also used for sparkling wine production. Melon, grapefruit or overripe gooseberry are aromas typically associated with Chardonnay. Top-quality wines are usually full-bodied, and rich in alcohol and extract. Barrique-aging imparts an additional dimension to the primary fruit aromas.

Food affinities

The broad range of Chardonnay wine produced in Germany, from fresh Qualitätswein to powerful, dry Spätlese, makes it quite versatile. Light, young versions go well with fish and shellfish, while the more powerful and/or oak-influenced wines are good partners with roasted foods or full-flavored cheese.

COLOR	AROMA
pale to bright yellow	reminiscent of gooseberry, grapefruit, exotic fruits
TASTE	BODY, SUBSTANCE
medium acidity, often mellow, buttery	medium- to full-bodied



Scheurebe

SCHEUREBE

Originally assumed to be a crossing of Silvaner and Riesling, DNA profiling in the late 1990s revealed that Scheurebe (pronounced “shoy ray beh”) is probably a crossing of an unknown wild grape and Riesling. Its intense bouquet is reminiscent of black currant, peach or ripe pear. Scheurebe wines go very well with aromatic, spicy foods, from appetizer to dessert.

Significance

The new crossing gained recognition in the 1950s when growers realized it could ripen sufficiently to produce Beeren- and Trockenbeerenauslese. It was bred in 1916 by Professor Georg Scheu in Alzey/Rheinhessen, and Germany’s largest wine-growing region became a stronghold for the varietal. It boomed in the 1970s; its vineyard area doubled. Of the 1,600 ha currently planted with Scheurebe, ca. 900 ha are in Rheinhessen, 400 ha in the Pfalz, ca. 130 ha each in the Nahe and Franken regions, and a small amount in Baden. In all, Scheurebe has lost significance in recent years and now accounts for less than 2% of Germany’s total vineyard area.

Cultivation

Scheurebe is nearly as exacting as Riesling with regard to site selection. It can grow in moderately dry, barren soils, but does better in loess and thrives in sites with chalky subsoils. The medium-sized grapes ripen shortly before Riesling; drops in acidity occur relatively late.

Vinification/Style

The vast majority of Scheurebe wines are Prädikat wines, a considerable number of which are vinified mild or sweet, styles that are more prevalent with this varietal than with other grape varieties. In recent years, however, there has been an increasing tendency to produce drier-style Scheurebe, which is quite similar to wine produced from the internationally popular Sauvignon Blanc. Depending on quality level, the wine is pale or straw yellow or an intense golden yellow. Light Kabinett and medium-bodied Spätlese wines have a harmonious balance of stimulating acidity and delicate fruitiness, as well as a pronounced varietal aroma that is usually reminiscent of black currant; sometimes, mango, mandarin, lime, peach or very ripe pear. Lusciously sweet versions have great aging potential and with age, show impressive aromas of peach or rose.

Food affinities

Produced in numerous styles and from grapes of various ripeness levels, Scheurebe wines are quite versatile. Light Kabinett wines are great for social get-togethers. Dry to off-dry Spätlese are delicious partners with Asian cuisine and aromatic, spicy fish or poultry ragouts. Lusciously sweet Spätlese and Auslese go well with fruit-based desserts and rich, blue-veined cheese.

COLOR

pale to straw yellow;
intense golden yellow

AROMA

reminiscent of black
currant, exotic fruits

TASTE

pronounced, fruity
acidity

BODY, SUBSTANCE

medium-bodied

Bacchus



BACCHUS

Bacchus, a crossing of [Silvaner x Riesling] x Müller-Thurgau, was bred by Peter Morio and Professor Dr. Husfeld at the Institute for Grapevine Breeding Geilweilerhof in Siebeldingen/Pfalz in the 1930s. Its floral Muscat tone is reminiscent of Scheurebe.

Significance

Like Scheurebe, Bacchus was a rising star in the 1970s, reaching its peak in the 1990s, and continually declining in vineyard area ever since. In 2010, there were barely 2,000 ha still being cultivated, primarily in Rheinhessen and Franken. Part of its popularity with growers stems from the fact that unlike Riesling, it is an early ripener that achieves high must weights. As such, it can be planted in sites that aren’t really suitable for Riesling.

Cultivation

Bacchus is not terribly demanding on site and does best in deep, vigorous, nutrient-rich soils. It’s a prolific varietal, achieving yields just under those of Müller-Thurgau. Although it ripens early, Bacchus shouldn’t be harvested too early. It needs time to achieve good quality.

Vinification/Style

Many Bacchus wines reach Prädikat levels of ripeness and are vinified with some residual sweetness. The wines are rich in extract, fruity, and have a distinctive bouquet which is sometimes similar to that of Scheurebe. Those with high must weights and sufficient acidity share Riesling traits. In general, the wines have a floral Muscat note. In color, usually light yellow. Alcohol content is low to medium.

Food affinities

With its fine, spicy aroma, Bacchus is terrific with Asian cuisine and fruit-based desserts.

COLOR

greenish yellow
to pale yellow

AROMA

reminiscent of black
currant, orange,
caraway

TASTE

fruity, crisp

BODY,
SUBSTANCE

light to
medium-bodied

Gutedel



GUTEDEL

Gutedel has been grown for 5,000 years, making it one of the oldest cultivated grape varieties of the world. It is presumed to have originated in Palestine; cultivation in the Middle Nile Valley has been verified. From there it was probably spread by the seafaring Phoenicians. It arrived in French wine-growing regions in the early 16th century. It was planted, for example, near the village of Chasselas southwest of Mâcon, which would explain the origin of the Gutedel synonym “Chasselas” in French-speaking areas. Its advent in Germany dates from the early 17th century, where it was originally planted in Württemberg and Franken; a century later, in Sachsen and south of Freiburg/Baden in today’s Markgräflerland district. Greater expansion began in 1780, when Margrave Friedrich von Baden imported plantings from Vevey, a well-known wine-growing village on Lake Geneva.

Significance

White (and red) Gutedel is cultivated as a tasty table grape all over the world. In Germany, plantings are now concentrated almost exclusively in Markgräflerland between Freiburg and the Swiss border, where 1,100 ha of the total 1,140 ha are located. Here, the southern Baden specialty has maintained its vineyard area for decades. In addition, there are still 24 ha of Gutedel in Saale-Unstrut.

Cultivation

Average sites that are sheltered from cold winds are sufficient for Gutedel. It prefers deep soils that aren’t too dry, but also ripens in shallow, weathered stony soil and chalky soils. A medium-early ripener, it can achieve average must weights of 100 hl/ha in fertile sites. Because the berries are not prone to fungal diseases, Gutedel can be left on the vine longer in autumn, which helps improve quality.

Vinification/Style

The special appeal of its wines is the rather neutral character of the Gutedel grape. This also means that site-specific traits (terroir, soil, microclimate) are unmistakably reflected in every wine. Most Gutedel wines are light, pleasant quaffing wines. Increasingly, though, there are specialties in the Prädikat wine range: dry wines with a particularly mild, harmonious character, thanks to malolactic fermentation. In all, Gutedel wines are regarded as light and easy to drink.

Food affinities

The wines are best enjoyed in their youth. Gutedel wines are popular with brunch or light dinners of cold cuts and cheese. More refined versions are tasty with light foods, such as fish dishes or mild cheese.

COLOR

pale yellow

AROMA

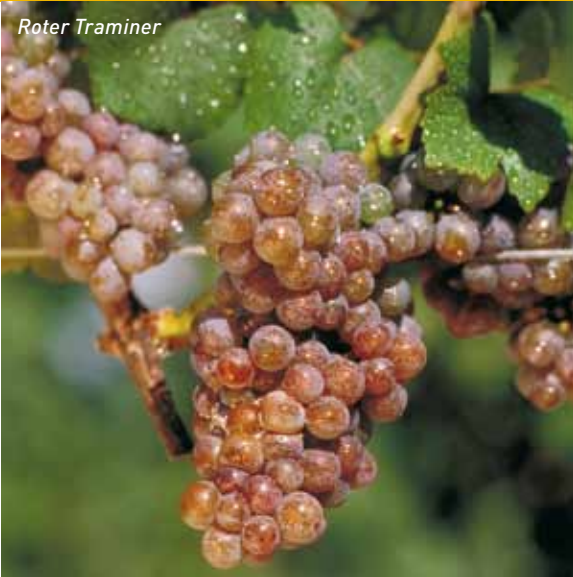
from nutlike to buttery; earthy

TASTE

fruity, crisp

BODY, SUBSTANCE

light to medium-bodied



Roter Traminer

ROTER TRAMINER
(GEWÜRZTRAMINER)

Roter Traminer (Red Traminer) is one of the oldest grape varieties still cultivated. Some researchers trace the grape’s origin to Greece; the premise that its true home is the village of Tramin in southern Tyrol is controversial. Nevertheless, it is a fact that Traminer wine was being used for Holy Communion in monasteries there as early as the 15th century. It was documented in Germany in the 16th century, a time when it was a recommended variety. Reports on clones of the variety from the 18th century confirm that even then, grape selection was being implemented successfully. Traditionally, Roter Traminer, Riesling, and a prolific variety were planted side by side in vineyards to minimize crop loss. Yet, even in the past, the area devoted to this grape remained small because of its unreliable yields.

According to EU wine regulations pertaining to officially approved varietal names, Roter Traminer may also be designated by its synonym, Gewürztraminer, in Germany. Furthermore, the designation Clevner is also permitted in Baden.

Significance

Although plantings have increased slightly during the past few years, with ca. 860 ha, Roter Traminer accounts for less than one percent of Germany’s total vineyard area. Some 350 ha lie in the Pfalz; in Rheinhessen and in Baden (primarily in the Kaiserstuhl district), 150 ha each. Although there are only ca. 30 ha in Sachsen, it is considered to be a traditional, regional specialty.

Cultivation

The thick-skinned, light red Traminer grape can reach high levels of ripeness, even the highest Auslese categories. Yields are variable from year to year and often low, due to its propensity to coulure; the long-term average is seldom more than half of

its more reliable counterparts. Reason enough to regard German Traminer as a high-quality specialty.

Vinification/Style

Very fine wines can be produced from the very aromatic, perfumed varietal. They are usually high in extract and voluminous. Very mild in acidity, typical Traminer wines – depending on ripeness level – are straw to golden yellow in color and exude a fragrance reminiscent of fading roses, ranging from restrained to exuberant. Aromas of acacia blossoms, violets, honey, marzipan, quince jelly, bitter orange or passion fruit are other frequent associations. Lusciously sweet versions have superb aging potential.

Food affinities

Those who love aromatic wines appreciate Traminer for its fragrant bouquet, enhanced by a fruity, herbal spicy taste. It goes well with goose liver pâté, roast duck and goose, and high-fat blue cheese. Mature, lusciously sweet versions are prized as appetizers; sweet Spätlese and Auslese are popular complements to desserts prepared with marzipan, chocolate or brandies.

COLOR

straw to
golden yellow

AROMA

reminiscent of roses,
raisins, quince

TASTE

very mild acidity

BODY,
SUBSTANCE

full-bodied
and rich



ELBLING

Elbling numbers among the oldest white varieties cultivated in Europe. The Romans aptly called it “*Vitis alba*” (literally, white grape). Etymologists assume the name Elbling derives from the Latin *albus*, meaning white. The majority of historians feel that the Romans brought Elbling to Germany more than 2,000 years ago, possibly via Gaul. For centuries, from the Middle Ages to the 19th century, was widespread in Germany and neighboring regions, as well as in eastern Europe. It’s likely that the abolishment of the tithe contributed to the grape’s decline. In Germany today, Elbling is a specialty cultivated almost exclusively in the Mosel region. Particularly growers in the upper Mosel Valley, near the border with Luxembourg, point to a 2,000-year-old tradition of Elbling viticulture.

Significance

Statistically, there are about 560 ha of Elbling in Germany, or well under one percent of the country’s overall vineyard area. Yet, in the Mosel, it accounts for about 6% of the region’s vineyards, making it the third most important variety there. Plantings are concentrated along the southern portion of the Mosel River southwest of Trier and along the slopes of the Sauer River. In all, the area devoted to the grape is declining somewhat.

Cultivation

The Elbling’s prevalence along the Upper Mosel is not by chance: it thrives in the shell-limestone soils here. The early ripening variety is undemanding concerning site. Shell-limestone soils best bring out the grape’s typical, fresh character. Yields are usually sufficient, sometimes high, particularly in the Qualitätswein category. Only occasionally are Elbling Kabinett or Spätlese wines produced.

Vinification/Style

The basic wines are marked by an acidity that is about as high as that of Riesling, yet is somewhat softer on the palate. The grapes are vinified into light, fresh, fairly neutral still or sparkling wine. Some 80% of Elbling grapes and/or wines are sold to large wineries where they receive their sparkling touch. Estate-bottled, varietal still wines and traditionally produced sparkling wines are virtual rarities. The red mutation Roter Elbling, also considered a white wine grape, is seldom found.

Food affinities

Still and sparkling Elbling wines are light, fresh, and slightly effervescent. They’re uncomplicated wines for patio sipping on beautiful summer days and tasty with simple meals of cold cuts and cheese, as well as fish and seafood.

COLOR

very pale to
greenish yellow

AROMA

delicate,
reminiscent of apple

TASTE

pronounced acidity

BODY, SUBSTANCE

very light



Sauvignon Blanc

SAUVIGNON BLANC

Although this white grape is grown primarily in southwestern France, it has made great inroads in recent decades and is now cultivated around the world, from Argentina or Chile to Italy to New Zealand. It’s particularly successful in California and South Africa. With ca. 80,000 ha worldwide, Sauvignon Blanc is one of the most widely planted white grape varieties. Historical documents show that it was in France by at least A.D. 280, where it was cultivated in the Loire Valley before spreading elsewhere. The grape has been planted in Durbach/Baden since around 1830. The then-owner of the Gräflich Wolff Metternich’sche Weingut, Graf Zorn von Bulach, planted vines from Château d’Yquem in the site Schloss Grohl. The estate had special permission to market the wines as “white Bordeaux” until the 1980s. In 2006, the estate produced its first Sauvignon Blanc Trockenbeereenauslese.

Significance

In the meantime, there are now ca. 600 ha of Sauvignon Blanc vines in Germany, primarily in the Pfalz, Rheinhessen, and Baden, and to the surprise of some, a number of these wines have received very high marks at international tastings in recent years.

Cultivation

The demanding grape only ripens completely in warm sites. It should be planted in good, south-facing sites that are not too high in altitude. It prefers somewhat barren ground to heavier soils, but thrives best in good, deep soil. Yields are average. It achieves ripeness levels on a par with Silvaner.

Vinification/Style

Sauvignon Blanc numbers among the wines that have a wealth of aromas and flavors. Dry versions are redolent of bell pepper, black currant, citrus fruits, and gooseberry. In general, they have a fairly pronounced acidity that lends them a fresh character.

Food affinities

The wines are excellent with fish, seafood, and vegetable dishes, as well as pasta in creamy sauces. Highly recommended is a glass of Sauvignon Blanc with goats’ milk cheese. It is also popular solo, as an apéritif.

COLOR

pale yellow

AROMA

reminiscent of bell pepper, black currant, citrus fruits, gooseberry

TASTE

somewhat pronounced acidity

BODY, SUBSTANCE

medium-bodied, rich in extract



Spätburgunder

RED VARIETALS

SPÄTBURGUNDER (PINOT NOIR)

If Germany’s finest white wines are produced from Riesling, its red wine counterpart is the Spätburgunder grape. Both are synonymous with top quality. Burgundy is the acknowledged home of Spätburgunder, where it might have been cultivated since the 4th century or earlier; the earliest documented mentions date from the late 14th century. The precise parentage of the grape is controversial, even in light of DNA profiling that points to a spontaneous crossing of Traminer x Schwarzriesling (Pinot Meunier). Other experts rule this out, contending that Pinot Meunier is a mutation of Pinot Noir. Another school of thought suggests that one or both parents of Pinot Noir may have been wild vines.

Significance

Germany ranks third worldwide after France and the USA in area devoted to Spätburgunder. With some 11,300 ha of Spätburgunder vines, an area equal to 11% of the country’s vineyard area, the grape has a clear following among wine-growers and consumers alike. Since the early 1990s, the area planted with Spätburgunder has increased by more than 4,000 ha. The majority of plantings are in Baden (nearly 5,750 ha) – concentrated in the Kaiserstuhl district – and in the Pfalz (ca. 1,600 ha). Other important growing regions include Rheinhessen (more than 1,300 ha) and Württemberg (more than 850 ha), as well as the Rheingau

(380 ha) and the Ahr (more than 340 ha). Among German red wines, Spätburgunder frequently fetches the highest prices. Even high-priced Spätburgunders (some are barrique aged) sell well in the specialty trade and restaurants.

Cultivation

This very old varietal needs much care and makes high demands on climate and soil. It thrives best in so-called Riesling sites, i.e., very good sites. If growing conditions are right, it reaches top form and rewards all efforts with the most wonderful red wines in the world.

Vinification/Style

Although there are Spätburgunder wines with some residual sweetness, the majority are vinified as dry red wines. Occasionally, rosé wines and sparkling wines are produced. Traditionally, the finest wines are made from completely ripe grapes. Many growers age their premium wines, such as Grosse or Erste Gewächse, in barriques. Ranging in color from ruby to garnet red, Spätburgunder wines are slightly tannic, mild in acidity, and have a long finish, with aromas reminiscent of blackberry and cherry.

Food affinities

Spätburgunder red wines are ideal during the cooler seasons of the year. They should be served at room temperature between 18 and 20°C (64.4 and 68°F). Powerful, full-bodied Spätburgunder is best with roasted meat or game and aged hard cheese. As a varietal rosé, Spätburgunder Weissherbst goes well with appetizers and white meats.

COLOR

ruby red
to garnet red

AROMA

reminiscent of
blackberry, cherry,
strawberry, elder,
pepper

TASTE

slightly tannic

BODY, SUBSTANCE

full-bodied to rich

Dornfelder



DORNFELDER

A relative newcomer, bred in 1955, Dornfelder is already considered a German red wine classic and has been in great demand for years. Originally developed for use as a blending wine to add color to pale red wines, it is a crossing of Helfensteiner x Heroldrebe.

Significance

From small beginnings in the mid-1970s – until then, there were only about 100 ha of Dornfelder – it began to take off and now covers some 8,000 ha or 8% of Germany’s total vineyard area – second only to Spätburgunder. Dornfelder was particularly well received by growers in the Pfalz and Rheinhessen, but is also cultivated in most other regions.

Cultivation

This is a hearty grape variety, which is not particularly susceptible to disease but prone to prolific yields if not judiciously pruned. It is somewhat demanding of site, preferring soils that are neither sandy nor stony.

Vinification/Style

Dornfelder is vinified in all styles, but primarily as a dry red wine. Two quite distinctive types of wine are produced. The first is a very fruity ver-

sion that brings forth the grape’s intense aromas of sour cherry, blackberry, and elder. They are meant and marketed to be consumed while fresh and young. Other growers ferment and/or age their Dornfelders in large casks or small barriques, focus on tannins and structure, and downplay the fruit aromas. These are usually rich, smooth, and harmonious wines. The wines have an unmistakably deep color.

Food affinities

Like other full-bodied reds, Dornfelder wines – particularly those with some age – are enjoyable during the cooler seasons of the year, when they’re delicious with full-flavored roasts, game, and cheese.

COLOR

violet to deep red
verging on black,
very dense

AROMA

reminiscent of elder,
blackberry

TASTE

tannic

BODY,
SUBSTANCE

full-bodied to rich



PORTUGIESER

Portugieser wines are uncomplicated, fruity, and fresh – easy drinking for everyday enjoyment. Because they aren’t overly tannic, they’re ready to drink during the spring after the harvest. There are no conclusive findings on the origin of the grape, but it made its way from Austria (18th century) to Germany (19th century).

Significance

In terms of vineyard area, Portugieser is the third most important red wine grape of Germany, after Spätburgunder and Dornfelder. The nearly 4,100 ha planted with Portugieser, or 4% of the country’s vineyard area, are concentrated in the Pfalz (more than 2,000 ha), Rheinhessen (1,550 ha), and the Ahr (40 ha). In all, the number of plantings has slightly declined in recent years.

Cultivation

The grape makes no particular demands on soil or site. Although damp and heavy soils are not suitable, it manages to grow in sandy soils that are low in nutrients. If there is no damage from winter frost, yields are reliable, even prolific. The grapes ripen early and achieve ripeness levels sufficient for QbA wines by the first half of September.

Vinification/Style

The grape must is usually pressed immediately or after a brief period of skin contact to produce Weiss-

herbst. The pale red color is well-suited for such a varietal rosé. Portugieser red wines usually have less alcohol than other reds. However, if yields are strictly controlled, the grape is capable of producing deep red, full-bodied red wines of substance.

Food affinities

Portugieser is prized as an uncomplicated, pleasant, medium-bodied, and fresh quaffing wine. Mild in tannins, it doesn’t need aging in order to be a harmonious, accessible wine. On the nose, it is fairly restrained, with hints of berry (red currant, raspberry, or strawberry), sour cherry or pepper. Portugieser is enjoyable with quite a number of foods. The rosé version is a popular summer wine.

COLOR

pale red
to ruby red

AROMA

reminiscent of red
currant, strawberry

TASTE

mild tannins

BODY,
SUBSTANCE

light to
medium-bodied



TROLLINGER

Trollinger is Württemberg’s premier red grape variety. In fact, these agreeable wines are known as the “Swabian national drink.” The grape probably originated in southern Tyrol or neighboring Trentino, where it is known as Vernatsch. It is possible, though, that Lombardy was its original home.

Significance

Between 1960 and 1990, the area planted with Trollinger in Germany grew by ca. 1,000 ha, reaching its peak at about 2,500 ha, a level it basically retained in the decade thereafter. Today, there are some 2,400 ha. Trollinger is the number one red wine grape in Württemberg, followed by Schwarzriesling (Pinot Meunier) and Lemberger. Except for a few growers in the Pfalz and Baden regions, with only about 30 ha, varietal statistics confirm that Trollinger is grown almost exclusively in Württemberg.

Cultivation

The grape prefers warm soils, particularly those based on marl and shell-limestone formations. Because it ripens late, even later than Riesling, it requires good sites that aren’t prone to frost damage. As a prolific grape with yields of 100 hl/ha, it can also thrive in alkaline soils that are low in nutrients and in vineyards with widely spaced rows. Must weights usually remain in the QbA range, ca. 70° Oechsle on average. Total acidity ranges from 7 to 10 g/l, which is relatively high for a red wine.

Vinification/Style

The majority of Trollinger wines are meant to be fresh, uncomplicated wines for everyday drinking. The harmonious wines are even more pleasant with a touch of residual sweetness. The light, fruity wines need no aging; they can be enjoyed the year after the harvest. Their delicate scent is reminiscent of strawberry or cherry. Usually light brick red to the eye, and in good years, even pale ruby red. Trollinger Weissherbst, a varietal rosé version, is also produced. Trollinger is often blended with Lemberger, another traditional grape of Württemberg. Last but not least, the juicy berries are also very tasty table grapes.

Food affinities

It goes without saying that a wine popular enough to be consumed nearly every day must be quite agreeable. The bread-and-butter wine goes down easily with a light dinner of cold cuts and cheese, but it’s also a good choice for white meat or pasta in tomato sauce. Lightly chilled Trollinger is a refreshing wine during the warmer seasons of the year.

COLOR

brick red
to pale ruby red

AROMA

reminiscent
of strawberry,
red currant, cherry

TASTE

mild tannins

BODY,
SUBSTANCE

light to
medium-bodied

Schwarzriesling (Müllerrebe)



SCHWARZRIESLING (PINOT MEUNIER)

This varietal is quite popular in Württemberg, but also has fans elsewhere. It is registered in the official list of varietals as Müllerrebe. The name derives from “Müller” and “meunier,” the German and French equivalents of miller, in reference to the hairy underside of the grape’s leaves – they look like they’ve been dusted with flour. It is assumed to have originated in Burgundy, where it has been known for well over 400 years. DNA profiling points to a spontaneous crossing of Traminer x Schwarzriesling as the parents of Pinot Noir. Other experts rule this out, contending that Pinot Meunier is a mutation of Pinot Noir. In France, the grape is a component in the traditional three-varietal Champagne cuvée.

Significance

In Germany, the majority of plantings are in Württemberg. Nevertheless, the grape accounts for some two percent of Germany’s total vineyard area. In the 1980s, Schwarzriesling grew from 1,000 to 2,000 ha; since then, this area has increased to 2,250 ha – 1,650 ha of which are located in Württemberg. It is of secondary importance in northern Baden, in Rheinhessen, in the Pfalz, and in Franken.

Cultivation

Compared with Spätburgunder, Schwarzriesling is less demanding of soil and site. Fairly uncomplicated to grow, it thrives in powerful fertile loess-loam soils. Yields and must weights are average. Yields are similar to the relatively low yields of Spätburgunder; must weights, slightly lower. Nevertheless, it reaches 70 to 80° Oechsle in normal years. Acidity levels are sometimes rather low.

Vinification/Style

Schwarzriesling wines are ruby red in color; have a fruity aroma similar to that of Spätburgunder; and in terms of body, fairly delicate. They are vinified in both dry and sweet styles. QbA wines predominate, but Kabinett and Spätlese qualities are also produced.

Food affinities

As an uncomplicated red wine for everyday drinking, the wines are especially popular in Württemberg, where they’re often sold in liter-sized bottles. Fuller-bodied versions go well with pork or lamb as well as mild cheese. As a wine with meals, it can be served as an alternative to Spätburgunder.

COLOR

ruby red

AROMA

reminiscent of red currant, cherry, raspberry, blackberry

TASTE

moderately tannic

BODY, SUBSTANCE

medium-bodied, rich



Regent

REGENT

A new crossing officially permitted since 1996, Regent posted enormous increases in vineyard area up to 2005. It is a crossing of Diana (Silvaner x Müller-Thurgau) and Chambourcin that was bred at the Institute for Grapevine Breeding Geilweilerhof in Siebeldingen/Pfalz. It is prized by organic wine-growers for its resistance to botrytis and mildew (downy and powdery).

Significance

Initially, Regent was planted in numerous experimental vineyards; today, it can be found in every German wine-growing region. Varietal statistics bear witness to growers' great interest in the grape, particularly at the outset, and to some extent today. From 1997 to 2005, the area devoted to Regent grew from 70 ha to more than 2,100 ha. and has remained stable since then. In all, it accounts for 2% of Germany's total vineyard area, and is planted primarily in Rheinhessen, the Pfalz, and Baden.

Cultivation

Early to ripen, above-average must weights, and high frost resistance enable Regent to be planted even in sites that are marginally suitable for red wine grapes. It shows good resistance to downy and powdery mildew.

Vinification/Style

Regent achieves must weight that even surpass those of Spätburgunder, with similar, moderate yields. As such, the wines are rich in substance. They are marked by pronounced tannins, fine acidity, and aromas reminiscent of cherry or blackberry. Regent wines are very intense in color, ranging from garnet red to deep red verging on black. The finest grapes are also vinified in barriques.

Food affinities

The wines are fairly accessible even in their youth. Regent partners well with meats that are intense in flavor, such as leg of lamb, oxtail ragout or game.

COLOR

garnet red
to deep red verging
on black

AROMA

reminiscent of black
cherry, blackberry,
currant

TASTE

tannic

BODY, SUBSTANCE

rich
to full-bodied



Saint Laurent

SAINT LAURENT

Based on DNA profiling, Saint Laurent or Sankt Laurent is a spontaneous crossing of a yet unknown variety and a Pinot. It was introduced into Germany from Alsace some 150 years ago and until 1990, the area under vine was very small. The name probably derives from St. Laurentius, whose name day (10 August) falls 10 to 12 days before Spätburgunder begins to ripen.

Significance

Since 1997, the grape variety has soared to great heights. The 670 ha planted in Germany are bascially confined to the Pfalz and Rheinhessen.

Cultivation

Bud burst is early (danger of May frost) and the grape develops quickly. As such, it can be cultivated in average sites. However, cool sites can lead to acidity levels that are too high. The grape grows well in deep or chalky soils. Yields are average, falling into the 70 to 80 hl/ha range. On average, Saint Laurent reaches a remarkable must weight of 80° Oechsle.

Vinification/Style

Given its high must weights and good levels of extract and acidity, the grape is capable of yielding powerful red wines with a fresh fruitiness. Occasionally, wines in the higher quality range are fermented and/or aged in barriques. The wines are deep red in color. Some of the fruitier versions have aromas reminiscent of cherry or wild cherry.

Food affinities

Fruitier style Saint Laurent wines go well with lighter dishes. Those with greater firmness or grip can stand up to heartier foods, including game and aged cheese.

COLOR	AROMA
ruby red	reminiscent of wild cherry
TASTE	BODY, SUBSTANCE
mild tannins	medium-bodied to rich

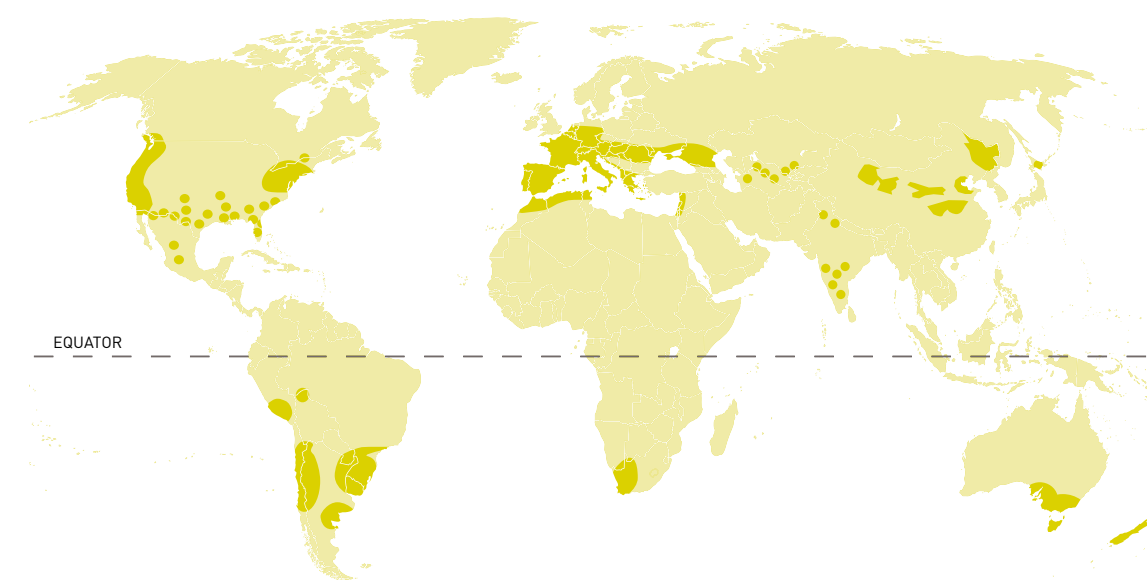


Crisp and slightly effervescent, fruity, hints of mineral – these are the traits that distinguish German white wines from their counterparts in other countries. This profile is shaped by the special climatic and soil conditions of Germany's wine-growing regions.

Apart from the Saale-Unstrut and Sachsen regions in the east, Germany's wine-growing regions are concentrated in the southern and southwestern part of the country. They number among the most northerly wine-growing regions of the world, right in the border zone between the warm, moist Gulf Stream climate to the west and the dry continental

climate to the east. The long growing season (the harvest sometimes extends into November) and the moderate warmth of summer make for wines that are more delicate and less alcoholic than those in southern wine-growing countries. Different soil types and grape varieties also contribute to the diversity of German wines.

VITICULTURE WORLDWIDE



THE REGIONS ACCORDING TO SIZE

Wine-growing region in ha	Vineyard area in ha	Proportion white : red in %
Rheinhessen	26,523	69.2 : 30.8
Pfalz	23,445	61.7 : 38.3
Baden	15,837	56.4 : 43.6
Württemberg	11,421	28.7 : 71.3
Mosel	8,871	90.8 : 9.2
Franken	6,109	80.6 : 19.4
Nahe	4,155	75.1 : 24.9
Rheingau	3,107	85.1 : 14.9
Saale-Unstrut	735	73.3 : 26.7
Ahr	559	14.8 : 85.2
Sachsen	478	81.0 : 19.0
Mittelrhein	456	85.1 : 14.9
Hessische Bergstrasse	436	79.1 : 20.9

THE REGIONS

The 13 wine-growing regions for quality wine production are located primarily in the southwestern part of Germany. Different types of soil, considerable differences in regional climate, as well as a region's traditional grape varieties all contribute to the proverbial diversity of German wines. A closer look at Germany's viticultural geography quickly shows that wine-growing is not confined solely to the southwest. The northernmost vineyards for quality wine production are near Potsdam, in the Werderaner Wachtelberg site, an exclave of the Saale-Unstrut wine-growing region. Due to climate change, the frontier of viable viticulture has been moving northward in recent years. In the meantime, there are even vineyards planted on the island of Sylt in the North Sea, although these grapes have been approved only for the production of Landwein, not quality wine. The easternmost German vineyard, the Königlicher Weinberg, lies in a suburb of Dresden, in the Sachsen region.

MAP OF GERMANY'S WINE-GROWING REGIONS





AHR

The Ahr is the northernmost wine-growing region in the western part of the country and one of Germany’s smaller regions. Its red wines, in particular, are appreciated well beyond the region’s borders. The protective Eifel Hills, the heat buildup within the narrow valley, and the flow of mild air from the Koblenz-Neuwied Basin enable red wine grapes, particularly Spätburgunder, to ripen well here. Ahr wines are sold at good prices as a specialty in wine shops and restaurants. The majority of the wines are purchased directly from the producer, thanks to the Ahr’s thriving tourist trade and proximity to the heavily populated Rhine-Ruhr area.

Location

Some 40 km south of Bonn, the Ahr River flows into the Rhine. From its source in Blankenheim to its confluence with the Rhine near Sinzig, it flows for 89 km through the wildly romantic, pristine landscape of the Ahr Valley. The Ahr flows from west/southwest to east/northeast, providing south-facing slopes. It passes through the wine villages of Altenahr, Mayschoß, Rech, Dernau, Walporzheim, and Heimersheim as it approaches the Rhine.

Climate

The Ahr is sheltered by the Eifel Hills. As such, annual precipitation is relatively low: the long-term average is 650 mm/25 in. The average annual temperature, 9.8°C/49.6°F, is also fairly low for a wine-growing region. Winters are comparatively mild, yet the danger of a spring frost is always possible. Thanks to its proximity to the Cologne Lowland, warmth generated by the Gulf Stream also reaches the Ahr and helps temper the climate. The microclimatic pockets that develop in the narrow part of the valley also have a positive effect on viticulture.

Soil

The Ahr Valley lies within the Rhenish Massif (a group of forested, low mountain ranges also referred to as the Rhenish Slate Mountains). Slate provides vines an excellent basis for ripening: it retains heat during the day and gently releases it during the night. The soil also consists of gray-wacke, loess-loam, gravel, and volcanic stone. From Ahrweiler into the Rhine Plain, the valley widens and the soils are less barren. The river terraces are covered with fertile loess.

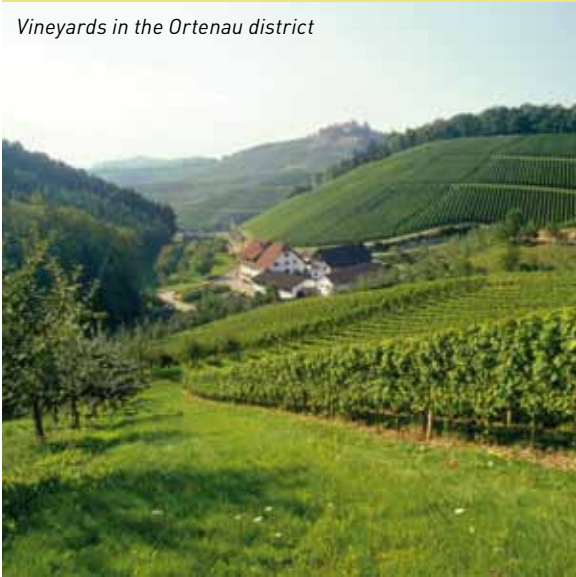
Grape varieties

With only about 560 ha of vines, the Ahr numbers among the smaller regions. Some 85% of the vineyards are planted with red wine grapes – a proportion higher than that of any other region. Various red varietals are cultivated, but above all, Spätburgunder, which accounts for more than 60% of the region’s total vineyard area. Portugieser and Frühburgunder, a strain of Spätburgunder that ripens two weeks earlier (and a rarity in Germany), are also grown in the Ahr. Riesling is the primary white wine grape.

THE AHR AT A GLANCE

<u>Location</u>	<i>bordered by the Ahr Hills in the northwest; protected by the Eifel Hills</i>
<u>Climate</u>	<i>mild and favorable (Cologne Lowland); very hot and humid in certain parts of steep sites</i>
<u>Soil</u>	<i>deep, rich in loess in the lower valley; stony, with some slate and volcanic stone in the central valley</i>
<u>Vineyard area</u>	<i>ca. 560 ha/1,400 acres; 1 district; 1 collective site; 43 individual sites</i>
<u>Grape varieties</u>	<i>Spätburgunder, Riesling, Portugieser, Frühburgunder</i>

Vineyards in the Ortenau district



BADEN

Baden is the southernmost and the third largest German wine-growing region, with ca. 15,800 ha. The region stretches from the Tauber Valley in the north to Lake Constance in the south. It is divided into nine districts, each with a geological and climatic profile as diverse as the wines they produce. Overall, the region is one of the warmest in all of Germany, a fact reflected in the typical grape varieties grown here. About 75% of all Baden wines are marketed by large and small cooperative wineries.

Location

Baden’s vineyards are in the southwest corner of Germany, stretching more than 400 km/250 mi through nine districts (from north to south): Tauberfranken, Badische Bergstrasse, Kraichgau, Ortenau, Breisgau, Kaiserstuhl, Tuniberg, Markgräflerland, and Bodensee (Lake Constance).

Climate

Baden has the sunniest (ø 1,700 hours of sun) and warmest (ø 11°C/52°) climate of Germany. As such, it is the only German wine-growing region that belongs to EU climate zone B, which is reserved for relatively warm regions. The climate is influenced by the region’s location between the ridges of the Palatinate Forest and the Odenwald, and between the Vosges Mountains and Black Forest. They offer protection from cold winds and keep heavy rains at bay. Between the southern Vosges and the Jura lies the so-called Belfort Gap (Burgundian Gate) through which warm Mediterranean air can flow into the Rhine Plain.

Soil

The variform Baden region includes all kinds of soil profiles. Shell-limestone and marl are typical in

the Kraichgau district and along the Tauber River. Farther south, in the Kaiserstuhl, Tuniberg, and Markgräflerland districts, the soils range from chalky or clayish marl deposits to rich loess and loam soils that are interspersed with volcanic soils. Heat-retaining moraine deposits predominate near Lake Constance.

Grape varieties

Be it Spätburgunder, Grauburgunder or Weissburgunder, the Pinot family thrives in Baden, particularly in the Kaiserstuhl and Tuniberg districts, where warmth and ideal growing conditions prevail. Yet, other varietals are cultivated as well. Markgräflerland is known for Gutedel, an ancient variety that yields neutral, harmonious wines. The Rieslings from the Ortenau are unmistakably mild in acidity. Rivaner, Riesling, and Schwarzriesling (Pinot Meunier) predominate farther north, in the Tauberfranken, Badische Bergstrasse, and Kraichgau districts. For the most part, the vineyards near Lake Constance are planted with Spätburgunder and Müller-Thurgau grapes. Badisch Rotgold is a regional specialty. Pale to light red in color, it is made from Grauburgunder and Spätburgunder grapes.

BADEN AT A GLANCE

<u>Location</u>	<i>from Lake Constance northward into the Upper Rhine Plain; along the Badische Bergstrasse/Kraichgau, all the way north to Tauberfranken</i>
<u>Climate</u>	<i>sunny and warm; the Kaiserstuhl is the warmest region of Germany</i>
<u>Soil</u>	<i>moraine deposits near Lake Constance; Tertiary chalk, clay and marl soils, enormous loess deposits, and volcanic soils in the Kaiserstuhl and Markgräflerland districts; shell-limestone and marl in the Kraichgau and along the Tauber River</i>
<u>Vineyard area</u>	<i>ca. 15,800 ha/39,000 acres; 9 districts; 16 collective sites; 306 individual sites</i>
<u>Grape varieties</u>	<i>Spätburgunder, Müller-Thurgau, Grauburgunder, Weissburgunder, Riesling, Gutedel</i>



Vineyards in Escherndorf



FRANKEN

Franken is the home of the Bocksbeutel, the flat, round-shaped bottle with a short neck. Of all Franconian wines, the best-known are the powerful, earthy Silvaners or Müller-Thurgau wines, which are usually vinified dry. For wine connoisseurs, Silvaner and Franken are an inseparable whole. The variety reaches top form in the shell-limestone soil along the Main River and brings forth very concentrated, earthy aromas. Red varietals are cultivated primarily in the western section of the region, in and around Bürgstadt and Klingenberg. Franken's image is enhanced by its moderate size and the recognition value of the Bocksbeutel.

Location

The region's 6,100 ha of vines lie on the northern border of the state of Bavaria, and are contained within the area lying between three forested, low mountain ranges – the Rhön in the north, the Steigerwald in the east, and the Spessart in the west – and the Tauber Valley in the south. The region stretches from Aschaffenburg to Schweinfurt (from west to east) along the W-shaped course of the Main River. All vineyards are planted on south-facing slopes of the Main River or in side valleys of its tributaries.

Climate

Franken lies within the continental climate zone, i.e., summers are dry; winters can be very cold. Under these climatic conditions, there is an annual frost-free growing season of between 160 and 190

days; an average of 1,600 to 1,750 hours of sun; an average annual temperature of 8.5-9.0°C/47-48°F; and an average annual precipitation of 500-600 mm/19.5.-23.4 in.

Soil

From west to east, the principal soils of Franken are weathered primitive rock and colored sandstone near Aschaffenburg; shell-limestone and loess near Würzburg; and colored and/or gypsum marl in the Steigerwald district. Wind-borne sand and heavy, clayish marl are found along the Main's loop near Volkach. Over the course of 60 million years, these soils developed as layers of earth from the deposits of a Triassic sea.

Grape varieties

Some 80% of Franken's vineyard area is planted with white varietals. Silvaner is the classic Franconian grape. Delicately aromatic Müller-Thurgau predominates, though, and is enjoying a renaissance at the hands of young growers who make and market it as an uncomplicated, youthful, fresh wine. Bacchus is the third most important white varietal and is regarded as a regional specialty. There is a red wine enclave in the western part of the region, where Spätburgunder thrives in the colored sandstone soil.

FRANKEN AT A GLANCE

<u>Location</u>	<i>between Aschaffenburg and Schweinfurt on the south-facing slopes of the Main River and its tributaries</i>
<u>Climate</u>	<i>predominantly continental: dry, warm summers and cold winters</i>
<u>Soil</u>	<i>weathered primary rock and colored sandstone in the west (Mainviereck); loam-loess and shell-limestone in the center (Maindreieck); and marl in the east (Steigerwald)</i>
<u>Vineyard area</u>	<i>ca. 6,100 ha/15,100 acres; 3 districts; 23 collective sites; 216 individual sites</i>
<u>Grape varieties</u>	<i>Müller-Thurgau, Silvaner, Bacchus, Riesling, Domina, Spätburgunder</i>

Vineyards near Zwingenberg



HESSISCHE BERGSTRASSE

With 440 ha of vineyards, the Hessische Bergstrasse is one of the smallest wine-growing regions of Germany, and somewhat smaller than the Mittelrhein, Sachsen, and the Ahr. The old Roman trade route *strata montana* (mountain road) straddles the border between the states of Hessen and Baden-Württemberg. The Hessian portion became an independent wine region under the German wine law of 1971; the vineyards farther south were incorporated into the Baden region, the district known as the Badische Bergstrasse. In the Hessische Bergstrasse, Riesling is the most important grape variety, covering nearly half of the region’s vineyard area. A high proportion of the wines are dry or off-dry in style, and are purchased directly from the producer.

Location

The heart of the region runs parallel to the Rhine in the foothills of the sheltering forested hills known as the Odenwald, nestled between the Main and Neckar Rivers. The vineyard area begins near Zwingenberg (south of Frankfurt and Darmstadt) and extends south to Auerbach, Bensheim, and Heppenheim, where the slopes are thickly clad with vines and orchards. There is also a small “island of vines” near Gross-Umstadt (southeast of Darmstadt).

Climate

As he traveled from Frankfurt along the Bergstrasse in April 1764, Emperor Josef II romantically enthused: “This is where Germany transforms into Italy.” The region’s mild climate is due primarily to the Odenwald, which protects it from cold northerly and easterly winds. The Rhine, Main, and Neckar act as heat reservoirs. The average annual temperature is about 10°C/50°F, with nearly 1,600 hours of sun, and 720 mm/28 in of precipitation. These are the marks of a climate with a long growing season and a region predestined for cultivating grapes.

Soil

Although the soils in the Hessische Bergstrasse are dry and low in nutrients, there is wind-borne sand that heats up quickly and fine-grained, deep, water-retaining loess. The subsoil is very old, thick, and weathered. Loess is a mineral-rich, fertile subsoil that brings forth powerful wines with a wealth of aromas. In the steep slopes near Heppenheim, there is also colored sandstone that was formed by detritus from the Rhine.

Grape varieties

The majority of Bergsträsser wines are vinified in a dry or off-dry style. Nearly half of the vineyard area is planted with Riesling, the region’s typical grape. This is supplemented by Müller-Thurgau, Grauburgunder, and Spätburgunder.

THE HESSISCHE BERGSTRASSE AT A GLANCE

<u>Location</u>	<i>nestled between the Neckar, Rhine, and Main Rivers; protected by the forested hills of the Odenwald</i>
<u>Climate</u>	<i>optimal solar radiation and sufficient rainfall</i>
<u>Soil</u>	<i>light soils with varying amounts of loess</i>
<u>Vineyard area</u>	<i>ca. 440 ha/1,100 acres; 2 districts; 3 collective sites; 23 individual sites</i>
<u>Grape varieties</u>	<i>Riesling, Spätburgunder, Grauburgunder, Müller-Thurgau</i>

Vineyards near Bacharach



MITTELRHEIN

The Mittelrhein is the spectacular stretch of the Rhine River between Bonn and Bingen known as the Rhine Gorge. Here the river has carved its course through the stone hills to form a steep, narrow valley. Most of the vineyards line steep slate cliffs that are dramatically beautiful, but extremely labor-intensive. The 65-km/40-mi stretch of the Mittelrhein between Bingen and Koblenz was added to the UNESCO World Heritage list (Upper Middle Rhine Valley) in 2002. The climate is mild, with many sunny days, and the Rhine acts as a giant heat reservoir – ideal conditions for Riesling, the region’s main grape. The character of the wines is influenced primarily by the weathered slate soil. As in the Ahr, the region and its wine-growers benefit from a thriving tourist industry, and the majority of small and medium-sized growers sell their wines directly to consumers.

Location

The region extends for more than 110 km/70 mi between Bingen and the Siebengebirge (“seven hills”) south of Bonn. From Bingen to Koblenz, most of the vineyards are on the left bank of the Rhine; from Koblenz to Bonn, on the right bank.

Climate

The Rhine Valley enables mild air flow into the region. Winters are mild; the Rhine acts as a heat reservoir; and there are seldom hard frosts. Spring is timely, and summer weather provides constant warmth and sufficient rainfall. The steep slopes also play a role: cold air quickly flows downward.

The average annual temperature is 9.3°C/48.7°F. All of these factors provide a long growing season that often extends into late autumn – excellent conditions, particularly for Riesling.

Soil

The soils from Bingen to Koblenz are primarily slate or a variation thereof: slate of the Hunsrück Hills; dark slate; and loam or loess-loam with slate debris. The typical acidity and mineral tones of the wines derive from the soil. Graywacke, a type of sandstone, is another component of the soil make-up. North of Koblenz, volcanic elements enter the picture. Pumice and tuff, as well as loess, lend the wines body and strength.

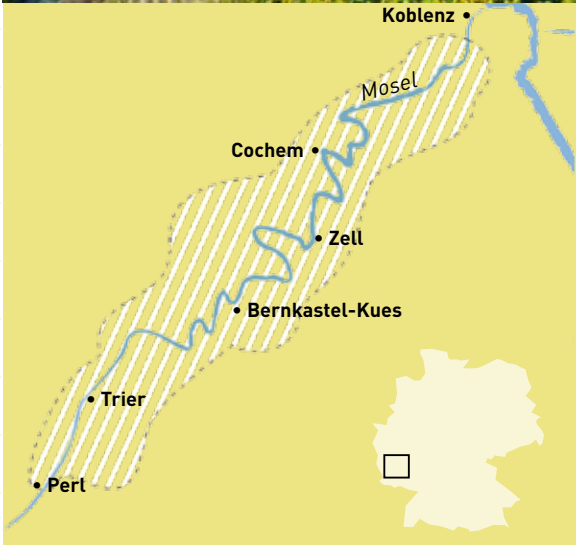
Grape varieties

Mittelrhein wine-growers favor traditional grape varieties. Thanks to the region’s climate and soil, growing conditions are ideal, particularly for Riesling. Delicate aromas, racy acidity, and pronounced mineral tones are the hallmarks of a Mittelrhein Riesling. It is the premier white varietal, planted in 70% of the region’s vineyard area. Kerner, Müller-Thurgau, and Pinots are also cultivated. Spätburgunder is the leading red varietal.

THE MITTELRHEIN AT A GLANCE

<u>Location</u>	100 km/620 mi on both sides of the Rhine, from the Nahe to the Siebengebirge Hills near Bonn
<u>Climate</u>	lots of sun hours; sites protected from the wind; the Rhine serves as a heat reservoir
<u>Soil</u>	weathered slate and graywacke; isolated pockets of loess; in the north, soils of volcanic origin
<u>Vineyard area</u>	ca. 460 ha/1,100 acres; 2 districts; 10 collective sites; 111 individual sites
<u>Grape varieties</u>	Riesling, Spätburgunder, Müller-Thurgau

Vineyards near Kröv



MOSEL

The region comprising the valleys of the Mosel River and its tributaries, the Saar and the Ruwer, is regarded as the oldest wine-growing region of Germany. The Romans introduced viticulture to the Mosel on a large scale. The Mosel is a traditional Riesling region with a high recognition level. Its reputation and large international following are largely due to the region’s high-quality Riesling wines. No less renowned are the steep vineyard sites themselves. With an angle of inclination of 65°, the Bremmer Calmont is the steepest vineyard of Europe. Nowhere else in the world are there more steep slopes than in Germany’s fifth largest wine-growing region.

Location

The region extends along the German portion of the Mosel River for some 243 km/150 mi, from Perl to Koblenz. The vineyards along its tributaries, the Saar and Ruwer, also belong to the region. It is divided into six districts. The Burg Cochem district on the Lower Mosel, from Koblenz to Zell, is often referred to today as the Terrassenmosel – the slopes are so steep that they have been terraced to enable vines to be cultivated. Bernkastel lends its name to the district between Briedel and Trier. Also known as the Middle Mosel, it is the heart of the region, with world-renowned wine villages and sites, such as Bernkasteler Doctor, Ürziger Würzgarten or Trittenheimer Apotheke. South of Trier, between Igel and Palzem, is the Obermosel district or Upper Mosel. The final stretch of vineyards along the German Mosel is known as the Moseltor (literally, “gateway to the Mosel”) and ends in Perl. The two other districts, Saar and Ruwer, are named after their respective rivers.

Climate

Thanks to its sheltered valley location, the region enjoys one of the warmest climates in Germany. The steep slate slopes soaring up from the rivers retain

the sun’s warmth during the day and gently release it at night. Fluctuations in temperature are minimal. Moderately cold winters and pleasantly warm summers with sufficient rainfall are the norm. The average annual temperature is ca. 10°C/50°F. The moderate climate along the 50th degree of latitude blesses the Mosel with an extremely long growing season, from April through October. In some years, grapes can continue ripening well into November.

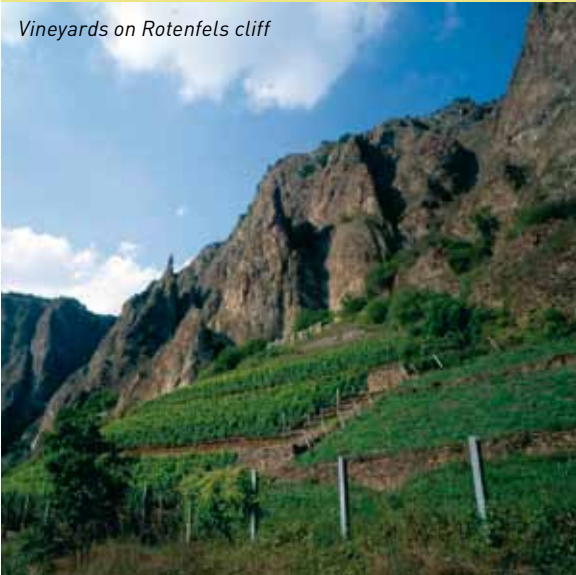
Grape varieties

Riesling, in particular, thrives in the slaty soil of the Middle and Lower Mosel, where vines must penetrate deeply to absorb minerals and other elements lying beneath the barren soil. The region also offers other varietal wines. Rivaner is the second most important grape. In the Upper Mosel, the ancient variety Elbling is at home, where it may have already been cultivated 2,000 years ago. It brings forth fresh, fruity, and uncomplicated dry white wines, as well as sparkling wines. Plantings of Grauburgunder, Weissburgunder, Auxerrois, and Chardonnay are increasing. They do quite well in the chalky soils of the Upper Mosel and yield excellent wines. Since the late 1980s, red wine grapes – mostly Spätburgunder and Dornfelder – have been cultivated again in all three valleys.

THE MOSEL AT A GLANCE

<u>Location</u>	<i>between the Hunsrück and Eifel Hills (within the Rhenish Massif); along the Mosel River and its tributaries, Saar and Ruwer</i>
<u>Climate</u>	<i>optimal balance of warmth and rainfall in the steep sites and valleys</i>
<u>Soil</u>	<i>near Luxembourg (Obermosel), shell-limestone and marl; in the Saar and Ruwer Valleys, Devonian slate; south of Zell, soft shale and silica-rich graywacke</i>
<u>Vineyard area</u>	<i>ca. 8,900 ha/22,000 acres; 6 districts; 19 collective sites; 524 individual sites</i>
<u>Grape varieties</u>	<i>Riesling, Müller-Thurgau, Elbling, Kerner</i>

Vineyards on Rotenfels cliff



NAHE

Situated between the Mosel and Rhine, the Nahe is one of Germany’s medium-sized wine-growing regions. Although vines have been cultivated here since Roman times, it was only under the German wine law of 1971 that the Nahe was declared an independent region. Soil structures vary considerably here, giving rise to an equally diverse number of flavor elements in the wines. Riesling is the most important variety, and those from the region’s steep slate slopes number among the finest of Germany.

Location

The region lies within the forested Hunsrück Hills in the temperate southwestern portion of Germany. It is ringed by the Soonwald-Nahe nature park in the north, the North Palatine Upland in the south, the Upper Nahe Upland in the west, and opens up toward the rolling hills and plateaus of Rheinhessen in the east. The area under vine primarily follows the course of the Nahe River from its confluence with the Rhine at Bingerbrück for about 60 km/36 mi south and west as far as Kirn. It is roughly divided into three zones (from east to west): the Lower Nahe, from Bingerbrück to Bad Kreuznach, the region’s largest town and main wine center; the Middle Nahe, from there to Schloss Böckelheim; and the Upper Nahe, upstream from Schloss Böckelheim to Martinstein near Kirn.

Climate

Protection from cold winds by the Hunsrück Hills, mild temperatures, low rainfall, and lots of sunshine provide excellent conditions for viticulture in the Nahe Valley. The climate in the Upper Nahe and its side valleys is influenced by cooler air masses, whereby the grapes tend to ripen later. In turn, the aromas and acidity structure of late ripening grapes, such as Riesling, have more time to develop. The resultant wines are racy, fruity, and elegant.

Soil

In the turbulent course of its geological evolution, the Nahe was endowed with a wealth of soil types: quartzite and slate in the lower valley near the Rhine; prophyry, melaphyre, and colored sandstone in the central valley; weathered soils and overlapping layers of clay consisting of sandstone, loess, and loam near Bad Kreuznach. With some 180 different soil types that quickly vary within a small area, the Nahe holds the record for soil diversity in Germany. This is matched by an equally broad spectrum of grape varieties and styles of wine.

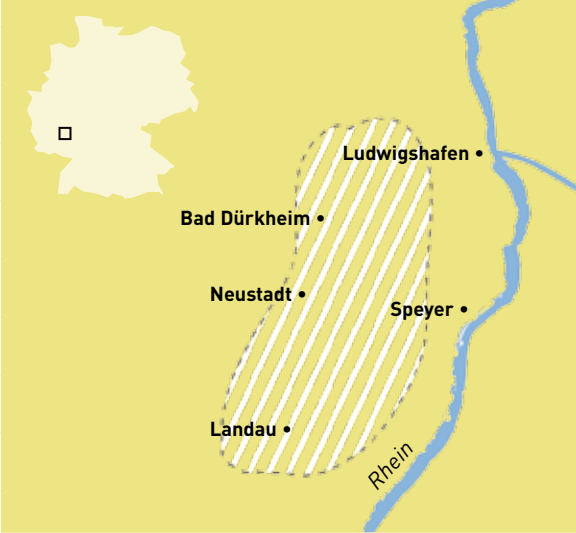
Grape varieties

Some 75% of the region’s grape varieties are white, led by Riesling, Müller-Thurgau, and Silvaner. Plantings of Weissburgunder and Grauburgunder have increased considerably in recent years. Dornfelder is the primary red variety, followed by Spätburgunder, Portugieser, and Regent. Pinots and particularly demanding red varietals do especially well in the lower Nahe between Bingen and Bad Kreuznach, where they develop high must weights and a moderate acidity.

THE NAHE AT A GLANCE

<u>Location</u>	<i>primarily in the side valleys of the Nahe River, from its confluence with the Rhine opposite Bingen westward toward Kirn</i>
<u>Climate</u>	<i>balanced, mild, and frost-free</i>
<u>Soil</u>	<i>quartzite and slate in the lower valley near the Rhine; porphyry, melaphyre, and colored sandstone in the central valley; weathered soils and overlapping layers of clay consisting of sandstone, loess, and loam near Bad Kreuznach</i>
<u>Vineyard area</u>	<i>ca. 4,100 ha/10,000 acres; 1 district; 6 collective sites; 284 individual sites</i>
<u>Grape varieties</u>	<i>Riesling, Müller-Thurgau, Dornfelder, Silvaner, Spätburgunder</i>

Vineyards near Neustadt



PFALZ

With 23,400 ha of vines, the Pfalz is one of Germany’s largest regions, second only to Rheinhessen. In the domestic market, every third bottle of German wine purchased comes from the Pfalz. Like Rheinhessen, the Pfalz has a large number of small, family-operated wine estates, renowned large estates, and cooperatives, who successfully market their wines in wine shops and restaurants. The proximity to Alsace, a flourishing tourist trade, and the self-confidence of successful winemakers have left their marks on the many styles of wine produced in the Pfalz. With about 9,000 ha of red varietals, more than 3,000 ha of which are Dornfelder, the Pfalz is Germany’s largest red wine region.

Location

The Pfalz is bordered by Rheinhessen to the north, Alsace to the south, and the Saarland to the west. To the east, on the opposite side of the Rhine, lies northern Baden. For ca. 80 km/50 mi, a thick ribbon of vines runs parallel to the foothills of the forested Haardt Mountains, an extension of the Vosges. The northern portion of the region, the Mittelhaardt, stretches from Zellertal (west of Worms) and Bockenheim southward to Neustadt in the heart of the region. This is the home of renowned wine villages, such as Bad Dürkheim, Wachenheim, Forst, and Deidesheim. The southern portion of the region, the Südliche Weinstrasse, extends from Maikammer and Landau to Schweigen on the border with France. It is by far the largest Bereich (wine district) in Germany.

Climate

The Pfalz is one of the warmest regions of Germany, with an average of 1,800 hours of sun and an average annual temperature of 11°C/52°F. The mild climate is due to the slopes of the Palatinate

Forest, which protect the vines from cold winds and excessive rainfall. Even almonds, figs, lemons, sweet chestnuts, and olives thrive in the Mediterranean climate of the Pfalz.

Soils

The northern and southern Pfalz vary considerably in their soil makeup. Light clays, sandstones, loams, marl, and combinations thereof prevail in the Mittelhaardt-Deutsche Weinstrasse district. To the south, the soils are loamier and thus, heavier and more fertile. In both districts, though, there are pockets of shell-limestone, granite, porphyry, and forms of slate.

Grape varieties

Wine-growers in the Pfalz tend to focus on traditional grape varieties, above all, Riesling. The “king of white grapes” is indisputably the region’s leading varietal, with more than 5,500 ha of vines. Furthermore, the Pfalz has been the number one Riesling region in the world since 2008. Weissburgunder and Grauburgunder are also on the rise. Additional white wine grapes cultivated in the Pfalz include Müller-Thurgau, Kerner, Silvaner, and Scheurebe. Nearly 40% of the vineyard area is devoted to red wine grapes. Dornfelder predominates, but Spätburgunder and Portugieser are also important.

THE PFALZ AT A GLANCE

<u>Location</u>	<i>from south of Worms to the French border; between the foothills of the Palatinate Forest eastward into the Rhine Plain</i>
<u>Climate</u>	<i>lots of sun hours; mild, variable climate</i>
<u>Soil</u>	<i>colored sandstone, chalky loam and clay, as well as marl, interspersions of shell-limestone; isolated pockets of granite, porphyry, and slate</i>
<u>Vineyard area</u>	<i>ca. 23,400 ha/58,000 acres; 2 districts; 25 collective sites; 323 individual sites</i>
<u>Grape varieties</u>	<i>Riesling, Dornfelder, Müller-Thurgau, Portugieser, Spätburgunder, Grauburgunder, Kerner, Weissburgunder</i>



Eltviller Steinberg



RHEINGAU

The Rheingau numbers among the regions with the highest percentage of Riesling (nearly 80%) and exports a high portion of its wines. The region is known for dry and off-dry Rieslings with a healthy acidity and full-bodied Spätburgunder red wines. Grapes can fully ripen here, thanks to the geological structure of the soil and the optimal climate along the Rhine. Even during the summer, sufficient moisture is available to the grapes.

Location

The region extends from the Lower Main east of Wiesbaden to Lorchhausen north of Rüdesheim. In this stretch of the the Rhine, the river interrupts its south-north course and flows from east to west, thereby creating south-facing slopes that enable the grapes to take full advantage of solar radiation. Reflections from the water’s surface and the heat-retaining soils create ideal growing conditions.

Climate

The Taunus Hills provide natural protection from cold winds and torrential rainfall. With an average annual temperature of 10.6°C/51°F, the climate is quite mild. Figs, olives, and apricots are often found growing in Rheingau gardens, underscoring the Mediterranean nature of the climate. Average annual precipitation of ca. 500 mm/19.5 in and 1,600 hours of sun round out the mild climate profile.

Soil

There are three soil zones in the Rheingau. In the west (Rüdesheimer Berg sites, Lorch, and Assmannshausen), heat-retaining slate and/or phyllite slate prevail. In the central and eastern Rheingau, sandy loam and loess, both of which retain water well, are found in sites at a low altitude not far from the Rhine; sites at a higher altitude some distance from the river contain Taunus quartzite (Lorch) as well as sericite gneiss (Hallgarten, Kiedrich, Wiesbaden) over a layer of loess and Tertiary sediments.

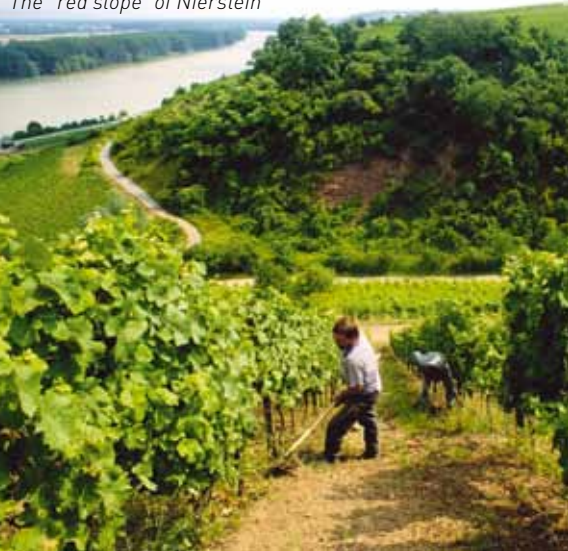
Grape varieties

In contrast to their colleagues to the south, Rheingau growers focus primarily on two traditional varieties: Riesling and Spätburgunder. Nearly 80% of the Rheingau’s vineyard area is planted with Riesling vines. The demanding, late-ripening varietal thrives in the Rheingau, where it develops typical mineral notes and a well-structured acidity. Spätburgunder is the second mainstay of Rheingau growers. It is cultivated throughout the region, but above all, in Assmannshausen. Very small quantities of Müller-Thurgau wines are produced, and consumed primarily as the everyday wines of the growers themselves.

THE RHEINGAU AT A GLANCE

Location	from near the confluence of the Main River with the Rhine near Wiesbaden, stretching westward to Rüdesheim and Lorchhausen (right bank of the Rhine)
Climate	protected by the Taunus Hills; mild winters and warm summers
Soil	slate, quartz, gravel, and sandstone; deep, mostly chalky soils consisting of sandy loess or loess; phyllite slate (for red varieties)
Vineyard area	ca. 3,100 ha/7,700 acres; 1 district; 11 collective sites; 129 individual sites
Grape varieties	Riesling, Spätburgunder

The “red slope” of Nierstein



RHEINHESSEN

In terms of size, Rheinhessen is the largest wine-growing region of Germany. Its 26,500 ha of vines are situated to the west of the great bend of the Rhine at Mainz. The region is associated with a great number of grape varieties. Its motto – “land of a thousand hills” – reflects its landscape of gentle, rolling hills. Rheinhessen wines belong to the core product range in the retail and hospitality business. The region is also very export oriented. The wine villages Nackenheim, Nierstein, and Oppenheim along the Rhine Terrace are highly regarded in international circles. Its mineral-rich slopes and proximity to the Rhine provide ideal growing conditions for Riesling and other late-ripening varieties. While the majority of large, self-marketing and exporting wine estates are at home in the Rhine Terrace, the estates in the rural heart of the region are medium-sized family operations and bulk producers.

Location

The wine-growing region takes its name from an administrative area of the same name in the state of Rheinland-Pfalz. It is not geographically related to the state of Hessen. Historically, the province of Rheinhessen belonged to the the Grand Duchy of Hessen from 1816 to 1919. The rolling hills of Rheinhessen are situated between Mainz, Worms, Alzey and Bingen. The eastern boundary is the Rhine, which is where the villages of Oppenheim and Nierstein are located.

Climate

The climatic conditions for viticulture are optimal. Sheltered by the Odenwald, Taunus, Hunsrück, and North Palatine Upland, the region has a mild average annual temperature of 11°C/52°F. With warm summers, mild winters, little rainfall, and 1,700 hours of sun each year, the region is one of Germany’s warmest wine-growing regions. Rheinhessen numbers among the driest regions of central Europe.

Soil

Rheinhessen’s soil profile is diverse. Loess and wind-borne sand are widespread; quartzite, porphyry, slate, and volcanic stone are also present, as are various clays, sandstones, and gravels. Rotliegend(les), a bright red mix of slaty clay and sandstone, is found around Nierstein in the east and in the western portion of the region.

Grape varieties

The various soils and microclimates enable a great number of grape varieties to be cultivated in Rheinhessen. The proportion of white to red varieties is 70 to 30%. Although the area devoted to red wine grapes has more than doubled in the past decade, focus has started shifting back to white varieties. Rheinhessen is home to the world’s largest area devoted to Silvaner (over 2,450 ha). Nevertheless, Müller-Thurgau is the leading grape, followed by Riesling and Dornfelder. More Dornfelder is planted in Rheinhessen than in any other German wine-growing region. Together with the Pfalz, Württemberg, and Baden regions, Rheinhessen is one of Germany’s largest red wine regions. Ingelheim, in particular, is known as the “red wine village.”

RHEINHESSEN AT A GLANCE

Location	the rectangle between Mainz, Bingen, Alzey, and Worms
Climate	mild average temperatures with lots of sun hours and sufficient rainfall
Soil	loess, sediments/weathered soils, fine-grained sand with marl, weathered quartzite and porphyry
Vineyard area	ca. 26,500 ha/65,500 acres; 3 districts; 24 collective sites; 432 individual sites
Grape varieties	Müller-Thurgau, Riesling, Dornfelder, Silvaner, Portugieser, Spätburgunder

Vineyards near Freyburg



SAALE-UNSTRUT

The region is named after its two main rivers, and the vineyards – most of which are terraced – lie in the narrow valleys of the Saale and the Unstrut. Situated along the 51st degree of latitude, Saale-Unstrut is the northernmost region approved for quality wine production in Germany. The northerly location and continental climate bring forth wines of great finesse with a lively acidity. With ca. 735 ha of vines, it is considered to be one of Germany’s smaller wine-growing regions. Traditionally, most of the wines are vinified dry.

Location

Vineyards are primarily cultivated around Freyburg and Naumburg in southern Sachsen-Anhalt and near Bad Kösen in northern Thüringen, although there is a pocket of vines near Potsdam in Brandenburg. The lion’s share (600 ha) lies in Sachsen-Anhalt.

Climate

Saale-Unstrut is sheltered by the Harz Mountains and forested hills of the Thüringer Wald. With an average anual precipitation of 500 mm/19.5 in, it is one of the driest regions of Germany. The influences of the continental climate don’t make life easy for wine-growers: hard frosts in the winter and spring are not unusual; considerable fluctuations in temperature lead to a natural reduction in yields. In order for grapes to ripen at all, vines must be planted in protected sites, particularly in

the river valleys, where pockets of warmth develop and ensure a mild microclimate.

Soil

The colored sandstone that is widespread in the region retains water well. Vines also thrive in the heat-retaining shell-limestone soils. Rich copper schist, a fairly rare claystone, is found in the vineyards near the Mansfeld Lakes (north of Freyburg).

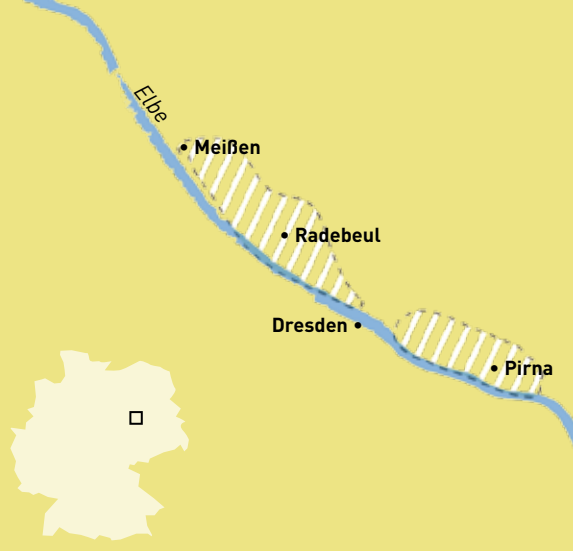
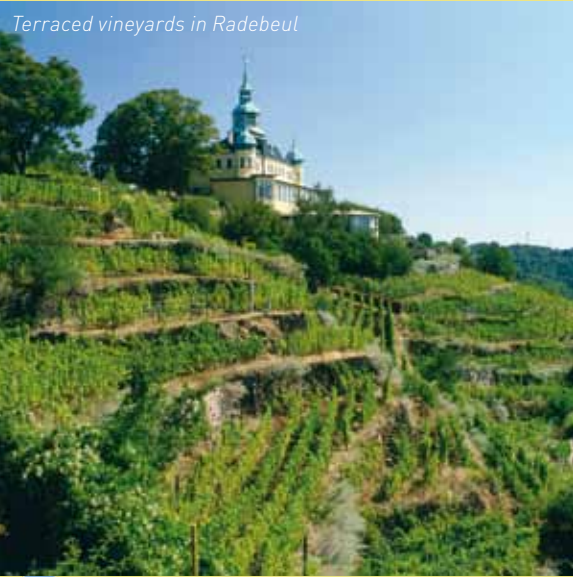
Grape varieties

Some 30 varietals are cultivated, providing quite a diversity of wines to taste and compare. The leading variety is Müller-Thurgau, which brings forth wines with a remarkable finesse here, thanks to low yields. Saale-Unstrut growers are particularly proud of their Weissburgunder wines, but also their Rieslings and Silvaners, varietals that are also traditional in the region. One fourth of the vineyard area is planted with red wine grapes, above all, Dornfelder, Portugieser, Spätburgunder, and Zweigelt. These are rarities that usually sell out very quickly.

SAALE-UNSTRUT AT A GLANCE

Location	in the valleys of the Saale and Unstrut Rivers
Climate	average annual temperature of over 9°C/48.2°F and little rainfall
Soil	shell-limestone, colored sandstone
Vineyard area	ca. 735 ha/1,800 acres; 3 districts; 4 collective sites; 39 individual sites
Grape varieties	Müller-Thurgau, Weissburgunder, Riesling, Silvaner, Dornfelder, Portugieser

Terraced vineyards in Radebeul



SACHSEN

Where viticulture comes to an end near Bonn – on the 51st degree of latitude – viticulture on the Elbe begins. Sachsen is the most northeasterly wine-growing region of Germany. That top-quality wines, particularly white wines, can even be produced here bears witness to a very favorable climate, which in Sachsen is the strong influence of a continental climate. Provided there is sufficient rainfall, the continental climate brings with it a high average annual number of sunny days that provide optimal conditions for grapes to develop and ripen. The region’s vineyards are located primarily on the northeastern slopes of the Elbe. The wines have less acidity and are more neutral than the wines of Saale-Unstrut.

Location

The majority of Sachsen’s vineyards lie east and west of Dresden, on the stretch of the Elbe between Meissen and Pirna. There are also small areas of vines cultivated farther north, in Schlieben (Brandenburg) and in Jessen (Sachsen-Anhalt) in the Elstertal district.

Climate

The continental climate is the primary influence on viticulture in Sachsen, which specifically means warm summers and cold winters. The danger of frost in winter is extremely high and can effect a natural reduction in yields. There is sufficient rainfall during the long growing season. The vines are sheltered by the surrounding Central Uplands, such as the ridges of the Ore Mountains, Elbe Sand-

stone Mountains of “Saxon Switzerland,” and the Lusatian Highlands. The vines benefit from the temperature fluctuations of mild days and cool nights. The ca. 1,600 hours of sun every year also have a positive influence on wine quality. The average annual temperature is about 9°C/48.2°F. The terraces overlooking the Elbe retain heat and water well.

Soil

The special character of a Saxon wine depends upon the different types of soil in its vineyard of origin. The Elbe Valley has numerous geological formations. During the main phase of folding in the Ore Mountains, which took place in the Lower Carboniferous Period, rocks of the Meissen Granite Syenite Massif were forced to the surface. Layers of sandstone and spongolite dating from the Upper Cretaceous Period partially cover the layers of syenite. These, in turn, are partially overlaid by loess and wind-borne sand deposits formed during and after the (Pleistocene Epoch) Ice Age.

Grape varieties

White wine grapes prevail in Sachsen. The proportion of white to red varieties is about 80 to 20%. Müller-Thurgau, Riesling, and Weissburgunder are the main white grapes. The Riesling x Courtillier Musqué crossing Goldriesling, classified (permitted) only in Sachsen, is a regional specialty. In addition, there are a few plantings of the ancient varietal Elbling – otherwise found only in the Upper Mosel. Saxon wines account for less than one percent of total German wine production. As such, these wines are seldom found in wine shops or restaurants outside the region.

SACHSEN AT A GLANCE

<u>Location</u>	<i>in the valleys of the Elbe River and its tributaries between Pirna, Dresden, Meissen, and Diesbar-Seußlitz (ca. 55 km/34 miles); Bereich Elstertal</i>
<u>Climate</u>	<i>mild average temperatures, medium rainfall</i>
<u>Soil</u>	<i>weathered granite and granite-porphry, loam, loess, and sandstone</i>
<u>Vineyard area</u>	<i>ca. 480 ha/180 acres; 2 districts; 4 collective sites; 17 individual sites</i>
<u>Grape varieties</u>	<i>Müller-Thurgau, Riesling, Weissburgunder</i>

The loop of the Neckar River near Mundelsheim



WÜRTTEMBERG

Württemberg is the fourth largest, and together with Baden, most southerly German wine-growing region. It is known for its broad range of red varieties seldom found elsewhere in Germany, such as Trollinger, Lemberger, and Schwarzriesling. Today, about 80% of the region’s wines are produced by cooperatives. In former times, sales were primarily regional; today, the wines are increasingly available in the overall domestic market, but seldom exported.

The Swabians are a thirsty folk: their average annual per capita wine consumption is about double that of elsewhere in Germany, not least because of their love of Trollinger, the quaffing wine of choice.

Location

Württemberg’s vineyards line the valleys of the Neckar River and its tributaries, the Rems, Enz, Kocher, Jagst, and Tauber, in the area between Reutlingen (near Tübingen) and Bad Mergentheim. There’s also a Württemberg wine exclave between Ravensburg and Kressbronn and includes the vineyards on the shore of Lake Constance in the Bavarian Bodensee district near Lindau, Wasserburg, Nonnenhorn, und Hattgau.

Climate

The Black Forest and Swabian Jura buffer the vineyards from strong, cold winds and excessive rain. Vineyards near Lake Constance and the Neckar and its tributaries receive plenty of sunshine. Summers can be hot and dry; winters, sometimes frosty enough to damage the vines. Red wine grapes, in particular, benefit from the pockets of warmth that can develop along the rivers – in conjunction with heat-retaining soils.

Soil

The soils vary from steep, rocky slopes interspersed with shell-limestone in the heart of the

region to marly soils along the Upper Neckar, which can contain sediments of sand, clay, and marl. In the Remstal Valley and around Stuttgart, volcanic stone is widespread. Sediments of Tertiary deposits, vestiges of glacial shifting, prevail around Lake Constance.

Grape varieties

Trollinger, the region’s leading variety, feels very much at home on the slopes lining the rivers. The fresh, juicy red wine is known as Württemberg’s “national drink.” Riesling is number one white wine grape and second only to Trollinger in area under vine. The majority of vineyards are planted with red varieties: Schwarzriesling, Lemberger, and Spätburgunder. Württemberg specialties, such as Lemberger and Trollinger, are seldom cultivated elsewhere.

WÜRTTEMBERG AT A GLANCE

<u>Location</u>	<i>between Reutlingen and Bad Mergentheim; Stuttgart and Heilbronn are main wine centers</i>
<u>Climate</u>	<i>mild average temperatures; valley sites along the Neckar River; protected by the Black Forest and Swabian Jura</i>
<u>Soil</u>	<i>various marl formations and shell-limestone</i>
<u>Vineyard area</u>	<i>ca. 11,400 ha/28,000 acres; 9 districts; 17 collective sites; 210 individual sites</i>
<u>Grape varieties</u>	<i>Trollinger, Riesling, Schwarzriesling, Lemberger, Spätburgunder</i>

GEOGRAPHICAL OVERVIEW: REGIONS, DISTRICTS, AND LANDWEIN REGIONS

13 bestimmte Anbaugebiete	41 Bereiche	26 Landweingebiete
Ahr	Walporzheim/Ahrtal	Ahrtaler Landwein, Landwein Rhein
Baden	Bodensee, Markgräflerland, Kaiserstuhl, Tuniberg, Breisgau, Ortenau, Badische Bergstrasse, Kraichgau, Tauberfranken	Taubertäler Landwein, Badischer Landwein, Landwein Oberrhein, Landwein Rhein-Neckar
Franken	Mainviereck, Maindreieck, Steigerwald	Landwein Main, Regensburger Landwein
Hessische Bergstrasse	Starkenburg, Umstadt	Starkenburger Landwein, Landwein Rhein
Mittelrhein	Loreley, Siebengebirge	Rheinburgen Landwein, Landwein Rhein
Mosel	Burg Cochem, Bernkastel, Obermosel, Moseltor, Saar, Ruwertal	Landwein der Mosel, Saarländischer Landwein, Landwein der Ruwer, Landwein der Saar, Landwein Rhein
Nahe	Nahetal	Nahegauer Landwein, Landwein Rhein
Pfalz	Südliche Weinstrasse, Mittelhaardt/Deutsche Weinstrasse	Pfälzer Landwein, Landwein Rhein
Rheingau	Johannisberg	Rheingauer Landwein, Landwein Rhein
Rheinhessen	Bingen, Nierstein, Wonnegau	Rheinischer Landwein, Landwein Rhein
Saale-Unstrut	Thüringen, Schloss Neuenburg, Mansfelder Seen	Mitteldeutscher Landwein
Sachsen	Meißen, Elstertal	Sächsischer Landwein
Württemberg	Remstal-Stuttgart, Oberer Neckar, Württembergisch Unterland, Württ. Bodensee, Bayer. Bodensee, Kocher-Jagst-Tauber	Schwäbischer Landwein, Bayer. Bodensee Landwein*, Landwein Neckar, Landwein Rhein-Neckar
not within a specified region		Mecklenburger Landwein
not within a specified region		Brandenburger Landwein
not within a specified region		Schleswig-Holsteinischer Landwein

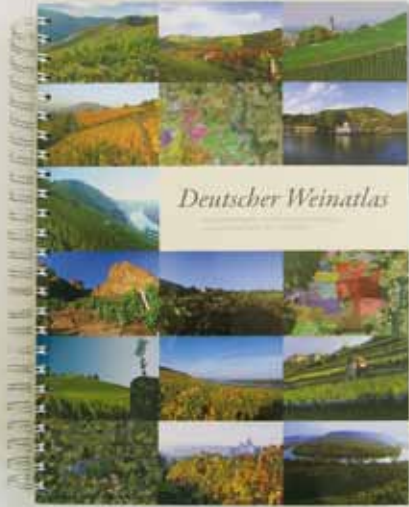
* Bavarian portion of Württemberg


Deutscher Weinatlas

The German Wine Atlas is an ideal reference book for anyone interested in knowing the precise origin of the quality and Prädikat wines of Germany’s wine-growing regions. On its 267 pages, the standard work affords a complete overview – for the first time ever, based on aerial photos on a scale of 1:70,000 – of all 2,660 individual sites, 160 collective sites, and 41 districts of Germany’s 13 wine-growing regions.

Readers will appreciate the clear structure of the wine atlas. All regions are alphabetically ordered, with vineyard sites listed from north to south and marked in different colors. The site register in the appendix lists all vineyard sites, making it particularly easy for readers to locate a specific appellation of origin within the series of maps. From Abenheimer Klausenberg to Zwingenberger Steingeröll, every site is listed alphabetically according to the name of its respective wine village. In addition, there’s a register of all individual sites listed according to region, district, and collective site.

The atlas is available in bookshops or the German Wine Institute’s online shop at: www.deutscheweine.de. Additional details for readers outside of Germany are available by contacting: info@deutscheweine.de.





The path from vine to bottle involves many working steps. Innovations in vineyard and cellar techniques during the past few decades have been vital to viticulture in Germany's wine-growing regions. Extensive scientific research has contributed to definite improvements in wine quality. It can be rightly said that never before has there been as much good and truly excellent German wine produced as today. At the same time, the caliber of German oenologists and viticultural specialists has never been higher – it's no coincidence that these experts are in demand at leading wine enterprises worldwide. Their know-how in all areas of viticulture and winemaking are highly prized.

WORK IN THE VINEYARD

The wine-grower must tend to many tasks in the vineyard throughout the entire year – pruning and training the vines, soil care, plant protection and pest control, and not least, harvesting the grapes.

In January or February, the old wood is pruned away, a procedure that definitely influences the potential yield and ultimately, the quality of the wine. The number and length of canes and their shoots also play an important role. Quality-conscious growers generally reduce the number of canes per vine to two short ones or one long one. Simply letting vines "go wild" in order to produce as much fruit as possible is fairly uncommon, not only due to legal yield restrictions. Many growers have come to realize that today, with a worldwide surplus of wine, quality is a vital competitive factor – and quality begins in the vineyard. Vine prunings are usually mechanically chopped or crushed, then worked back into the soil to improve the humus supply. To this day, the very labor-intensive task of pruning by hand remains the norm, although mechanical measures have been developed. Large estates need two to three months to complete this work.

Pruning



Trellis training



Foliage treatment



Vineyard activities peak in the springtime (from March to April). Before bud burst, the vine’s shape takes form through bending and typing the canes in order to ensure an adequate nutrient supply to the shoots. The usual systems of training, pendulum or half bow, involve stretching and fastening canes along a wire. Following this step, soil cultivation begins in order to optimize growing conditions for the vine. Mechanical plowing and seeding for green cover, as well as the natural growth of plants in the vineyard, bring the soil to life and support the natural, biological activity of the soil. Organic nutrients, e.g., manure, straw or compost, as well as supplementary minerals, e.g., magnesium, lime or phosphate, are also added at this time. Today, economical and environmental factors play a great role in how vineyards are fertilized. Modern methods of soil analysis easily help determine where there are deficits. Carefully planned fertilization and green cover also help avoid ground water pollution.

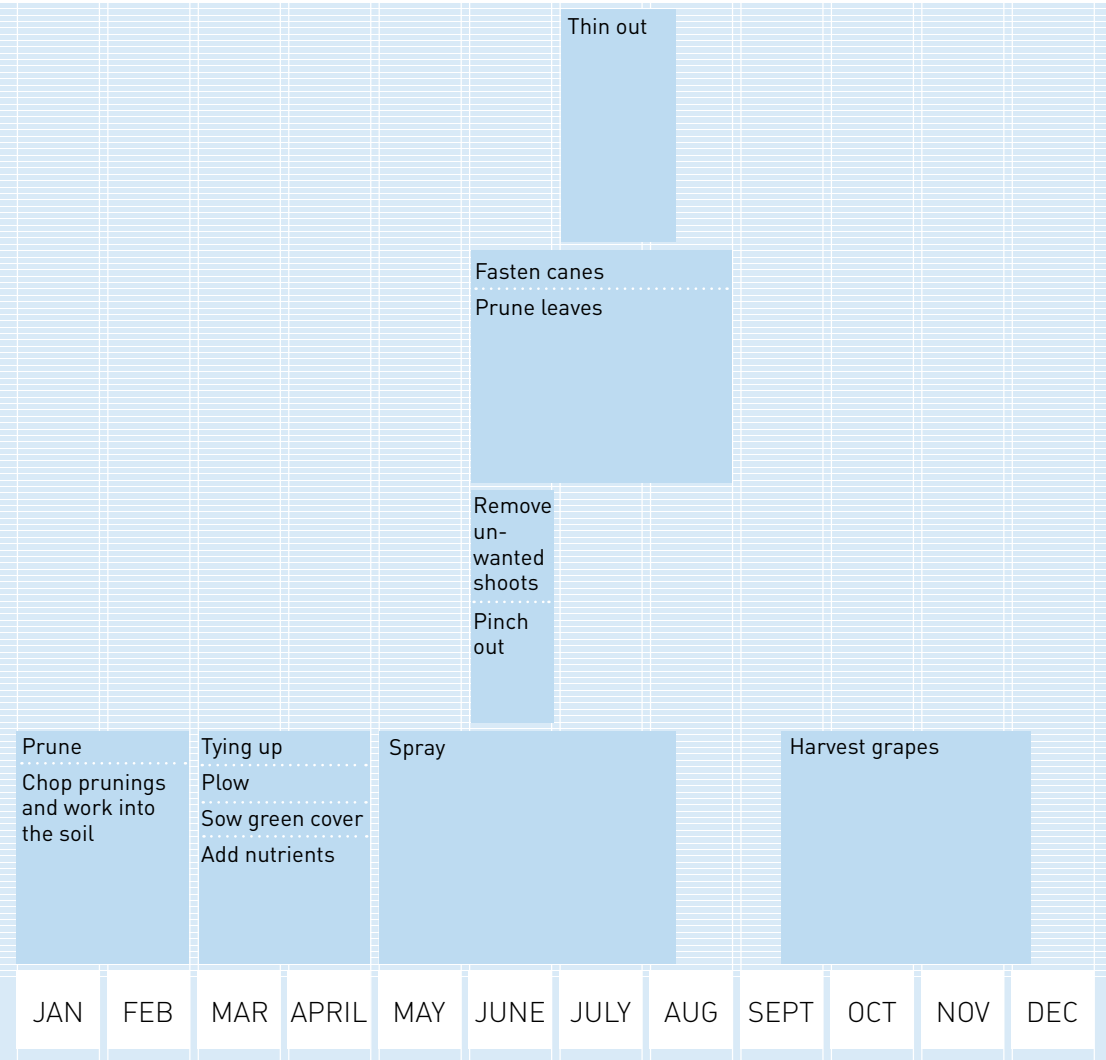
“As little as possible, as much as necessary” is the motto of modern wine-growers with regard to spraying to combat vine pests and fungus disease. Starting with healthy vines, i.e., planting vines that have been grafted onto suitable rootstock, for example, also helps reduce the incidence of disease and damage. To help keep grapes healthy, growers spray them from four to seven times between May and August, depending on the weather.

Another labor-intensive phase begins after blossoming in June. Ideally, the blossoming period (the self-pollination phase that leads to berry formation) is not prolonged. That could lead to coulure (blossoming without fertilization) or millerandage (development of uneven-sized berries). Insufficiently fertilized blossoms wither and/or drop off in windy or rainy weather, thereby seriously reducing potential yield. Removing unwanted shoots promotes growth. Growers also prune clusters in order to reduce yields and improve quality.

Between June and August, a thick leaf wall develops that is kept in shape by tying or binding the shoots. Healthy, i.e., green, foliage is very important for assimilation in the leaves. Nevertheless, some of the leaves must be removed in order to

increase sun penetration and improve air circulation. Leaf pruning in July and August also regulates the height of the vine. Today, this work is usually done by machine.

YEAR-ROUND WORK IN THE VINEYARD



Measuring must weight with a refractometer
20°C (68°F)



Until the beginning of August there are still means of influencing the quantity and quality of the grapes. Thinning out some of the pea-sized berries strengthens those left on the bunch. More and more growers are using this method to improve quality. Starting in mid-August, the grapes clearly begin to ripen (veraison). The amount of sugar in the berries rapidly increases as the acidity decreases (particularly the malic acid; the tartaric acid is retained).

Depending on the summer weather and the physiological ripeness of the grapes, the harvest traditionally begins in mid- or late September. Rainfall at this time is not desired, because at this stage of ripeness, the grapes would absorb the water and the wetness would encourage rot. Growers can measure how ripe the grapes are with the aid of an optical instrument, a refractometer, which helps determine the optimal time to begin picking. The actual start of picking depends on the grape variety, vineyard site as well as ripeness. The so-called physiological or optimal ripeness level of the grapes factors in the condition and/or color of the berry skin, elasticity of the pulp, ripeness of the seeds, and actual taste of the berry. When as many of these criteria as possible have been met, the ideal time to harvest has arrived. Physiological ripeness, then, is an essential component of the “inner quality” of a wine.

In the past, the start of the harvest was regulated by local authorities who set the dates for the main harvest and, somewhat thereafter, the Spätlese harvest. This regulation was abolished in autumn 1993. Today, the individual grower is responsible for deciding when to begin. Growers are still required to supply the government with harvest-related data,

e.g., quantity and origin of harvested grapes, type of harvest, and must weights, which are recorded in a *Herbstbuch* (harvest diary). “Type of harvest” refers to how selectively the grapes were harvested and is expressed as a Prädikat. This is one of the prerequisites – as is meeting minimum must weight requirements – for a wine’s potential quality classification (see the chapter “Recognizing quality”).

In flat or gently sloping sites, vines are often harvested mechanically. The grapes for Beeren- and Trockenbeerenauslese, however, must be picked by hand. The law also requires all growers to submit a final harvest report by 15 January of the year after the harvest. This enables the authorities to monitor total production and, if necessary, deal with surplus production. Each wine-growing region has specific yield limitations. In general, if a grower exceeds the limit, the surplus quantity cannot be marketed. However, there are exceptions.

In order to maintain wine quality and avoid surplus yields, European Union wine law requires maximum yields to be established; the individual state governments set the limits.

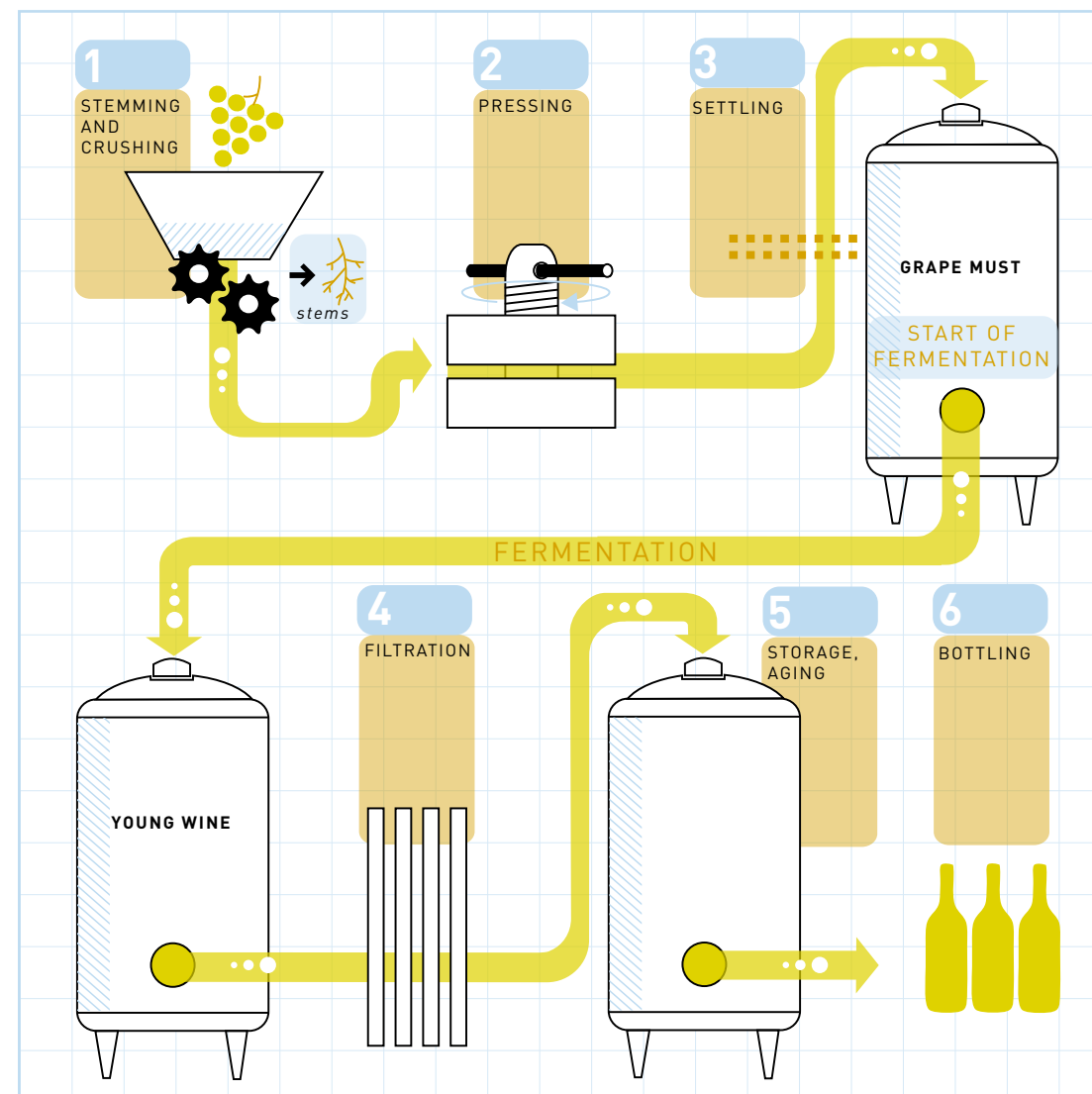
Mechanical harvester



WORK IN THE CELLAR

According to German wine law, wine is the product obtained exclusively by the complete or partial alcoholic fermentation of fresh or crushed grapes or grape must. It sounds so simple, but before a bottled wine finds its way to the consumer, the cellar master has much to accomplish.

THE PRODUCTION OF WHITE WINE



The production of white wine

In theory, the production of white wine is a simple matter: white grapes are pressed and the juice is allowed to ferment. In practice, however, there are numerous ways and means of producing wine. The overall process is outlined below.

Crushing and Pressing

After picking, the freshly harvested grapes are mechanically stemmed and crushed. This yields a stem-free mash consisting of pulp, skins, seeds, and juice. The mash can then be left standing to extract aroma/flavor substances, color (phenols and flavonoids), and tannins. Whether or not the wine-maker opts for standing time, the mash ultimately heads for the wine press, where it is gently pressed. This yields must, or simply put, grape juice.

During the past few years, some wine estates have decided to dispense with stemming, crushing, and mash settling, and proceed directly to pressing. Whole cluster pressing is particularly gentle and results in less cloudy must that contains fewer tannins.

Must treatment, chaptalization, and fermentation

The solids that remain behind in the press after pressing – skins and seeds – is referred to as *Trester*, or grape pomace. After pressing, the must is very cloudy and still contains a number of grape solids that are removed prior to fermentation since they could adversely affect the taste of the final wine. There are a number of ways to remove these solids. The traditional method is to simply let the must clarify itself through sedimentation (settling), i.e., gravity forces the heavy particles to fall to the bottom of the tank. Filtration is another option.

Now the relatively clear must can ferment into wine. Usually, the must is seeded or inoculated with specially selected cultured yeasts to ensure



a clean, even fermentation. Some growers prefer to rely upon the indigenous yeasts that are found naturally in vineyards and cellars to start a spontaneous fermentation. The cloudy, yeasty product still in the process of fermentation is known as *Federweisser* (depending on region, also called *Bitzler*, *Rauscher* or *Sauser*). A wine is referred to as young or fresh wine once fermentation has stopped, but prior to racking.

Sugar can be added to the must of Deutscher Wein, Landwein or Qualitätswein (QbA) before or during fermentation. France and other large wine-growing countries also make use of this method known as “enrichment” or “chaptalization” to increase the the alcohol content of a wine, i.e., the added sugar (usually sucrose or rectified concentrated grape must) is converted into alcohol during fermentation.

Enrichment and alcohol levels are defined by law:

- Climate zone A: 3.0% by volume
- Climate zone B: 2.0% by volume

For quality wines, the amount of additional alcohol achieved through chaptalization is limited to 15% of the total alcohol content. Since vintage 2002, must concentration by means of vacuum evaporation or reverse osmosis has been permitted. Must concentration is regarded as enrichment. Certain analytical limits apply when cellar techniques are used to increase the alcoholic strength of a wine. The basic parameters set forth in European Union law are more narrowly interpreted in Germany than in other member states:

- Chaptalization is strictly forbidden for Prädikat wines.
- The addition of concentrated grape must and freeze concentration are only permitted for Deutscher Wein.

The length of fermentation varies. It depends on fermentation temperature and sugar content (must weight). Yeast converts sugar into alcohol and carbon dioxide in simple, average-quality musts at temperatures between 18-20°C (64.4-68°F) within seven to ten days. Fermentation that takes place at temperatures of 12-15°C (53.6-59°F) is referred to as cold fermentation. It can last several weeks or months and often results in wines with a fine fruitiness. The fermentation of higher-quality musts with a greater concentration of sugar also takes longer (Trockenbeerenauslese, for example).

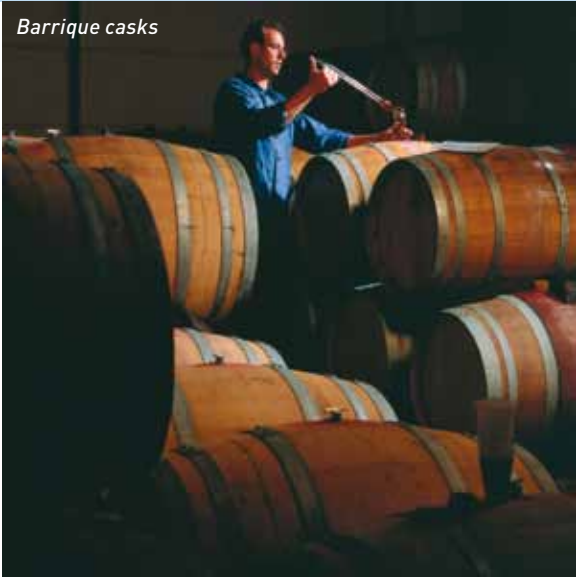
After fermentation is completed, the lees (dead yeast cells, insoluble tartrates, and other solid matter) fall to the bottom of the cask or tank and are separated from the young wine by filtration. This procedure is known as racking.

To produce a wine with a certain amount of natural sweetness (in German, *Restzucker*, or residual sugar), the cellar master can interrupt fermentation by means of temperature control (heating or cooling) or filtering to prevent the yeast from completely converting all the sugar in the must (which would produce a dry wine). Quite often, the very high sugar content of rich musts (e.g., Beeren- or Trockenbeerenauslese or Eiswein) “overwhelms” the yeast and it is unable to convert all of it. These wines retain their residual sugar naturally. Adding unfermented, naturally sweet grape juice (*Süssreserve*, or sweet reserve) to the finished wine prior to bottling is another way to produce a wine with sweetness.

Aging and bottling

After racking, wine is stored and/or aged. The length of storage and type of container (old oak, new oak, stainless steel, glass bottle) can decisively influence the quality and flavor of a wine. Consumers today seem to prefer young, fresh wines. As such, white wines are often bottled and marketed after minimal aging. On the other hand, high- and highest-quality wines are aged much longer before being bottled. Red wines and white Pinots (Grauburgunder, Weissburgunder) are increasingly aged in small, new oak casks (barriques). Depending on the size of an estate, most bottling today takes place on semi- or fully-automated bottling lines that vary in size and capacity. Bottles are sterilized to ensure total cleanliness and after filling, immediately closed with natural corks or alternative closures, such as screw caps or glass or plastic corks. After this, the wine should be stored at a moderate temperature for a few weeks before being shipped. Capsules and labels are added right after bottling or when orders are placed.

Barrique casks



[BARRIQUE]

Long popular in France, it wasn’t until the 1990s that the barrique cask was used in Germany. Barrique casks are made of oak and in contrast to conventional oak casks, they are smaller. The original barrique cask had a capacity of 225 liters; the wine law permits a capacity of up to 350 liters. Unlike the traditional German oak cask, which is shaped into form with steam, the staves of a barrique are bent and toasted over a wood- or gas-burning fire. Toasting imparts roast aromas to the wood. Depending on the length and intensity of toasting, these aromas can smell like vanilla (usually in lightly toasted casks) or tobacco (usually in strongly toasted casks). Wines that are aged in these casks – often, full-bodied reds, such as Spätburgunder and Cabernet Sauvignon, but also powerful whites, such as Grauburgunder or Chardonnay – reflect these aromas that develop through toasting. Not only the degree of toasting, but also the length of storage and origin of the wood influence the wine’s aroma.

The production of red wine

Red wine and white wine production have different priorities. With few exceptions, the pigments in red wine grapes are found primarily in the skins. The color must be released into the juice for the wine to take on color. For this reason, production of red wine follows a path that varies from that of white wine. One method is to ferment the

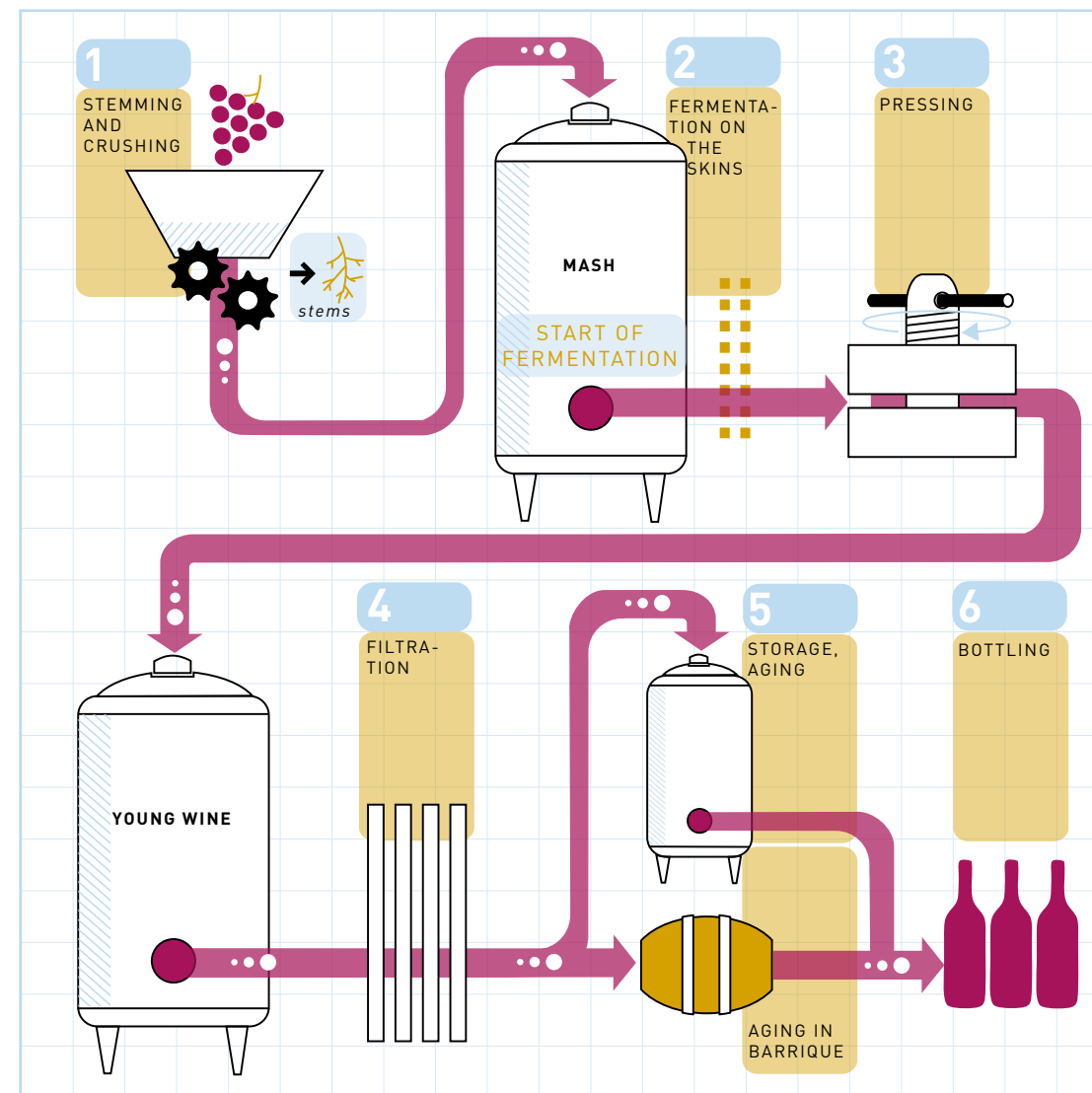
stemmed and crushed grapes on the skins. The alcohol produced during fermentation releases the pigments from the skins. Yet, not only color is extracted, but also the tannins in the skins. If the grapes are pressed immediately, with little or no skin contact, the result is a rosé wine, a single varietal rosé (in German, *Weissherbst*) or a so-called *Blanc de Noir(s)*.

Another method of producing red wine involves thermal treatment, i.e., the mash is heated to 45-85°C (113-185°F). This procedure also releases the pigments from the skins, but in contrast to fermentation on the skins, the resulting red wine is fruitier and has fewer tannins. Today, many producers use a combination of both methods in their red wine production.

The fermented and/or heated mash is then pressed and the young wine is stored and/or aged.

Most red wines undergo malolactic fermentation during or after alcoholic fermentation. In this process, lactic bacteria convert malic acid into milder lactic acid, resulting in a red wine with a smoother, rounder taste.

THE PRODUCTION OF RED WINE



Fermentation on the skins





In addition to its legal, objective dimension, quality has an individual and subjective aspect. Subjective impressions of quality are not bound by legal regulations or scientific criteria. They are shaped by personal preference with regard to origin, grape variety, and style, and influenced by exogenous factors, such as mood and setting at the time of consumption.

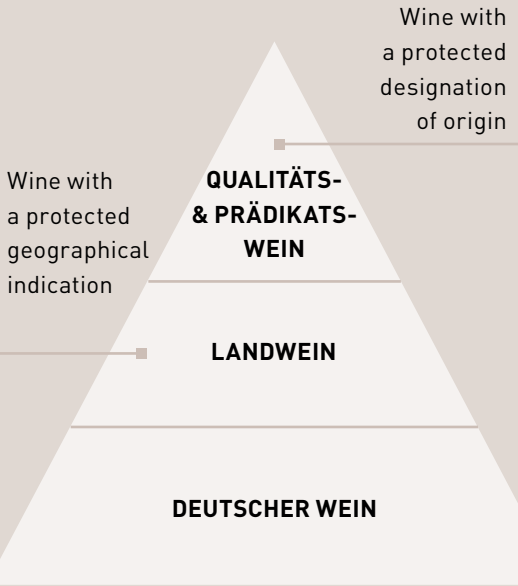
Briefly put: From a subjective point of view, quality is a composition of sensory impressions and subjective assessment, as well as appreciation for wine. The legal (objective) dimension of quality is defined by generally binding standards. It can be measured and verified. The legal concept of quality is anchored in the wine law and regulations related to it. The wine law of the European Union sets general parameters, and in certain cases, transfers competence to the wine-growing countries of the EU. EU wine law addresses issues that affect all members, but also takes national differences into consideration. The EU area devoted to viticulture is divided into climatic zones designed to help compensate for the variations that influence wine production, thereby putting all members on an equal footing. By establishing basic quality categories, the EU created legal parity among the respective members' quality designations. The fundamental differences lie in the perception and definition of what constitutes quality.

Quality in the glass

In Latin countries, quality is based largely on origin ("born" quality). Depending on origin (indication of origin), extremely varied quality standards apply. Quality assessment is usually the responsibility of regional regulatory organizations. In Germany, officially controlled quality (quality in the glass) is what counts. Quality standards are largely the same in every region. Quality assessment is in the hands of government quality control boards (official quality control examination). The establishment of quality categories and quality control testing are key elements of the German wine law.

Over the course of many years, official quality control testing has proven itself in assessing wine quality. Since 1971, every German quality wine has been subject to a chemical analysis and sensory examination conducted by a testing panel. The examination number (A.P.Nr.) must appear on the wine label. Another basic principle set forth in the wine law pertains to the clarity of designations. Terms and descriptions that are misleading or deceptive are explicitly forbidden.

THE QUALITY PYRAMID



QUALITY CATEGORIES

The most important mandatory declaration on a label is a wine’s quality category. This declaration documents the wine’s objective quality classification and guarantees legally prescribed minimum standards. These standards pertain to origin, starting must weight, and analytical limits of the substances in the wine.
Prior to 1 August 2009, the broad EU classification differentiated between table wine and quality wine.

■ **Deutscher Wein (with or without varietal or vintage declaration)**

The broad category Tafelwein (table wine) formerly in use has been replaced by Deutscher Wein (German wine). These wines are produced exclusively from grapes grown in vineyards of German origin. Compared with other wine-growing countries, relatively small quantities of this quality level are produced in Germany. Maximum yields per hectare have been prescribed by law for all German wine-growing regions. These regulations not only apply to German quality wine, but also to Deutscher Wein. In some regions, the maximum yields permitted for Deutscher Wein are higher than those for quality wine. The minimum natural alcohol content (must weight) for Deutscher Wein in climate zone A (all German wine-growing regions except Baden) is 5% by volume (44° Oechsle); in climate zone B (Baden), 6% by volume (50° Oechsle). A total alcohol content of at least 8.5% by volume, but not more than 15% by volume, and a total acidity of at least 3.5 g/l are also required. While a varietal can be named on the label, there are exceptions: the names of 22 varieties may not be used.

■ **Wine with a protected geographical indication (Landwein)**

At least 85% of the grapes for a Landwein must originate in the Landwein region named on the label (mandatory declaration). Landwein is trocken (dry)

or halbtrocken (off-dry) in style, with the following exception: Landwein from the regions Rhein, Oberrhein, Rhein-Neckar, and Neckar may have more sweetness. The minimum natural alcohol content in all Landwein regions is at least 0.5% by volume (4° Oechsle) higher than that of a simple Deutscher Wein.

■ **Wine with a protected designation of origin (Qualitätswein and Prädikatswein)**

Considering the long-term average, the wines in this category account for the lion’s share of German wines. They must originate 100% from one of the 13 German wine-growing regions. The minimum natural alcohol content for every Qualitäts- or Prädikatswein varies according to region and grape variety. Depending on region, varietal, and quality level, the starting must weights range from 55 to 154° Oechsle. Qualitätswein, like Landwein, may be chaptalized. The final alcoholic strength of a Landwein or a Qualitätswein may be increased through enrichment. Both adding sugar to the must prior to fermentation, known in France as *chaptalisation*, and concentrating must are permitted, but subject to legal restrictions.
In climate zone A (all regions but Baden), the amount of additional alcohol that can be achieved by chaptalization is limited to 3.0% by volume; in climate zone B (Baden), 2.0% by volume. For Qualitätswein, the quantity of alcohol achieved through enrichment is limited to 15% of a wine’s total alcohol content. Vacuum evaporation and reverse osmosis are the only methods of must concentration permitted. The alcohol can be increased no more than 2.0% by volume and the overall reduction in volume is limited to 20%.

INTERNATIONAL EQUIVALENTS

F	D	I
FRANCE	GERMANY	ITALY
Designations for Landwein		
Indication géographique protégée IGP	Geschützte geographische Angabe	Indicazione geografica protetta IGP
Designations for Qualitäts- and Prädikatswein		
Appellation d’origine protégée AOP	Geschützte Ursprungsbezeichnung	Denominazione di origine protetta DOP

EU LOGOS INDICATING PROTECTED ORIGIN



THE PRÄDIKATS (SPECIAL ATTRIBUTES) IN ASCENDING ORDER

- **Kabinett:**
usually lighter wines, made from ripe grapes, relatively low alcohol
- **Spätlese:**
fuller-bodied wines, made from fully ripened grapes; because complete ripeness usually requires additional time on the vine, these grapes are normally harvested later during the harvest
- **Auslese:**
made from fully ripened bunches; selectively harvested (unripe or diseased berries are discarded)
- **Beerenauslese:**
full-bodied, fruity wines, made from overripe grapes that usually are affected by *Botrytis cinerea* (noble rot); selectively harvested (berry selection)
- **Eiswein:**
made from grapes harvested and pressed while frozen (-7°C or 19.4°F); only the naturally concentrated juice is pressed out
- **Trockenbeerenauslese:**
highly concentrated wine, made from botrytized grapes dried up almost to raisins; selectively harvested (berry selection)

Prädikatswein must meet more requirements than Qualitätswein. Enrichment, the use of oak chips, and dealcoholization are prohibited.

The label of every German wine must declare its quality category. The legally prescribed minimum standards for each category must be completely fulfilled, i.e., the consumer can clearly identify a wine’s legal quality on the label, on a price list, and on a restaurant wine list. A wine must comply with regulations regarding:

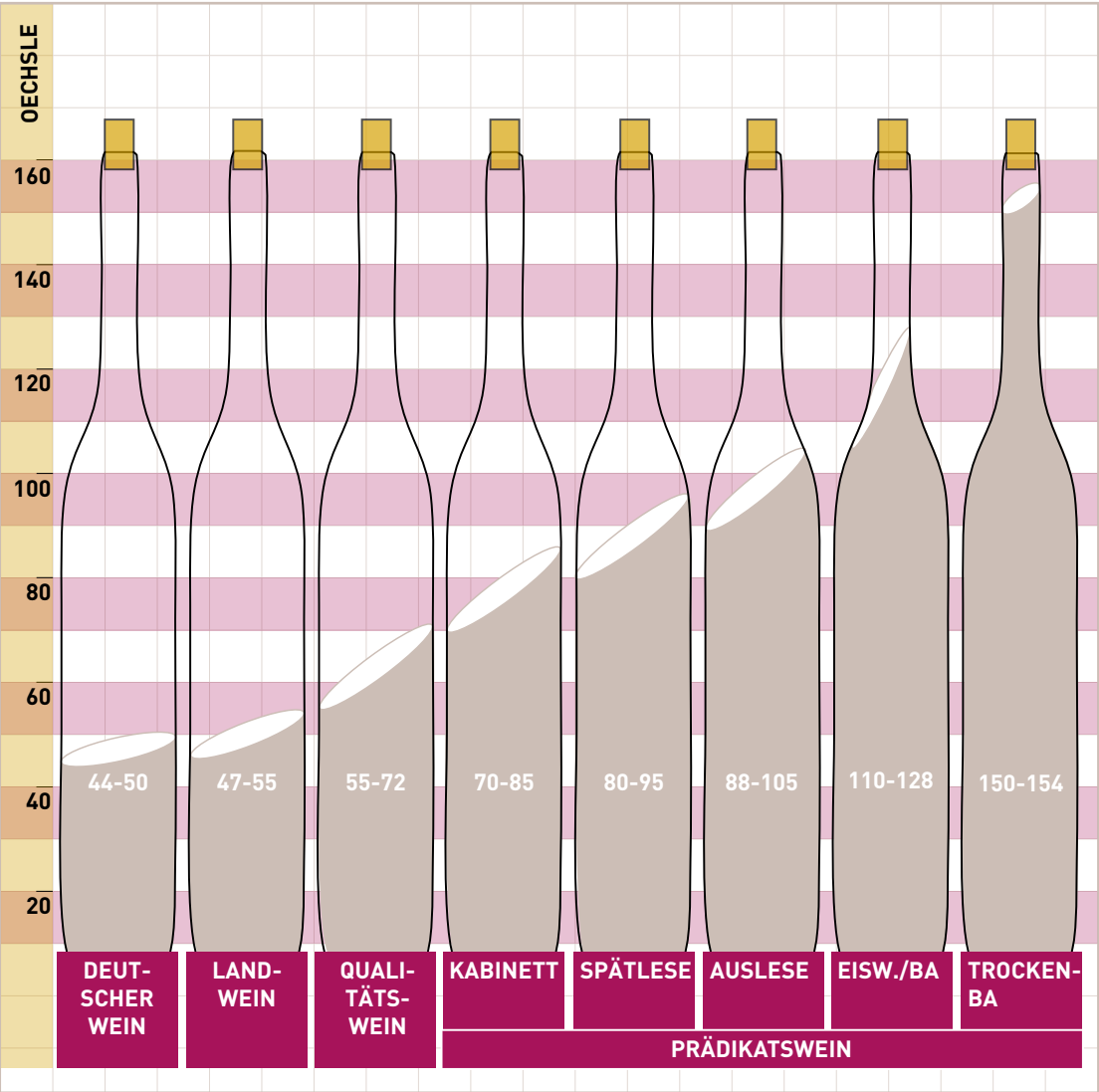
- geographical origin, i.e., a wine and/or its components must be sourced from within the appellation of origin defined for a particular quality category
- approved grape varieties
- harvest date, i.e., bearing in mind the grapes’ state of ripeness
- type of harvest, i.e., manual or mechanical, extent of selection
- maximum yield per hectare
- minimum starting must weight
- approved methods of production
- analytical limits.

As of 1 January 2012, the terms “protected geographical indication” for Landwein and “protected designaton of origin” for Qualitäts- and Prädikatswein can be used on German wine labels. Alternatively, the terms traditionally used to designate quality categories can continue to be used. The abbreviations “g.g.A” and “g.U.” (in German) or “PGI” and “PDO” (in English) are not permitted. The EU logos indicating protected origin (see p. 99) may be used.

COMPARISON OF QUALITY CATEGORIES

Deutscher Wein	Landwein	Qualitätswein	Prädikatswein
100% grapes from	85% grapes from	100% grapes from	
German vineyards	a Landwein region	a specified wine-growing region	
Minimum starting must weight			
44° - 50° Oechsle	47° - 55° Oechsle	55° - 72° Oechsle	70° - 154° Oechsle
enrichment permitted			not permitted
subject to food law regulations		subject to official quality control testing	
Minimum existing alcohol			
8.5% by volume		7.0% by volume	5.5% by volume (as of BA category)
Total alcohol content			
max. 15% by volume			
Possible style			
all	trocken, halbtrocken*	all	
* also lieblich (mild) and süß (sweet) in the Landwein regions Rhein, Oberrhein, Rhein-Neckar, and Neckar			

MINIMUM STARTING MUST WEIGHTS



Minimum starting must weight

The natural must weight (specific density of the must) indicates the ratio of total extract to water and volatile substances in wine. Must weight is determined primarily by sugar content. Theoretically, the potential alcohol of a wine can be calculated from the must weight. Because must weight depends on the ripeness level of the grapes, it can be regarded as a useful measure of quality. Minimum starting must weights have been set at different

levels to compensate for differences among regions, varieties, and quality levels. The natural growing conditions of a vine, for example, are shaped by the soils and climate of a vineyard and vary considerably from site to site. The ability of a particular variety to develop sugar or the time needed to ripen vary from varietal to varietal. Taking these factors into consideration guarantees minimum standards. German wine-growers endeavor to achieve more than the minimum required.

TYPES OF WINE

The wine law makes a distinction among four types of wine. Their respective methods of production and type of wine grape are precisely defined.

- **White wine:**
made from white wine grapes
- **Red wine:**
made from red wine grapes processed to produce a red wine; the color derives from fermentation on the skins or thermal treatment of the mash.
- **Rosé wine:**
made from red wine grapes usually, but not necessarily, processed to produce a light-colored wine; the degree of color derives from the length of skin contact; a red wine with little color (pale to light red) may be marketed as a rosé.

Weissherbst is a rosé wine made from grapes processed to produce a light-colored wine; no degree of color is prescribed.

- Additional requirements for Weissherbst:
- minimum quality category: Qualitätswein
 - single varietal
 - name of the varietal must be declared on the label.

Blanc de Noir(s) is a designation not officially defined in the wine law, but tolerated by the wine control authorities. It literally means “white wine made from red grape(s).” Often, a Weissherbst is referred to as a Blanc de Noir (single red varietal processed to produce a light-colored wine).

- **Rotling:**
made from white and red grapes or their mash that are fermented together; the wine must be pale to light red in color.

Schillerwein is a Rotling. The designation is only permitted for Qualitäts- and Prädikatswein as well as sparkling wines (e.g., Perlwein b.A. or Sekt b.A.) from the Württemberg wine-growing region (“b.A.” refers to a specified region).

Badisch Rotgold is a Rotling. The designation is only permitted for Qualitäts- and Prädikatswein as well as sparkling wines (e.g., Perlwein b.A. or Sekt b.A.) from the Baden wine-growing region (“b.A.” refers to a specified region). It is made from Grauburgunder and Spätburgunder grapes, whereby the Grauburgunder portion is greater. The varieties must be declared on the label.

Schieler is a Rotling. The designation is only permitted for Qualitäts- and Prädikatswein as well as sparkling wines (e.g., Perlwein b.A. or Sekt b.A.) from the Sachsen wine-growing region (“b.A.” refers to a specified region).

STYLES OF WINE

Labeling laws have become increasingly tolerant. In addition to the four styles clearly defined in the wine law, a number of “other” descriptive terms are permitted. These often denote particular organoleptic characteristics (appearance, aroma, flavor) that are typical for a particular wine. A certain degree of legal uncertainty cannot be ruled out.

Four clearly defined styles denote the sweetness level of a wine.

- Trocken: dry wines with a residual sugar content of up to 4 g/l (“bone dry”) or up to 9 g/l, whereby the amount of residual sugar is correlated with the amount of total acidity (formula: g/l acidity + 2 ≤ 9 g/l residual sugar).
- Halbtrocken: off-dry wines with a residual sugar content of up to 12 g/l or up to 18 g/l, whereby the amount of residual sugar is correlated with the amount of total acidity (formula: g/l acidity + 10 ≤ 18 g/l residual sugar).
- Lieblich: mild wines with a residual sugar content of more than 18 g/l, up to 45 g/l.
- Süss: sweet wines with a residual sugar content of at least 45 g/l.

Since 1 August 2009, EU law permits a tolerance of ± 1 g/l residual sugar for any of the styles mentioned above.

Among the “other” terms permitted is “feinherb” (dryish), which denotes wines with somewhat more or less residual sugar than an off-dry wine.

THE WINE LABEL

The wine label is the “calling card” of a wine. A well-designed label enhances recognition value and provides information that facilitates a consumer’s ability to select and purchase a wine. On 1 August 2003, the labeling law was clearly liberalized. The guiding principle prior to that time: terms and descriptions that were not expressly permitted were forbidden; thereafter: terms and descriptions that are misleading or deceptive are forbidden. These “terms and descriptions” are

- mandatory declarations
- optional declarations that are precisely defined
- other optional declarations that can be verified.

Mandatory declarations for German quality wines:

- country of origin: “Deutscher Qualitätswein” or “Qualitätswein aus Deutschland”
- specified region of origin: one of the 13 German wine-growing regions
- quality category (incl. Prädikat, if applicable)
- producer or bottler
- existing alcohol in % by volume
- bottle content
- quality control test number: A.P.Nr.
- contains sulfites
- as of 1 July 2012, certain allergens derived from eggs or milk products (e.g., the fining agents albumin and casein; stabilizing agent lysozyme)
- type of wine if other than white wine or red wine, e.g., Weissherbst, Rotling.

- mandatory
- optional



Optional declarations that are precisely defined:

- grape variety (up to three)
- vintage
- style
- “geschützte Ursprungsbezeichnung” (“protected designation of origin”) or EU logo
- a more narrowly defined appellation of origin, e.g., Bereich (district), village or village + vineyard site
- awards

Other optional declarations that could be helpful:

- recommended drinking temperature, food affinities, aging potential
- non-defined terms indicating style, such as “feinherb”
- analytical data, e.g., residual sugar content or acidity level
- descriptive information about the wine, e.g., traits pertaining to aroma and taste (fruity, fresh, mild acidity)
- information about the producer, e.g., wine-growers since ..., estate founded in ..., etc.
- information about natural and technical viticultural conditions, e.g., mild, sunny climate

What is important?

A label with well-chosen words can be helpful. Consider the potential consumer’s level of wine knowledge. Too much or too-technical information can overwhelm a wine novice.

The quality control test number

is a wine’s proof of identity. All wines with the same A.P.Nr. are identical. The test number also verifies that the most important declarations on the label are accurate and that the wine is fault-free.

The type of wine

enables conclusions to be made about the production process and provides a very broad idea of how a wine will taste.

The vintage

reveals the real age of a wine and in conjunction with other declarations, can provide clues about aging potential. At least 85% of a wine must be produced from grapes grown during the vintage declared on the label.

Grape varieties

provide information about sensory characteristics and a reasonably accurate idea of how a wine will taste. At least 85% of a wine must be produced from the single varietal named on the label. If two or three varieties are named, the wine must be produced exclusively from these varieties and they are to be listed on the label in descending order, according to proportion.

The region

enables conclusions to be made about natural production conditions and in conjunction with other declarations, can provide a reasonably accurate idea of how a wine will taste. Every quality wine must be produced exclusively from grapes grown in the region named on the label.

More narrowly defined appellations of origin

can contribute to a more specific idea of how a wine will taste, but usually the information provided by the name of a vineyard or district is relative to differentiating among the wines of one producer. At least 85% of a wine must be produced from grapes grown in the more narrowly defined appellation of origin named on the label; the other 15%, from the specified region.

The quality category

should be regarded in conjunction with the type of wine, grape variety, and region. It is primarily an indicator of a wine’s body and volume and can contribute to an accurate picture of how a wine will taste.

Style

denotes a wine’s perceptible level of sweetness. It facilitates selecting a wine that will be appropriate for a particular occasion and/or fulfill our taste requirements.

The existing alcohol content

supports the assessment of a taste profile and enables consumers to moderate their consumption.

Recommendations for use

help a wine novice select a wine.

Verifiable facts

can provide information about winemaking techniques, such as “aged in barrique” or “aged in oak.”

Producer and bottler

guarantee the quality of their wines with their good name. Convincing quality builds customer loyalty.

Awards

identify winemakers with quality aspirations. Awards are also a popular marketing tool.

Less is often more

Streamlining has helped address the issue of “overloaded” labels. Many producers today strive to improve clarity with clearly designed labels. For some, this means paring down the number of declarations to the name of the producer, style, and grape variety and dispensing with a vineyard designation. Others use two labels. The promotional label is usually uncluttered, eye-catching, and designed to strengthen product recognition and provide essential product information. Mandatory declarations are confined to a supplemental label, which may or may not include additional information as well.

During the past few decades, increasing numbers of wine labels have been enhanced by creative elements. So-called artists’ labels or the use of modern graphic design show that German vintners are in tune with the times. German labeling laws are a challenge, yet there is sufficient leeway to deal with them creatively.

OFFICIAL QUALITY CONTROL TESTING

Official quality control testing, the keystone of all quality endeavors, was introduced into Germany with the German wine law of 1971. It is a three-stage system that ensures minimum quality within the individual quality categories and their subdivisions. It is supported by control mechanisms in the wine law (harvest diary, final harvest report) and the examination of the bottled product. Responsibility for official quality control testing lies with the federal government, which has delegated it to the individual states. It includes:

■ **Examination of harvest details**

Details about the harvest must be recorded in the wine-grower’s *Herbstbuch* (harvest diary) and final harvest report. This requirement forces the grower to maintain a daily record that documents a number of factors that help determine a wine’s quality status and how it will be labeled:

- harvest date
- geographical origin
- grape variety
- type of harvest
- must weight
- quantity.

This data is supplemented by the *Kellerbuch*, a book in which the grower documents cellar procedures and inventory, such as:

- all changes in cellar stock, e.g., external purchases
- use of by-products, e.g., grape juice or distillates
- method and extent of enrichment.

■ **Analytical examination**

Once the producer feels the essential requirements related to a wine’s quality status and labeling have been met and the wine has been bottled, the producer submits a sample to an officially approved wine laboratory. The analytical examination focuses on the wine’s integral substances and checks for compliance with legal limits. The analytical findings are correlated with designations the producer or bottler intends to use and certify that the wine is chemically and physically fault-free.

■ **Sensory examination**

After the wine has satisfactorily undergone chemical analysis, the producer or bottler applies for a quality control test number with the authorities responsible for official quality control testing. The application includes

- all declarations that are intended to appear on the label
- declarations about the composition of the product
- date of bottling
- a copy of the chemical analysis.

The application is submitted with three sample bottles of the wine in question for a sensory examination. This is carried out by trained experts according to a generally binding procedure (five-point scale). Wine experts from various sectors of the wine industry, viticultural research and teaching institutions, the sales branch, and consumers are called on to form neutral tasting panels. The first job of a panel is to verify that prerequisites regarding

- region
- Prädikat
- grape variety(ies)
- color
- clarity

have been met. These questions are answered with a simple “yes” or “no.”

If the prerequisites have been met, the wine’s

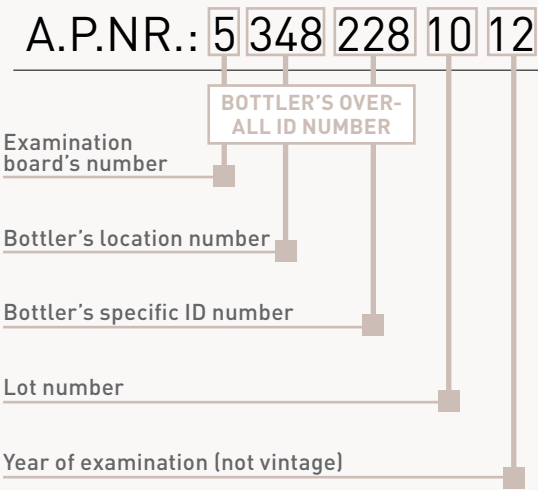
- bouquet
- taste
- harmony

are thoroughly evaluated. Each characteristic is evaluated on its own and each is weighted equally, whereby it can achieve between zero and five points. The sum total of the characteristics gives an “overall impression” that is divided by three to determine the wine’s quality score, which ranges from zero to five. A wine must achieve at least 1.5 points to receive a quality control test number. The sensory examination objectively considers subjective impressions to ensure a wine meets sensory quality standards and provides consumers the assurance that a wine is fault-free with regard to appearance, smell, and taste. After successfully passing the examination, a wine receives its official quality control test number (A.P.Nr.) and can be offered for sale.



THE OFFICIAL QUALITY CONTROL TEST NUMBER

[Example from Rheinland-Pfalz]



AWARDS, QUALITY PROFILES AND CLASSIFICATIONS

Annual competitions for awards and prizes are conducted by a number of regional, state, and national organizations in Germany. Successful entries on a regional or state level (minimum of 3.5 points on the five-point scale) are eligible to compete in the national competition conducted by the Deutsche Landwirtschafts Gesellschaft (DLG, or German Agricultural Society). Although the basic criteria are the same as those for the quality control number, the minimum number of points required to receive these awards is higher, reflecting well above average quality:

- **Bronze DLG prize**
Quality score of 3.50 or higher
- **Silver DLG prize**
Quality score of 4.00 or higher
- **Gold DLG prize**
Quality score of 4.50 to 5.00
- **Gold DLG prize extra**
Quality score of 5.00 and an extra examination.

German seal of quality

The German seals of quality are not mandatory and are seldom used these days, but the quality of wines that bear the national seals issued by the DLG is well above the minimum required by law. To qualify for a German seal of quality, a wine must achieve a quality score of at least 2.5 points on the five-point scale (compared with the minimum score of 1.5 points needed for the A.P.Nr.).

The regional wine-growers' associations of Baden and Franken award seals of quality for the wines of their respective regions. The criteria are similar to those of the DLG national seals.

Classic

Regional wines bearing the classic logo are medium-priced wines produced from grape varieties that are traditional in their region and vinified in a harmoniously dry style.

Riesling Hochgewächs

The designation is permitted in all German wine-growing regions if

- the wine is produced exclusively from Riesling grapes
- the minimum starting must weight is higher (by at least 10° Oechsle) than prescribed for Riesling in the wine's region of origin
- the wine must achieve a quality score of at least 3.0 points during quality control testing.

Selection Rheinhessen

Criteria:

- produced exclusively from the region's traditional grape varieties
- vines are at least 15 years old
- always dry in style
- maximum yield: 55 hl/ha
- minimum starting must weight: 90° Oechsle
- the grapes are selectively harvested by hand.

Rheinhessen Silvaner RS

Criteria:

- produced exclusively from Silvaner grapes of QbA quality
- always dry in style
- total acidity: at least 5 g/l.

Herkunftswein Rheinhessen – Origin with a profile

Criteria:

- produced exclusively from the region's traditional grape varieties
- always dry or harmoniously dry (cf. Classic) in style
- regional typicality is checked during the quality control test.

CLASSIC



The designation was introduced in 1992 by the regional wine-growers' association to denote wines of superior quality.



The designation was introduced in the mid-1980s by the regional wine-growers' association.



As the name implies, the *Herkunft* (origin) of these wines is Rheinhessen.



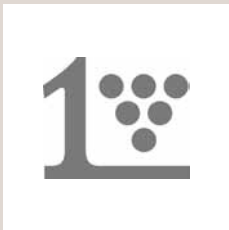
As the name implies, the *Herkunft* (origin) of these wines is the Mosel.



The designation is awarded by the regional wine-growers' association.



The designation is awarded by the Rheingau wine-growers' association.



Either term, Erste Lage or Grosse Lage, means “top site,” i.e., an exceptional vineyard or parcel thereof. The designation is awarded by the VDP (Association of German Prädikat Wine Estates).

Herkunftswein Mosel – Land of wine culture

Criteria:

- produced exclusively from the region’s traditional grape varieties
- the wine must achieve a quality score of at least 2.5 points during quality control testing
- several profiles have been established: mineral tones/dry; delicate/off-dry; luscious/fruity.

DC Pfalz (Districtus Controllatus Pfalz)

Criteria:

- produced exclusively from Riesling, Pinots (Spätburgunder, Grauburgunder, Weissburgunder) or Dornfelder
- corresponding must weights
- always dry in style
- minimum total alcohol: 12% by volume
- wines undergo additional sensory examination to ensure they reflect the DC profile.

Erstes Gewächs (“first growth”)

Criteria:

- produced exclusively from Riesling or Spätburgunder
- the grapes are grown in classified sites
- always dry in style
- maximum yield: 50 hl/ha
- minimum starting must weight: equivalent to Spätlese
- the grapes are selectively harvested by hand.

Erste Lage (as of vintage 2012: Grosse Lage)

Criteria:

- produced exclusively from a region’s core traditional grape varieties, as determined by VDP regional branches
- the grapes are grown in classified sites
- a wine dry in style is denoted by the term GROSSES GEWÄCHS

- a wine with sweetness is denoted by a traditional Prädikat (from Spätlese to Trockenbeerenauslese)
- maximum yield: 50 hl/ha
- minimum starting must weight: equivalent to Spätlese
- the grapes are selectively harvested by hand.



“GENERATION RIESLING” IN PROFILE

Young, innovative, open-minded: this is the impression that members of “Generation Riesling” project at many events in Germany and abroad. They are representative of a well-educated, internationally oriented, and ambitious younger generation assuming responsibility within the German wine industry, be it as wine-grower, managing director or winemaker at estates, cooperatives or commercial wineries. The age limit is 35.

The German Wine Institute/Mainz initiated the concept in 2005 in order to provide younger members of the wine scene – a group quite distinct from existing interest groups – a national and international platform that includes presentations at international wine trade fairs as well as selected events in Germany and abroad.

All members of the initiative are willing to act collectively as ambassadors of the nation’s modern, first-class, and dynamic wine industry,

and realize that it doesn’t compromise their individuality. While the name highlights Riesling, the German varietal currently in vogue and thus, most likely to capture attention at home and abroad, Generation Riesling does not exclude growers who focus on other traditional varieties, such as Pinots, Silvaner, Lemberger, etc.

The wine institute conducts annual workshops with speakers from all sectors of the wine industry to help Generation Riesling members stay on top of latest developments and profit from experts’ experience. Not only a great opportunity for networking, the workshops also generate new ideas and marketing concepts for the future.

In the meantime, the Generation Riesling movement has won the applause of the entire wine industry. Everyone agrees: these young, dynamic wine-growers embody and project the modern image of German wine today.

The Generation Riesling website provides news, a calendar of events, and online profiles of more than 350 registered members from all of Germany’s 13 wine-growing regions. www.generation-riesling.de

ORGANIC WINE AND ORGANIC WINE-GROWERS

Environmentally friendly viticulture is virtually a tradition in Germany. Its pioneering efforts in this field have made Germany a role model within Europe. Local wine-growers and authorities have long practiced ecologically oriented viticulture according to the highest standards.

Integrated viticulture

It is the responsibility of all German wine-growing enterprises to manage their vineyards in an ecologically conscious manner. This includes the timely and proper use of plant protection products based on the intensity of infestation (disease) or attacks (pests) and damage threshold, as well as the application of ecologically friendly fertilizer only after soil analysis. Integrated viticulture embraces preventive and remedial measures that minimize the risk of damage to the environment.

Controlled, environmentally sound viticulture

The goal here is to foster greater harmony between wine-growing and nature. On the part of the grower, this requires a high level of professional competence where viticulture and the natural environment

are concerned. The system is based on combatting fungal disease by using only plant protective products that are not harmful to beneficial creatures; using fertilizer only as needed; and using natural green cover to provide a habitat for a wealth of flora and fauna. Specially approved herbicides or insecticides are permitted only if deemed necessary. The members of the associations devoted to “controlled, environmentally sound viticulture” voluntarily adhere to the higher environmental standards that have been developed by and are controlled by viticultural advisory centers.

Organic viticulture

By the mid-1980s, many German wine-growers were committed to the holistic approach of organic viticulture, a subject of considerable importance in the German wine industry today. It has been regulated and controlled throughout the European Union since 1991. As of 2010, about 600 viticultural enterprises were cultivating some 5,400 ha of vineyards from an organic perspective. The goal is to produce high-quality grapes without resorting to substances that would be harmful to humans or the environment. Among the key provisions are: improving soil fertility by fostering biodiversity with green cover rich in flora and fauna; using only organic fertilizer; and completely refraining from the use of herbicides. Powdered stone meal and plant extracts can be used to support the natural resistance of vines to mildew. Limited amounts of preparations containing sulfur or copper are permitted if deemed necessary to improve resistance. Only biological and biotechnical products are permitted to combat pests. Organic producer associations, such as ECOVIN, Naturland, Bioland, Demeter, and Gää, all have members in Germany.

Biodynamic viticulture

The biodynamic version of organic viticulture is an approach that can be traced to the Austrian anthroposophist Rudolf Steiner (1861-1925). In es-

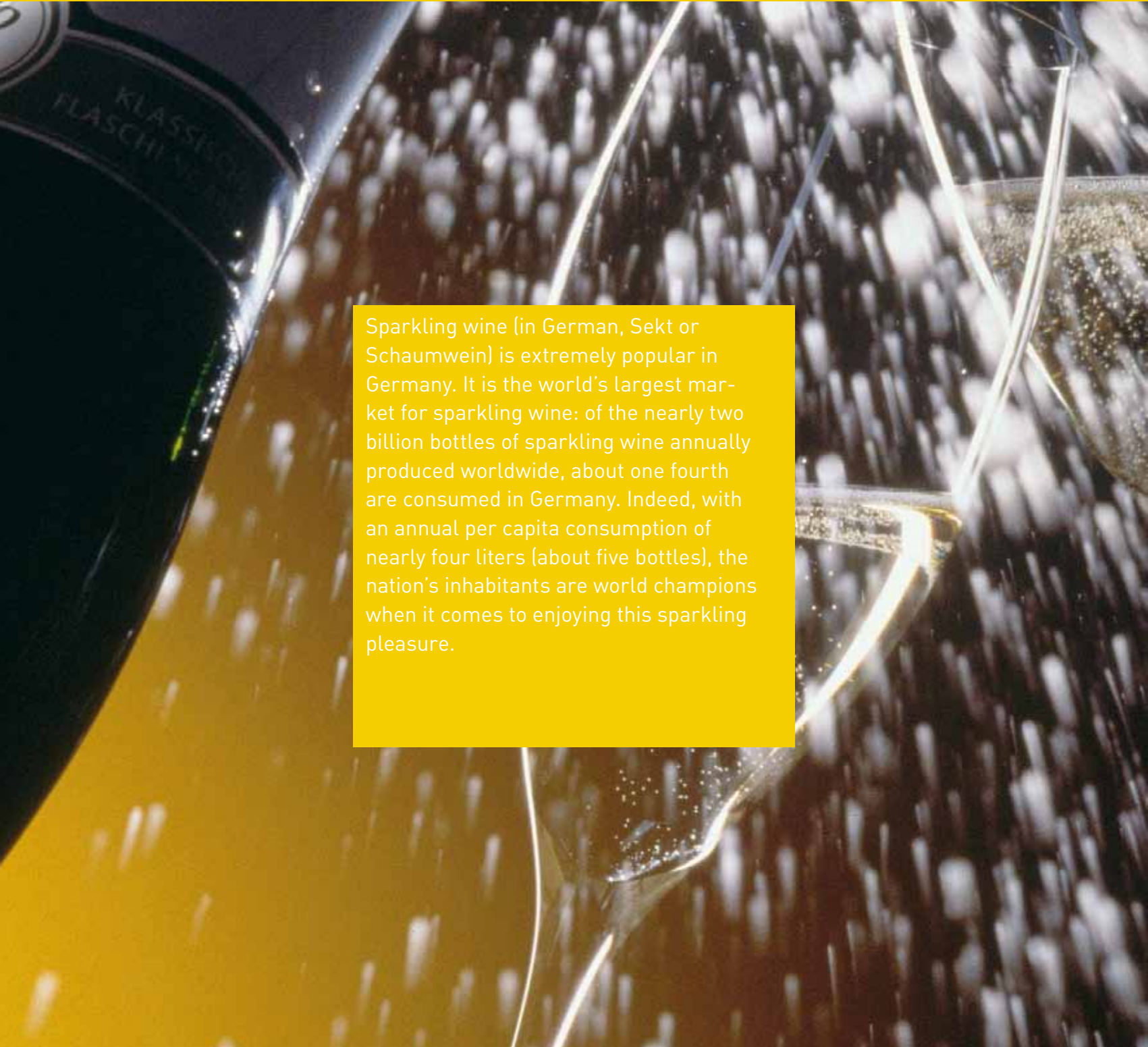
sence, his philosophy reads: poor plant health is the sign of a natural imbalance that could be related to the use of chemical fertilizers. Natural resources can be conserved and life processes fostered by utilizing the motion dynamics of cosmic and lunar cycles, as well as the sun, that influence the soil. The main focus is on work in the vineyard. Pruning, fertilizing, and even harvesting are geared to a sowing calendar. The soil should be plowed at least once a year, at best with a team of horses rather than a tractor. It should be revitalized with compost, and treated with minerals so that it can provide a habitat for diverse microorganisms that reinstate a natural balance.

In addition to applying methods of organic viticulture, a vine’s natural resistance and soil vitality can be strengthened by the use of specifically prescribed substances. Cow horns, together with cow dung or minimal, homeopathic doses (few grams per liter) of silica dust, are recommended as fertilizer. Applications of herbal infusions or dried herbs number among the prescribed tonics to increase plant resistance to pests. Stinging nettle helps achieve balance and harmony in a vineyard. Regardless of procedure, lunar cycles, and other stellar constellations are always to be considered. According to the teachings of biodynamics, lunar phases, in particular, play a major role in the development of plants on earth.

Demeter is a worldwide biodynamic association.



GERMAN SPARKLING WINE – A SPARKLING PLEASURE



Sparkling wine (in German, Sekt or Schaumwein) is extremely popular in Germany. It is the world's largest market for sparkling wine: of the nearly two billion bottles of sparkling wine annually produced worldwide, about one fourth are consumed in Germany. Indeed, with an annual per capita consumption of nearly four liters (about five bottles), the nation's inhabitants are world champions when it comes to enjoying this sparkling pleasure.

THE SPARKLING WINE MARKET

To whet consumers' appetite for sparkling pleasure, Germany's volume sparkling wine producers go to great efforts to support their brands with advertising. Big brands that have been on the market for decades are the driving force behind sales. The vast majority of sales take place in supermarkets, large and small. The greater the diversity on offer, the greater the price range – from €2,00 to well over € 40,00 – something for everyone's budget. The price of every bottle of sparkling wine automatically includes a government tax of €1,02 that has been levied since 1902, when Emperor Wilhelm II sought funds to expand the imperial navy.

The sparkling wine market in Germany is highly competitive. Quite a number of volume producers aggressively vie to get their brands placed in retail outlets and win customers.

In general, the market comprises three segments or price categories:

- low-end, price-driven sparkling wines that retail for up to 4,00 euros – which account for over half of all sales;
- standard quality sparkling wines that retail for up to 7,00 euros;
- premium quality sparkling wines, usually at considerably higher prices – a segment that has shown promising development in recent years.

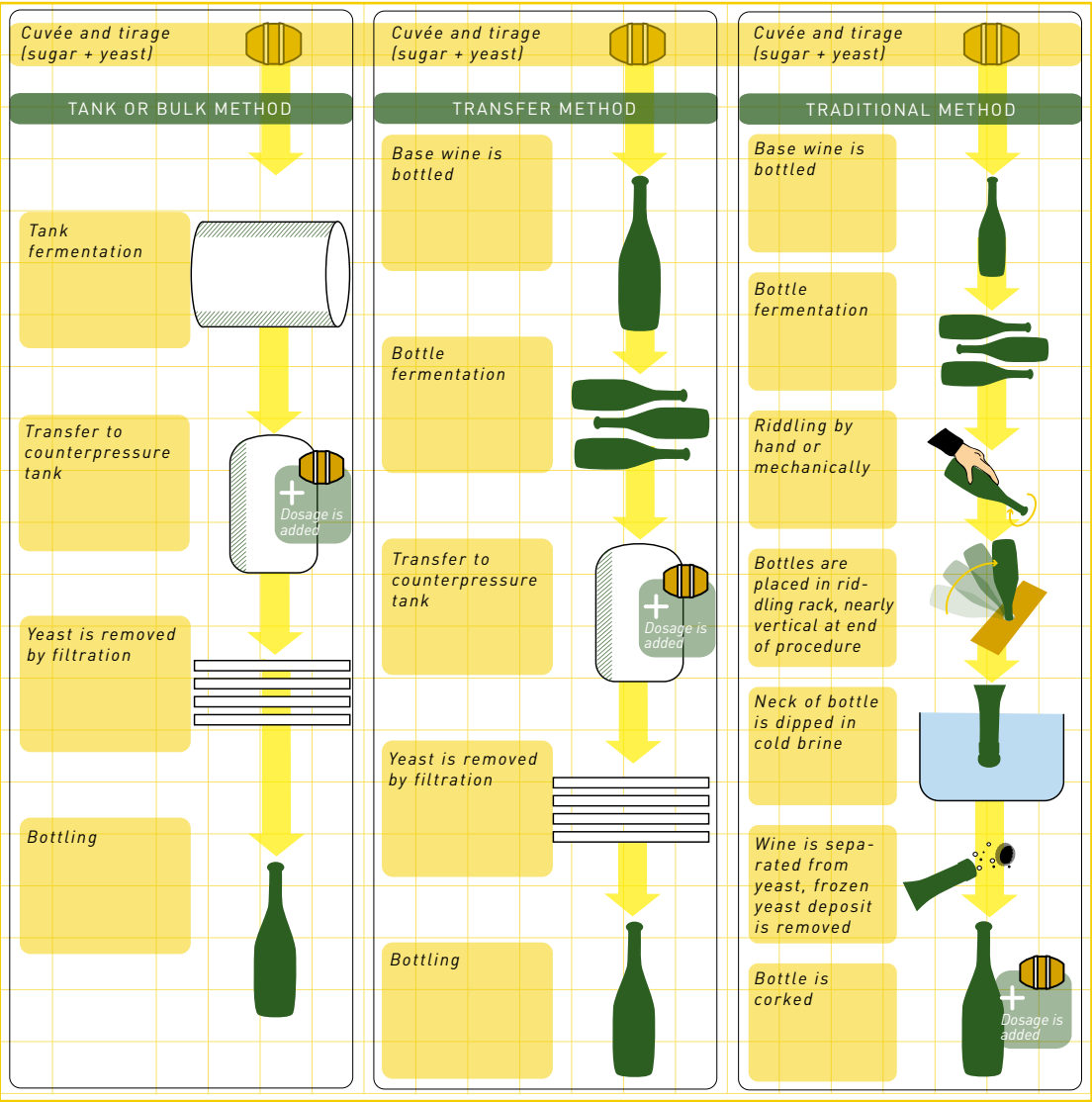
Quality is in vogue. This trend has prompted smaller producers to add sparkling wine to their portfolios as a specialty – and they've done so with great success. Their sparkling wines not only offer high quality, but also a vast range of individual styles unrivaled by producers of high volume brands.

PRODUCTION

Sparkling wine is produced in the course of a primary or secondary fermentation. The natural carbon dioxide generated during this process remains in the wine and is the source of its characteristic feature, bubbles.

The quality of a sparkling wine depends primarily on the quality of the base wines, and secondly, the method of production. Base wines that are well-suited for sparkling wine production should have an alcohol content of 80-85 g/l and a total acidity of 7-10 g/l. White wines should be low in tannins and have a low pH value. Volume producers aim for consistency by blending numerous base wines to achieve a uniform cuvée. Vintners prefer to use smaller, more individual batches of wine – often consisting of a single grape variety – as their base wines. As long as a sparkling wine remains in contact with the lees, the product is relatively stable. Once the yeast is removed (disgorged), the aging process begins. Depending on the type of sparkling wine, it should usually be consumed within one to three years after disgorgement.

FERMENTATION PROCESS



There are three main methods of production:

Tank or bulk method:
Fermentation in large pressure tanks is used to produce volumes of consistent sparkling wine that is first bottled after second fermentation and yeast removal. The method is inexpensive and used pri-

marily by large, commercial wineries that benefit from economies of scale.

Transfer method:
Fermentation takes place in bottles. After fermentation, the contents are transferred under pressure into a tank, separated from the yeast deposit through filtration, and then rebottled. This method

dispenses with labor-intensive and expensive manual yeast removal from individual bottles. Labels can include the terms “bottle fermented” or “fermented in *the* bottle.”

Traditional or classic method:
Fermentation takes place in bottles. The individual bottles are then riddled, either mechanically or by hand, until the yeast has settled as a deposit in the neck of the bottle, after which the yeast is removed (disgorged). The sparkling wine remains in the bottle. This is the most labor-intensive and expensive method. Labels can include the term “fermented in *this* bottle.”

In addition to the three usual methods of production, there is also the so-called *méthode rurale* (literally, rural method), which is a designation that originated in Limoux in southern France to describe what is probably the oldest method of sparkling wine production. Rather than a second fermentation, the wine is bottled before all of the residual sugar has been fermented into alcohol. As fermentation continues in bottle, carbon dioxide forms. The yeast deposits are not usually removed (no disgorgement) and simply remain in the bottle. There are a few producers in Germany who use this method of sparkling wine production.

[HOW DO THE BUBBLES GET INTO THE BOTTLE?]

The necessary CO₂ pressure is generated by adding sucrose. The alcohol increases by about 10 to 12 g/l. In addition to sugar, special yeasts are added. The so-called bottling dosage (tirage) is added to sparkling wine bottles, which are closed with crown caps, and the contents are fermented at about 12-15°C (53.6-59°F). This is followed by aging on the lees to improve quality and stabilize the sparkling wine (Sekt). Those from a specified region (Sekt b.A.) must be aged on the lees for at least 9 months.

[HOW DOES THE YEAST DEPOSIT
ESCAPE?]

After riddling, the neck of the bottle is dipped in cold brine to freeze the yeast deposit that has collected there. During disgorgement, the CO₂ pressure forces the frozen plug out of the bottle. Finally, a dosage – sugar dissolved in wine – is added to achieve the desired level of sweetness.

[WHAT IS WINZERSEKT?]

The designation *Winzersekt*, a vintner’s vintage varietal sparkling wine, is precisely defined and regulated by European Union statutes. They stipulate that these sparkling wines are estate-bottled, using only the grapes grown by them, and produced according to the traditional method. This means that after the second fermentation and prior to disgorgement, the sparkling wine must be aged on the lees for at least 9 months. Many growers extend this minimum in order to produce a *Winzersekt* of particularly high quality. Vintners are permitted to commission a cooperative or contract bottler to produce their *Winzersekt*, as long as the grapes, must and/or still fermenting must have been sourced exclusively from the grower’s own produce. The vintage, varietal, and producer’s name must appear on the label.

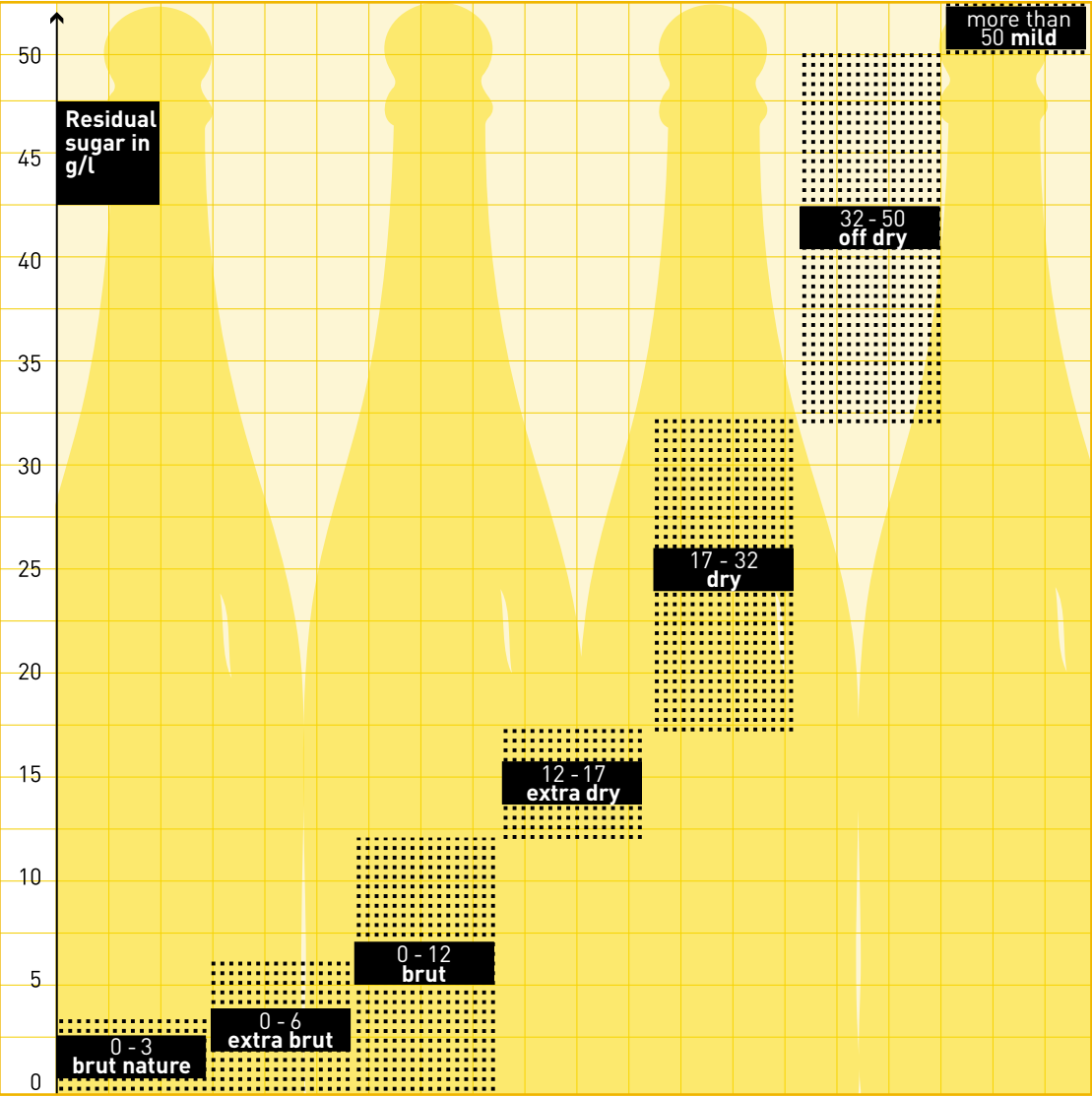
SPARKLING
QUALITY

It’s important to realize that “sparkling wine” is a broad, umbrella term. Within the European Union, uniform and binding regulations for the labeling and packaging of sparkling wines have existed since 1986. For example, the components of a product labeled *Deutscher Sekt* (German sparkling wine) must originate 100% from Germany. Blending regulations are analogous with those for still wines, i.e., multiregional cuvées are permitted, but cannot bear the name of a specified region on the label.

Sekt b.A., i.e., from a specified region, must indicate on the label the name of the region from which the grapes originated. Sometimes, even a vineyard site is named. Smaller geographical units are also permitted, e.g., the name of a district or vineyard site, on the labels of *Qualitätsschaumwein b.A.* In either case, whenever a geographical designation is used, the grapes must originate from that geographical unit, be it a region, district or vineyard. These sparkling wines are also subject to quality control testing that confirms that the criteria have been met and includes a sensory examination.

The *Winzersekt* concept has been particularly well received in recent years. For the most part, these are high-quality varietal sparkling wines produced by wine estates and cooperatives of growers or producers from their own grapes. It’s safe to assume that varietal sparkling wines account for at

STYLES OF SEKT



least ten percent of all German sparkling wine production today. Even large German producers have acknowledged this trend and are producing high-quality Riesling Sekt that can be found among the sparkling wines for sale in a well-stocked supermarket.

These cuvées, however, will seldom bear the designation *Winzersekt*, which is reserved for top-quality

products that have met stringent production criteria. In response to consumers’ increased quality consciousness and awareness that the quality of the components determines a product’s overall quality, producers are using higher-quality base wines for their sparkling wine production. Wine-knowledgeable consumers recognize the same varietal characteristics in the sparkling versions that they are familiar with in still varietal wines.

Regional and national competitions have also contributed to quality improvements. The standards for winning an award from a state chamber of agriculture or the German Agricultural Society DLG are very high.

Compared with still wine, it is far more difficult to standardize the quality of a sparkling wine. A high amount of sugar-free extract is desirable in a still wine and regarded as a sign of high quality; a sparkling wine with high extract values is likely to be too full-bodied, i.e., lacking the sleek character associated with Sekt. Those who prefer handcrafted, distinctive cuvées to popular brands are in luck. The former are widely available at wine estates, cooperatives, wine shops, and restaurants. Look for the following quality criteria on the label: origin, grape variety, method of production, and the quality control test number (in German, the A.P.Nr.). There are, of course, commercial bottlings that also meet these criteria, including “buyer’s own brand” — as with wine, the quality-consciousness of the producer is a decisive factor. The overall quality of the product depends on the quality of its components.

This is also true of *Perlwein*, a slightly sparkling wine that is currently enjoying a renaissance and now belongs to the standard repertoire of many vintners. Since the early 1990s, significant quantities are once again being produced and are often marketed as *Secco*, a take on Italian *Prosecco*. Sales of German Secco are estimated to be in the double-digit million range.

Since the sparkling wine tax is not levied on Perlwein, it is usually inexpensive to medium-priced. The CO₂ pressure is between 1 to 2.5 atm compared with that of Sekt (more than 3.5 atm). Perlwein can be produced as a simple German wine or as a quality wine from a specified regon.

In the production of Perlwein, CO₂ can be added – not permitted in Sekt production. The CO₂ can be naturally generated during fermentation of the must into wine (endogenous) or completely or partially manufactured industrially (exogenous). Perlwein is often sweeter than Sekt. If labeled trocken (dry), it can have up to 35 g/l of residual sugar; halbtrocken (off-dry), between 33 and 50 g/l; mild, more than 50 g/l. A Perlwein or Secco is an ideal apéritif or a light, uncomplicated beverage when it’s warm outside.

BRIEF SUMMARY

Sekt is produced through a primary or secondary fermentation. It must have an existing alcohol content of 10% by volume and a CO₂ pressure of at least 3.5 atm.

Deutscher Sekt is produced exclusively in Germany from base wines made of grapes grown in Germany.

Sekt b.A. (from a specified region) is subject to the same strict regulations with regard to coupage and designation of origin as a quality wine from a specified region. It is subject to quality control testing.


Winzersekt is a particularly distinctive, vintner-produced sparkling wine that is made by the traditional method. The vintage, varietal, and producer’s name must appear on the label. Winzersekt is estate-bottled.

Crémant, like Sekt b.A., may be used in conjunction with the name of a specified region (e.g., Crémant Baden or Baden Crémant) if the following criteria are fulfilled:

- at least nine months’ aging on the lees
- traditional method of production
- for white sparkling wine, must is produced by whole cluster pressing (max. 100 liters per 150 kg of grapes)
- max. 150 mg/l SO₂
- max. 50 g/l residual sugar
- additional, national regulations can apply.

[HERE’S HOW TO SERVE SEKT!]

Sekt tastes best when chilled. But never resort to the freezer, because ice-cold Sekt loses its aroma. Sekt reaches the right drinking temperature (between 6 and 10°C/42.8 and 50°F) after three to four hours in the refrigerator. Once the bottle has been opened, the temperature can be maintained by placing the bottle in a cooler filled with water and ice. Tip: don’t let the cork pop when opening the bottle; it’s better to hold the bottle at an angle and gently turn it while easing out the cork (TB...turn bottle).



Savvy in dealing with wine not only projects competence and enhances image, but above all, it generates essential sales and revenue. Regardless of which sector – the hospitality, specialty or retail food business – offering the most comprehensive range of wine possible does not demonstrate wine competence. Organization and handling are what count. Simply taking external constraints for granted can lead to failure in practice – such as ignoring the need for well-trained personnel. Yet, many problems can be solved by simple means or can be avoided right from the start.

SALES-ORIENTED PRODUCT RANGES

Regardless of the type of business, a customer-friendly wine selection is representative, attractive, diverse, and dependable. This goal can best be achieved by a healthy mix of three product ranges: core, specialty, and special offer.

The **core product range** includes all wines that are in constant demand and/or essential to customer satisfaction.

The **specialty product range** should offer something special or distinctive. It enhances an operation's image, and gives it a cutting edge over competitors. While image is important, be aware of the pitfall of stocking large quantities of very high priced wines that you might not be able to sell. It only wastes storage capacity and unnecessarily ties up capital. When stocks of expensive growths are nearly depleted, it's usually possible to replenish supplies on short order these days. You can save space and expense by letting your suppliers handle storage as much as possible. Building a specialty product range depends on the scope of the core selection, the level of product awareness, the image and popularity of a restaurant or shop, as well as employee commitment. Specialties to consider include:

- distinctive varietals in various styles
- specially aged wines (e.g., barrique)
- mature vintages
- rarities
- particularly high qualities (e.g., Eiswein).

The **special offer product range** comes into play on an occasional basis or for operational reasons to stimulate sales. It basically includes:

- wines that have been purchased specifically for this purpose (the sky's the limit)
- remaining stock from the core or specialty ranges that needs to be sold quickly (possibly at special prices) to adjust or streamline product range and/or reduce inventory.



Recommending wine in a restaurant

THE HOSPITALITY TRADE

In creating a wine list, pay particular attention to how each wine will be offered and served. There are two forms:

- by the bottle (0.25-, 0.375-, 0.5-, 0.75-, 1.0-liter bottles or the 1.5-liter magnum)
- by the glass (0.1-, 0.2-, or 0.25-liter glasses and/or carafes in various sizes, as well as pre-poured from a bottle or tap).

Basically, all quality levels can be offered by the glass.

Customers are particularly receptive to high-quality and/or high-priced wines served by the glass (0.1 liter). This is especially so for wine or sparkling wine served as an apéritif.

Offering wine by the glass in conjunction with the food on the menu is an attractive and financially interesting way to motivate guests to order a glass of wine and enables them to try different wines with their meal. It's not surprising that the demand for wine by the glass is steadily increasing, because:

- it encourages guests to discover the pleasure of wine
- an entire bottle of wine is too much for a single guest
- it enables two or more people to order individually
- a glass of wine is perceived as more affordable.

A wide selection of wines by the glass attracts new wine enthusiasts and makes the decision to purchase easier for guests. In all, it helps promote sales and profits.

In addition to eye appeal, a wine list should include a product range tailored to the needs and expectations of your guests, which in turn depends on the type and location of the food service outlet and its customer profile. A small snackbar in a blue-collar neighborhood on the outskirts of a city should list other (and fewer) wines than a student pub downtown, a first-class hotel in a spa or a wine restaurant in the heart of a wine-growing region. Careful consideration of these factors provides a sound basis for creating a suitable and promising wine list.

The scope of a wine list

The operational setup of outlets in the hospitality business is so diverse that an optimal selection can't be recommended here. The breadth and depth of a wine list depends on factors that affect all establishments. Customer profile, atmosphere, and average length of stay have to be considered, as well as procurement channels, storage capacity, and staffing. In addition, it's necessary to decide on which approach best serves the company's goals: a core selection of wines or a more comprehensive offer. The maxim "less is more" might also make sense. The bottom line: guests shouldn't feel that something's missing.

Our recommendations are based on practical experience and designed to meet the minimum required to offer a reasonably attractive selection of wine.

Even an optimal assortment needs an effective presentation. Well-trained personnel are a substantial cost factor and are not always available in the quality and quantity required. A well-prepared, informative wine list can help bridge that gap.

Recommendations for creating a wine or beverage list

The format and content of a wine or beverage list in the German hospitality business are no less diverse than those of their "food" counterpart: the

menu. The outer appearance can range from simple to verging on a work of art. Despite this diversity in graphic design, the majority have something in common: too often the organization of the contents reflects a great deal of insecurity. Often, this stems from a nonchalant or even careless attitude toward the role of a wine or beverage list and how it should function.

Functions of a wine or beverage list

Since the number of establishments that actually have a separate wine list is limited, we're basically talking about a beverage list that includes the wines on offer. For the most part, they're grouped together under the heading "wines" in a separate section of the list. A well-conceived beverage list could serve as:

- a source of information and decision-making aid for guests
- an advertising medium for the establishment
- an educational tool for staff training.

These functions should be kept in mind when creating a wine or beverage list.

A customer-friendly wine list should meet the following requirements...

...be clearly structured

Information should be presented in a manner that's logical and easy to follow.

The organization of a wine list depends on the scope of the selection, particularly the number of wines on offer with similar traits with regard to:

- how the wine will be offered and served
- type of wine
- appellation of origin
- grape variety
- style
- quality level
- vintage (younger wines precede mature growths).

In setting up the structure of a wine list, it's necessary to decide which of these traits will take precedence; the other characteristics are secondary. If the organization is based on appellation of origin, place the country or region with the least number of entries either at the beginning or the end of the list and those with the largest number of entries in the middle. If the selection is quite extensive, it helps to include a table of contents.

...be informative and encourage consumption

Not only do guests benefit from an informative wine list, but also service personnel. As such, the information imparted on a wine's label should also appear on the wine list, e.g., region, grape variety, vintage, quality category, alcohol content, style, and the name of the producer. In addition, a realistic and positive wine description is helpful and can encourage guests to try a wine. Additional product information, such as how the wine was aged (in large oak cask, in barrique), should also be provided. Brief stories, anecdotes, and photos also stimulate sales as well as shorten the wait. Since

a wine list should create a desire for wine, its appearance also plays an important role. It should be visually appealing, pleasant to the touch, and durable.

...be up to date

A customer-friendly wine list is up to date and should be updated on a regular basis.

...be tailored to the establishment

The material, design, content, and scope of a wine list should be commensurate with the style and image of the catering operation.

Whether it's a wine list or a wine label, the information on both must comply with nearly identical legal regulations. A wine list is also subject to price quotation regulations. Providing general information is permitted and detailed wine designations and descriptions build customer confidence.

THE RETAIL BUSINESS

In Germany today, nearly three quarters of all wines are sold in the retail food business – a volume that underscores the significance of this sales channel. General recommendations on how food stores should deal with wine would lack credibility. The different types of operations (from discount stores to supermarkets to department stores) can't be lumped together. At the end of the day, each of these sectors pursues its own strategy, which in turn determines the size and makeup of its wine selection. Yet, all enterprises in the retail food business have this in common: whether they want to or not, they're all forced to find ways to stand out in a sea of increasingly cutthroat competitors. Some resort to aggressive pricing; others rely on a (supposedly) prestigious product range, complete with special service. With the former, wine virtually has to sell itself; with the latter, well-functioning, professional advice is available.

Service is no less important in wine specialty or beverage shops. Apart from offering a representative selection of wines, the quality of service, including professional advice, can make or break a shop's wine concept. The following list outlines the minimum requirements for quality customer service.



Sampling wine in a shop

- Provide sufficient staff to offer assistance. Nothing is worse than for a customer to feel there's no one to turn to.
- Avoid long waits.
- Offer "service with a smile."
- Patiently listen to customer requests and take special requests into consideration.
- Describe wines concisely in terms the customer can understand.
- Avoid vague, empty phrases when describing wines (a super wine...everyone loves it); opt for precision (crisp...tannic...fresh...fruit-driven...).
- Respect a customer's budget.
- Offer customers samples, wine tastings, and seminars.
- Handle complaints fairly, quickly, and unbu-reaucratically.
- Create additional incentives to purchase.
- Offer volume discounts.
- Provide reasonably priced delivery service as well as a selection tailored to meet the needs of your clientele. If a customer asks for a wine that isn't available, check with colleagues in other shops. Even if there's no profit in it for you, your goodwill will make a lasting impression and foster long-term customer relationships.

The Deutsches Weininstitut (German Wine Institute) annually recognizes excellence in service and selection. Retailers who offer competent advice and a comprehensive selection of German wines can compete for the *Fachhandelspreis* prize, awarded to the best merchants in wine specialty shops, and the *Ausgezeichnete Weinabteilung* prize, awarded to retail food outlets with outstanding wine departments. Winners receive a plaque and a certificate that they can display in their stores – a tip for discerning customers.



WELL-CHOSEN WORDS

Wine consumers in international circles today tend to be drinking "less but better." Anti-alcohol campaigns, discussions about blood alcohol levels, and heightened health consciousness have contributed to lower wine consumption. Yet, wine enthusiasts often compensate by drinking higher-quality or more expensive wine. "Joie de vivre" and "trying something new" are in the forefront. For these fellow beings, wine is more than a beverage, it's an experience. Part of that experience is talking shop about wines, regions or certain winemakers. Consumers have become increasingly wine knowledgeable in recent years, which has led to a concomitant increase in what they expect of sales staff and service personnel in shops and restaurants. If someone asks how this or that wine actually tastes, they expect more than a perfunctory "super" or "you'll love it" in response. The opposite approach, i.e., describing a wine in excruciating detail, doesn't appeal to every guest or customer either. It suffices to provide a few well-chosen words that reveal something about a wine's color, aroma, taste, body, and age or maturity. It's useful to base descriptions of aroma and taste on familiar sensory perceptions:

- ...is redolent of ripe peaches
- ...tastes like a juicy pear
- ...is creamy to the taste
- ...distinctly reminiscent of ripe elder.



POSITIVE ATTRIBUTES		
COLOR	AROMA	TASTE
<div>White wine</div> <div>greenish yellow, pale yellow, straw yellow, rich gold, amber</div>	<div>closed, subtle, delicate bouquet, fine bouquet, fragrant, flowery, rich in bouquet, slightly spicy, spicy, fruity, aromatic, rich in aroma</div>	<div>Sweetness</div> <div>very dry, dry, off-dry, medium sweet, pleasant sweetness, pronounced sweetness</div>
<div>Rosé + Weissherbst</div> <div>yellowish red, reddish gold, salmon red, very pale red</div>		<div>Acidity</div> <div>mild, fine acidity, pronounced acidity, effervescent, lively</div>
<div>Red wine</div> <div>brick red, ruby red, garnet, violet red, deep red verging on black, brownish red</div>		<div>Tannin</div> <div>mild tannins, soft, round, velvety, tannic, astringent</div>
		<div>Body</div> <div>light, delicate, full-bodied, rich in body, rich in extract</div>
		<div>Age and maturity</div> <div>young, youthful, fresh, developed, at its peak, fully matured, ripe, noble maturity</div>

Even in an impeccably run dining establishment, there’s the occasional bottle of wine that doesn’t live up to what the label promises, i.e., a wine could be past its prime or corked. Such a bottle should never end up on a guest’s table.

PAIRING WINE AND FOOD

A wine on its own can offer great pleasure, but the enjoyment is sorely diminished when it is selected to accompany a particular food and it simply doesn’t match. It does take some effort to discover harmonious food and wine partners, not least because we experience a virtually endless number of possible combinations over the course of years of wining and dining. The old rule of thumb dictating “red wine with dark meat” and “white wine with light meat” is passé. New, creative ways of cooking that are geared more to light, imaginative cuisine based on natural aromas open the door to all kinds of new food and wine combinations, particularly with white wine. Creating harmonious partnerships is most likely to succeed when the wine and food are similar, i.e., when there is a balance between the body and richness, as well as the intensity of the aroma and flavor, of the food and wine. Three basic principles are noteworthy:

- Wine and food are equal partners at the table.
- The wine should underscore the flavor of the food. The wine could be a bit more forward than the food, but neither partner should seriously overshadow the other.
- The wines (as well as the foods) should be served in an order that shows a progression in terms of aroma and flavor as well as body and richness.



Diverse culinary delights

The harmony of wine and food

Alcohol heightens the perception of sweetness, strengthens the impact of spices, and aids digestion. Acidity seems more pronounced in a wine that is low in alcohol. Wines that are completely dry and high in alcohol content seem milder than dry wines with little alcohol. The bitter constituents in wine or in food (from roasting, grilling or braising) heighten our perception of sweetness and lower our perception of acidity. It takes longer to perceive bitter elements, but they linger a long time. They are more pleasant when accompanied by a tannic wine that is rich in alcohol.

High-fat foods are more agreeable with wines that are rich in acidity, tannin and alcohol – the three elements that stimulate the appetite and aid digestion.

Highly seasoned dishes (e.g., pepper, chili, curry, tabasco) taste even spicier when served with a wine that is high in alcohol. The effect is heightened even more if the wine is rich in both alcohol and acidity. Caution is recommended.

The carbon dioxide in wine (and particularly in sparkling wine, or Sekt) masks sweetness. If consumed with food, these wines and sparkling wines seem sweeter than they actually are. Drier styles (e.g., extra trocken to extra brut) are therefore better suited to food than the sweeter versions (labeled dry or mild), except with desserts.

Salt increases the perception of aromas and bitter substances in wine and food.

Acidity enhances sweetness (e.g., lemon juice on strawberries). It also temporarily masks bitterness. Acidic wines served with acidic foods are not agreeable and can cause acid indigestion. On the other hand, fatty foods are more easily digested when accompanied by a wine with a healthy acidity.

Sweetness improves the perception of aromas in wine and reduces the impression of bitterness or saltiness. Very dry wines seem milder and more harmonious when served with food, since food contains both sugar and salt.

An optimal food and wine combination depends on a number of other factors, too, e.g., the time of day, season, temperature outdoors, occasion (festive or everyday), the people with whom one is dining (age, wine knowledge), the price (budget constraints) as well as the components of the menu. If possible, the wine and food should be served at the same time.

Wines and foods can be arranged in basic categories based on aroma, taste, and seasoning.

- A = neutral, mild wines and foods
- B = aromatic, piquant, spicy wines and foods that are rich in substance and body
- I = light wines and foods
- II = powerful, full-bodied wines and foods

Wines are categorized according to various traits, e.g.,

- grape variety
- origin
- quality category
- style
- age

Foods are categorized according to how they are prepared, because the method of preparation – steamed, fried, baked, or roasted – influences the ultimate taste of the food. Furthermore, the basic flavor of fish or meat changes considerably depending on an accompanying sauce, e.g., made with cream or made with the stronger-flavored drippings from a roast; on the herbs and spices used; and on the side dishes. For this reason, it

THE HARMONY OF WINE AND FOOD IS DETERMINED BY THE PERCEPTIBLE CONTENT OF:

- alcohol
- bitter substances
- fat
- spices
- carbon dioxide
- salt
- acidity
- sweetness

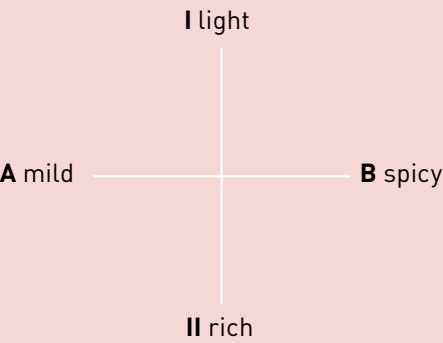
SERVING ORDER: WINE

- mild before spicy
- light before rich
- dry before sweet
- white before red
- chilled before room temperature

SERVING ORDER: FOOD

- mild before spicy
- light before rich
- slightly salty before mild/sweet

SAMPLE GRID



is quite a challenge to select different wines for different courses. If only one wine will be served, select it according to the most intensive flavor of the foods.

The closer wine and food are in terms of their basic character (light to rich, neutral to spicy), the easier it is to achieve a harmonious match. Harmony is balance and enhancement. The sample grids below can be useful in determining how similar the components of a particular food and wine combination are. If the food and wine are in the same field of the respective grids, the combination should be ideal.

SAMPLE CATEGORIES FOR WINE		
Body/Aroma	A mild	B spicy
I light	Qualitätswein (QbA)/ Kabinett wines from Riesling Silvaner Weissburgunder	Qualitätswein (QbA)/ Kabinett wines from Müller-Thurgau Bacchus Scheurebe Gewürztraminer
II rich	Spätlese wines from Riesling Silvaner Weissburgunder	Spätlese wines from Grauburgunder Spätburgunder Dornfelder Lemberger
SAMPLE CATEGORIES FOR FOOD		
I light	poached fish, poultry, salad greens with vinaigrette	Asian dishes, game birds, roasted vegetables, pasta with aromatic sauces
II rich	fatty freshwater fish, mussels, lobster, asparagus with hollandaise sauce	goose, duck, furry game, beef or lamb roasts, rich cheese (blue mold)

WATER AND WINE

Although water has relatively little taste, which is why it nicely complements wine, not every water tastes the same. Each water’s subtle nuances influence our decision about which brand to buy. Just as no two wines are alike, not all waters are the same. Since the “wrong” mineral water can mar the anticipated pleasure of drinking wine, it’s important to select a water with a composition of minerals and trace elements that will harmonize with a wine.

- Carbonated water is an ideal match with wines that are low in acidity, such as Gutedel, Silvaner or Grauburgunder, and above all, those with residual sweetness. The carbon dioxide refreshes the tongue and brings out the sweetness of a wine.
- Waters with a moderate carbon dioxide content go especially well with white wines that are dry and pronounced in acidity. Too much carbonation can accentuate the acidity.
- Powerful, tannic red wines are best with a still water that neutralizes the tannins. The same applies to rich, full-bodied white wines, such as those that have been aged in barriques.





Storing bottles horizontally

ENHANCING POTENTIAL PLEASURE

“Ambience” numbers among the factors that contribute to increased sales and customer satisfaction in the wine business, be it in shops or restaurants. It pays to have satisfied customers or guests: they’ll want to return and they’ll spread the word to friends and family – a great source of potential new business.

Storing bottled wine

The shelf life of a wine depends on sufficient sulfurization, sterile bottling, and a suitable closure. In addition to these “technical” criteria, cellar treatment, growing region, vintage, grape variety, method of harvest, and quality category play a role. Aging potential is also influenced by existing alcohol, acidity, residual sugar, and tannins.

Generally speaking, one can say:

- Lightweight, basic wines (Landwein, QbA, and to some extent, Kabinett) develop fairly quickly and are not destined for long-term aging.
- Wines of higher quality (Spätlese and above, Erste and Grosse Gewächse) mature more slowly and have more aging potential.

Storage conditions to consider:

Storage duration determines bottle position. Wines with aging potential should be stored lying horizontally; those to be consumed in their youth are better left upright to minimize potential cork problems. Ideal is a room that provides:

- minimal temperature fluctuation – at best, a constant temperature between 8-12°C (46.4-53.6°F); never over 15°C (59°F)
- humidity of ca. 70% to help keep corks from drying out and prevent the formation of mold
- shelter from a permanent source of light (particularly, sunlight and neon light) or vibration

- clean conditions
- good ventilation
- protection from goods that emit strong odors, e.g., onions, paint, and heating oil or gas.

In today’s world, wine cellars with ideal storage conditions are few and far between. A viable alternative is a wine refrigerator designed for proper storage. These range from compact models to sophisticated versions with dual temperature zones. The household fridge is sufficient for interim storage only.

Serving temperatures

Serving wine at the correct temperature helps achieve optimal drinking pleasure.

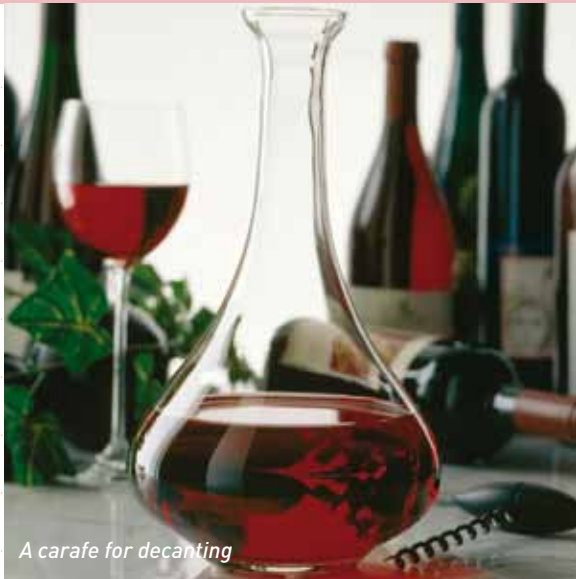
Temperatures that are too high diminish our sensory perception of fruit, acidity, and tannin. White wines that are served too warm often taste broad or plump. If not sufficiently chilled, the carbon dioxide in sparkling wines can seem too aggressive. Temperatures that are too low enhance our perception of fruit, acidity, and tannin. In tannic red wines served too chilled, the interesting flavors of its tannins are often suppressed.

Chambrieren is the French term referring to the procedure of slowly allowing a wine to reach room temperature – not today’s usual temperatures of over 20°C (68°F), but rather a temperature between 18-20°C (64.4-68°F).

Frappieren derives from the French term *frappé*, meaning ice cold, and refers to the procedure of quickly chilling a bottle of still or sparkling wine. The bottle is placed in a wine bucket filled with ice cubes, water, and a handful of salt. As the ice melts, there’s an evaporative heat loss. Quickly rolling the bottle between the hands results in a quick chill. This method is effective, but not particularly gentle on the wine in that it literally freezes the aromas.

OPTIMAL DRINKING TEMPERATURES

Type of wine	Temperature
Sekt (sparkling wine)	8 – 10° C 46.4 – 50° F
White wine <i>light, young</i>	9 – 11° C 48.2 – 51.8° F
<i>full-bodied, mature</i>	11 – 13° C 51.8 – 55.4° F
Weissherbst (rosé)	9 – 13° C 48.2 – 55.4° F
Red wine <i>light, young</i>	14 – 16° C 57.2 – 60.8° F
<i>full-bodied</i>	16 – 18° C 60.8 – 64.4° F
<i>full-bodied and very tannic</i>	18 – 20° C 64.4 – 68° F



A carafe for decanting

Exposure to air

Light, fresh white wines and delicate, light-bodied red wines generally need little exposure to air for their characteristics to unfold. On the other hand, very powerful young or mature red wines that are rich in acidity, alcohol, and tannin often need considerable contact with air. They benefit from being opened some time prior to drinking and/or aeration by being poured into a carafe. While exposure to air enables the aromas of white wines to open up, this is not recommended for wines that are showing age, which should have as little contact with air as possible. Sparkling wines need little or no exposure to air, yet, after opening the bottle, it makes sense to allow the carbonation to settle down a bit before pouring. Bottles of older, mature red wines in which a deposit of tannins and pigments has developed, as well as white wines in which tartrate has precipitated, should be decanted prior to drinking, i.e., poured into a carafe or decanter.

THE RIGHT GLASS

Dealing with wine also includes suitable stemware. In selecting the right glass, numerous criteria play an important role. The bottom line: a glass should bring out the full qualities of color, aroma, and flavor of a wine. In recent years, many a soul has given serious thought to the subject of “which glass for which wine” and as a result, there are quite a

number of special creations on the market today. More and more glass manufacturers are successfully offering a wealth of models that combine functionality and attractive design.

TIPS ON THE RIGHT GLASS

- Colorless, transparent glasses are the best for evaluating a wine’s color, clarity, and viscosity.
- Thick-walled glasses spoil the pleasure of drinking wine.
- The quantity of a pour shouldn’t exceed half of the glass.
- The stem of a glass should be long enough to prevent the hand from touching the bowl, thereby warming up the wine.
- White wine glasses should have a relatively small bowl to help prevent the wine in the glass from warming up and its fragrance from escaping too quickly.
- Depending on tannic content, young red wines need larger bowls than mature red wines. A larger bowl increases a wine’s exposure to air and makes a wine seem smoother.
- High-quality, mature wines are best served in glasses with smaller bowls. Otherwise, they oxidize too quickly.
- In general, a glass with a tulip-shaped bowl helps concentrate aromas rather than letting them escape along the sides of the glass.

A

B

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Alcoholic fermentation:	The primary fermentation, a biochemical process during which yeast (indigenous/wild or cultured/inoculated) converts the natural sugar in wine must into CO ₂ and alcohol. Wine is the byproduct of alcoholic fermentation.
Ampelography:	The science of identifying and describing grape varieties.
Amtliche Prüfnummer (A.P.Nr.):	The quality control test number issued to quality and Prädikat wines that have successfully passed three-stage testing, including chemical and sensory examinations. It is a wine’s proof of identity; it verifies that the most important declarations on the label are accurate and that a wine is fault-free (minimum standards have been met); and it is a mandatory declaration on the label.
Auslese:	A Prädikat, or special attribute, that describes the ripeness level of the grapes and type of harvest. In this case: a rich wine made from fully ripened bunches selectively harvested (unripe or diseased berries are discarded). Beeren- and Trockenbeerenauslese are increasingly concentrated versions of Auslese, made from overripe and/or botrytized grapes, selectively harvested by hand, berry by berry.
Badisch Rotgold:	A <i>Rotling</i> from the Baden wine-growing region. Made from Grauburgunder (at least 51%) and Spätburgunder grapes; they must be declared on the label.
Barrique:	A traditional French cask measure of 225 liters (the wine law permits up to 350 liters) that usually refers to fermentation and/or aging in new or relatively new oak casks that influence a wine’s aroma profile (hints of vanilla, tobacco, etc.). Can be declared on the label if at least 75% of a wine was fermented or aged in barrique for at least four months (white wines) or six months (red wines).
Beerenauslese:	A Prädikat, or special attribute, denoting a full-bodied, fruity wine made from overripe grapes that are usually affected by <i>Botrytis cinerea</i> (noble rot); selectively harvested (berry selection). Abbreviation: BA.
Bereich:	An appellation of origin, a district. A broad division of a wine-growing region made up of collective and individual vineyard sites; applicable to quality and Prädikat wines. Examples: Bereich Bernkastel, Bereich Johannisberg, Bereich Nierstein.
Blanc de Noir(s):	White wine made from red grape(s).
Blind tasting:	A tasting to objectively assess a wine’s style and quality without knowing its identity (producer). Example: quality control sensory testing.
Bocksbeutel:	The flat, round-shaped bottle with a short neck that is traditional in the Franken wine-growing region, as well as four villages near Baden-Baden (Neuweier, Steinbach, Umweg, and Varnhalt), and the Baden district of Tauberfranken.
Body:	A tasting term for the overall sensation of a wine’s fullness in the mouth. Alcohol, extract, and residual sugar contribute to the body, or weight, of a wine.
Botrytis cinerea:	A fungus. In unripe grapes, it causes damaging, ashen-colored gray rot. In fully ripened grapes, it enables the water content of the grape to evaporate, leaving behind solids (sugars, acids, and minerals) and resulting in a highly concentrated wine. The name derives from <i>Botrus</i> , Greek for bunch of grapes, and <i>cinis</i> , Latin for ashes. The beneficial form, “noble rot,” is known as <i>Edelfäule</i> in German and <i>pourriture noble</i> in French.
Bottle aging:	The last stage of development in wine production. After bottling, wine is often aged several years, whereby the aromas and flavors change. At best, the wine’s fruit, acidity, and alcohol reach optimal balance and harmony.
Chambrieren:	[Fr] To slowly allow a wine to reach room temperature.
Classic:	A harmoniously dry wine of above-average quality made from a region’s traditional grape varieties.
Climatic zones:	Climatic and weather conditions vary tremendously with the European Union. As such, the EU area devoted to viticulture is divided into climatic zones designed to help compensate for the variations that influence wine production, thereby putting all members on an equal footing. They range from A, the northernmost/coolest, to CIII (b), the southernmost/warmest. The prerequisites for quality categories are correlated with these zones, particularly, the required minimum amount of natural alcohol. With one exception, Germany’s wine-growing regions are located within zone A; Baden lies in zone B.

C

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D

Continental climate:	The climate of Germany’s easternmost regions (Franken, Saale-Unstrut, Sachsen) is relatively dry. Summers are hot, winters are cold. The growing season is shorter and the danger of early or late frost is higher than in regions influenced by the warm, moist Gulf Stream.
Corked:	A tasting term for the unpleasant moldy, damp smell of a wine with cork taint, a fault caused by the chemical compound TCA (trichloroanisole), which is produced when airborne bacteria or mold come into contact with phenols and chlorine. It can contaminate natural corks, but also wooden barrels and pallets, and cardboard cases.
Crossing:	The product of grape breeding to produce a new variety with previously defined characteristics. Traditionally, German new crossings were bred from two or more varieties of the same species (intraspecific crossing), e.g., <i>Vitis vinifera</i> x <i>Vitis vinifera</i> . A hybrid is bred from two or more varieties of different species (interspecific crossing), e.g., <i>Vitis vinifera</i> x <i>Vitis labrusca</i> . Until recently, hybrids were not permitted in Germany (see new hybrids).
Cuvée:	(Fr) A blend of wines from different grape varieties, vintages, vineyards, or casks.
Decant:	To carefully pour a wine into a decanter to expose it to oxygen or separate it from sediments or precipitates.
Dégorgier:	(Fr) To disgorge, or remove, the yeast deposit from a bottle of sparkling wine produced in the traditional champagne method.
Dégustation:	(Fr) A wine tasting in which the impressions of a wine’s aromas and flavors are described according to specified criteria.
Dépôt:	(Fr) A deposit that develops during bottle aging. In red wines, sediments formed from tannins and pigments; in white wines, precipitated tartaric crystals.
DLG:	Abbreviation for Deutsche Landwirtschafts-Gesellschaft (German Agricultural Society). Among other things, it conducts national wine competitions.

DWI:	Abbreviation for Deutsches Weininstitut (German Wine Institute), Mainz, the wine industry’s organization responsible for promoting the quality and the marketing of German wines.
Einzellage:	An appellation of origin, an individual vineyard site. The smallest climatic and geological unit within a specified region; applicable to quality and Prädikat wines. Examples: Bernkasteler Doktor, Johannisberger Hölle, Niersteiner Hipping.
Eiswein:	A Prädikat, or special attribute, denoting an intense wine made from grapes harvested and pressed while frozen [-7°C or 19.4°F]; only the naturally concentrated juice is pressed out.
Equator effect:	On the equator, solar radiation on the surface of the earth is perpendicular. The sun’s angle of incidence north or south of the equator is inclined. Steep slopes compensate for the slanting angle and equatorial radiation is approximated. Because they receive more intensive solar radiation, climatic conditions of south-facing steep slopes are particularly favorable.
Erste Lage:	Literally: top site. Prime vineyards or parcels thereof with optimal climatic and geological conditions. Based on the VDP’s in-house vineyard classification, <i>Erste Lage</i> denotes both an appellation of origin and a quality category (highest possible). As of vintage 2012, VDP growers will replace the designation <i>Erste Lage</i> with <i>Grosse Lage</i> . Because <i>Erste Lage</i> is not legally recognized by the wine law and may not appear on wine labels, VDP growers use a logo, a stylized numeral one that partially frames a cluster of grapes, to identify these top-quality wines.
Erstes Gewächs:	Literally: first growth. Wines from top sites or parcels thereof. Based on the Rheingau Wine-growers’ Association’s vineyard classification, <i>Erstes Gewächs</i> denotes both an appellation of origin and a quality category (highest possible). It is legally recognized by the wine law, but applicable to Rheingau wines only.
Erzeugerabfüllung:	An estate-bottled wine. The <i>Erzeuger</i> , or producer, is an individual grower, cooperative of growers or larger winery that makes and bottles wine made from grapes sourced from their own vineyards.
Extract:	Dry extract is the sum of a wine’s nonvolatile solids, primarily sugars, acids, and minerals.

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F

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Federweisser:	Unfiltered must containing CO ₂ and yeast that is still in the process of fermenting. An autumn specialty served with onion quiche or roasted chestnuts.
Feinherb:	An expression of style denoting a dryish wine with a bit more or less residual sugar than the parameters set for <i>halbtrocken</i> (< 18 g/l). It is permitted on labels but not legally defined.
Fermentation:	The biochemical process during which must is transformed into wine. Duration ranges from several days to several months.
Five-point scale:	Evaluating a wine's bouquet, taste, and harmony on a scale of one to five. The average of the points achieved for each characteristic determines a wine's quality score. The system was created by the DLG and is used in all official examinations of wine in Germany.
Fruit acids:	The sum of different acids in a wine, primarily tartaric and malic acids.
Grape variety:	Grapevines belong to the <i>Vitaceae</i> family, genus <i>Vitis</i> ; the majority of the ca. 140 varieties cultivated in Germany belong to the species <i>Vitis vinifera</i> .
Green cover:	Grasses and plants that grow naturally or are sown between the rows of vines to help reduce erosion and naturally improve soil fertility by fostering biodiversity, i.e., creating a habitat for a wealth of flora and fauna.
Green harvest:	A method of influencing the quantity and quality of the grapes prior to the main harvest by thinning out berries and/or bunches to strengthen those remaining on the vine.
Grosses Gewächs:	Literally: great growth. Based on the VDP's in-house vineyard classification, <i>Grosses Gewächs</i> denotes an <i>Erste Lage</i> wine that is dry in style. Their counterparts with residual sugar are denoted by the traditional Prädikats, from Spätlese through Trockenbeerenauslese. Because <i>Grosses Gewächs</i> is not recognized by the wine law and may not appear on wine labels, VDP growers use the initials GG to identify these top-quality wines.
Grosslage:	An appellation of origin, a collective vineyard site. A group of individual sites with a similar climatic and geological makeup. Examples: Bernkastel-er Badstube, Johannisberger Erntebinger, Niersteiner Gutes Domtal.

Gutsabfüllung:	An estate-bottled wine. In addition to fulfilling the criteria for an <i>Erzeuger-abfüllung</i> , the cellar master must have completed oenological training. A <i>Gut</i> is an estate; a <i>Weingut</i> , a wine estate.
Harvest diary:	One of the control mechanisms in quality control testing. During the harvest, the grower must maintain a daily record of when, where, and how much of which varietal(s), and at which must weight(s), was harvested. The type of harvest must also be noted.
Hochgewächs:	An above-average, 100% Riesling quality wine made from grapes with starting must weights higher than prescribed by law. It must achieve a quality score of at least 3.0 points during quality control testing.
Kabinett:	A Prädikat, or special attribute, denoting a wine made from ripe grapes (riper than Qualitätswein) and usually, relatively low in alcohol.
Kellereiabfüllung:	A wine bottled by a <i>Kellerei</i> (commercial winery). The winery either makes the wine from grapes grown by someone else or it purchases finished wine from a third party. The <i>Abfüller</i> , or bottler, is responsible for a wine's quality, regardless of the source of grapes or producer.
Klassische/ Traditionelle Flaschengärung:	The term(s) on the label of German <i>Sekt</i> (sparkling wine) to denote the most labor-intensive and expensive method of sparkling wine production in which the wine remains in one and the same bottle during every step of production, the traditional method used in Champagne, France.
Lage:	An appellation of origin, a vineyard site. A distinction is made between an <i>Einzellage</i> , or individual site, and a <i>Grosslage</i> , or collective site.
Landwein:	Comparable with a French <i>Vin de Pays</i> , <i>Landwein</i> is a simple, everyday wine with a protected geographical indication, made from grapes sourced from one of the 26 German Landwein regions.
Liebfraumilch:	A generic term for a white Rhine wine with between 18 and 45 g/l residual sugar. It is always a Qualitätswein from one of the following specified regions that must be named on the label: Rheinhessen, Pfalz, Nahe or Rhein-

H

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gau. No grape variety may be named on the label, but at least 70% of the cuvée must consist of one or more of the following grapes: Müller-Thurgau, Riesling, Silvaner or Kerner. The Liebfrauenkirche (Church of Our Lady) in Worms/Rheinhessen is the namesake of of Liebfraumilch, literally, the “Milk of Our Lady.” By the 20th century, the crop from the vineyard surrounding the church was not large enough to meet demand, and Liebfraumilch came to be used in a broader sense to denote any pleasantly mild German white wine from the central Rhine regions.

Malic acidity: One of the two principal organic acids of grapes and wines (see tartaric acid). The name derives from *malum*, Latin for apple. It naturally decomposes during the final stage of ripening or is converted into softer, milder lactic acid and CO₂ during malolactic fermentation.

Malolactic fermentation: A secondary, bacterial fermentation that takes place during or after alcoholic fermentation. Lactic bacteria convert tart malic acid into milder lactic acid. The winemaking technique reduces a wine’s total acidity and creates a softer, rounder mouthfeel.

Mash: Crushed grapes, consisting of pulp, skins, seeds, and juice. Before being pressed, mash is sometimes left standing to extract aroma/flavor, color, and tannins.

Must: Grape juice, the juice extracted during crushing and/or pressing.

Must weight: The density of grape juice, i.e., the weight of the must in relation to its volume. In Germany, this is expressed in degrees Oechsle (similar to the Baumé and Brix scales used elsewhere). A wine’s potential alcohol can be determined from this measurement. It is one indication of grape ripeness.

New hybrids: While the development of interspecific crossings has long been the norm in France (French hybrids), only in recent years have they been officially permitted in Germany, primarily thanks to the improved wine quality of new hybrids. A number of these are ***pilz**widerstandsfähig*, or fungus-resistant, referred to in German as “PiWis.” They are particularly popular with organic growers as a viable alternative to conventional plant protection measures, and thus, a contribution to sustainable viticulture. Examples: Regent, Johanniter, Phoenix, and Solaris.

Oechsle: A scale of sugar measurement in degrees based on the density of grape juice, developed in the 1830s by the physicist, pharmacist, and goldsmith Christian Ferdinand Oechsle (1771-1852) to improve the practicality of hydrometers.

Oenology: The science of wine and winemaking.

Organic viticulture: Environmentally friendly wine-growing in accordance with the strict guidelines set forth in EU regulations. Herbicides are forbidden, as are chemical or synthetic fertilizers and pesticides. The biodynamic version prescribes specific substances to strengthen a vine’s natural resistance and soil vitality. Growers are advised to utilize the motion dynamics of cosmic and lunar cycles.

Perlwein: A slightly sparkling wine that is often marketed as *Secco*, a take on Italian *Prosecco*. The sparkle can be naturally generated during fermentation or CO₂ can be added (not permitted in *Sekt* production).

Phylloxera: A vine louse that was imported to Europe from North America in the 1860’s. It destroys vines by feeding on their roots. Ultimately, scientists discovered that grafting vinifera vines on to phylloxera-resistant American roots was an effective remedy. Sandy soils, the bane of the louse, also provide protection.

Prädikatswein: Prädikat wine, a superior quality wine with a protected designation of origin, which must fulfill more stringent quality criteria than *Landwein* or basic *Qualitätswein*. A Prädikat, or special attribute, describes the ripeness of the grapes and the type of harvest. The six Prädikats, in ascending order of ripeness and extent of selection, are Kabinett, Spätlese, Auslese, Beerenauslese, Eiswein, and Trockenbeerenauslese.

Qualitätswein b.A. (bestimmter Anbaugebiet): Quality wine from a specified wine region, a basic quality wine with a protected designation of origin, made from grapes sourced from one of the 13 German wine-growing regions. Abbreviation: QbA.

Quality categories: The EU has defined two broad quality categories: wine without and wine with a protected indication of origin. There are two categories of protected indication of origin: protected geographical indication (*Landwein*) and protected designation of origin (*Qualitätswein* and *Prädikatswein*). *Deutscher Wein* (German wine) has no protected indication of origin.

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Refractometer: A hand-held, optical instrument that can be used in the vineyard to measure the sugar content in a few drops of grape juice, in degrees Oechsle, based on light refraction.

Residual sugar: A reflection of yeast performance. Yeast converts sugar in grape juice into alcohol and CO₂ during alcoholic fermentation. Under certain conditions, the yeast is unable to convert all the sugar. The amount of leftover, or residual, sugar in the wine determines its style. This is not to be confused with “sweet reserve,” which is unfermented (naturally sweet) grape juice left “in reserve” to add to finished wine (after fermentation) to fine-tune a wine’s style.

Riddle: To manually or mechanically turn a bottle of sparkling wine to help the yeast settle. In the traditional champagne method, bottles are placed in a riddling rack in which they are riddled and periodically moved to an increasingly vertical, upside-down position. During the process, the yeast settles and forms a deposit in the neck of bottle, which is ultimately disgorged prior to corking the bottle.

Rosé: Pale to light red wine made from red grapes that are usually processed to produce a light-colored wine. The degree of color derives from the length of skin contact.

Rotling: Pale to light red wine made from white and red grapes or their mash that are fermented together.

Schielerwein: A *Rotling* from the Sachsen wine-growing region..

Schillerwein: A *Rotling* from the Württemberg wine-growing region.

Schlossabfülllung: A wine bottled by a *Schloss* (castle) estate. In addition to fulfilling the criteria for a *Gutsabfüllung*, the wine estate must be situated in a castle with historical preservation status, and the wine is made from grapes grown in the estate’s own vineyards and produced and bottled at the estate.

Schorle: A spritzer, a refreshing beverage made of wine and sparkling water.

Sekt: Sparkling wine, the product of a primary or secondary fermentation, with a CO₂ pressure of at least 3.5 atm in a closed container, and an existing alcohol content of at least 10% by volume.

Selection: A harmoniously dry wine of top quality made from a region’s traditional grape varieties.

Sensory examination: One of the control mechanisms in quality control testing. In order to receive an A.P. Number, a wine undergoes a blind tasting in which its bouquet, taste, and harmony are evaluated according to a five-point scale.

Sommelier/ Sommelière: A wine waiter/waitress, the person responsible for recommending or selecting and serving wine to guests in an upscale restaurant. He or she might also be in charge of purchasing a restaurant’s wine and preparing its wine list.

Spätlese: A Prädikat, or special attribute, denoting a fuller-bodied wine made from fully ripened grapes; usually harvested later during the harvest. *Spätlese* literally means late harvest.

Steillage: Literally: steep site. A vineyard with an inclination of more than 30%.

Stem: To separate the stem from the berry prior to or during crushing. Stems contain bitter substances, such as harsh tannins, that can adversely influence the finished wine’s taste.

Strausswirtschaft: A wine pub in a grower’s home where he/she can sell his/her wine (and snacks) for a few months of the year. Such a pub is identified by a *Strauss* (wreath) or *Besen* (broom) hanging over the doorway. This form of direct marketing was initiated by Charlemagne 13 centuries ago..

Sugar-free extract: The sum of a wine’s nonvolatile solids (extract) excluding sugars.

Sulfites: Sulfur is used to sterilize barrels, and added to wine (in legally prescribed amounts) to prevent microbial growth, to protect it from oxygen, and to help stabilize it. “Contains sulfites” is a mandatory declaration on the label.

Tannins: Tannins in wine derive from the stems, skins, and seeds of grapes, and to a lesser extent, from the cask(s) in which a wine develops. The tannins in a young wine are usually harsh and mouth-puckering but mellow with age. They contribute to a wine’s aging potential. Tannins play a minor role in white wines since the berries are stemmed prior to pressing and the juice has little or no skin contact.

T

V

Tartaric acid:	One of the two principal organic acids of grapes and wines (see malic acid) and the most important. It lends a wine its refreshing tang and crisp finish.
Tartaric crystals:	When tartaric acid in wine binds with potassium, it forms potassium bitartrate (cream of tartar) crystals that accumulate on the cork or at the bottom of a bottle. They are harmless, tasteless, and do not detract from the bouquet or flavor of a wine, but unfortunately, they resemble glass shards. Volume producers prefer to avoid the problem altogether via cold stabilization prior to bottling. The wine is chilled to near-freezing temperatures to provoke crystal formation, after which it is transferred to another container, leaving the crystals behind. Decanting is a simple method of separating a wine from the crystals.
Terroir:	A neither clearly defined nor understood concept that refers to the interplay of climate, soil, grape variety, and the skill of the winemaker that lends a wine its unmistakable character.
Training:	Methods of supporting and shaping vines to improve bud burst, nutrient supply, and air circulation, as well as facilitate vineyard work, e.g., foliage management or mechanical harvesting. Wire trellises (canes are stretched and fastened along a wire) and, in very steep sites, single stakes (canes are shaped into a double bow and affixed to the stake) are training systems commonly used in Germany.
Trester:	Grape pomace, i.e., the stems, skins, and seeds left after grapes are pressed. It also refers to brandy distilled from grape pomace (cf. <i>grappa</i> , <i>marc</i>).
Trockenbeeren- auslese:	A Prädikat, or special attribute, denoting a highly concentrated wine made from botrytized grapes dried up almost to raisins; selectively harvested (berry selection). Abbreviation: TBA.
Vino-Lok:	A glass stopper with a special sealing ring and an aluminium cover cap. It is an alternative to the traditional natural cork closure.
Weinkellerei:	A winery, often a large, commercial winery (see <i>Kellereiabfüllung</i>).

W

Weissherbst:	A rosé wine made from one grape variety; it must be declared on the label. The grapes are processed to produce a light-colored wine; no degree of color is prescribed. Minimum quality category: Qualitätswein.
Whole cluster pressing:	The grower opts to dispense with stemming, crushing, and mash settling and proceeds directly from picking to pressing intact clusters. It is a particularly gentle method of pressing and results in less cloudy must that contains fewer tannins.
Winzer:	A vintner or wine-grower.
Winzergenossen- schaft:	A wine-growers’ cooperative. By the last half of the 19th century, many wine-growers were in dire straits due to the political and socioeconomic changes of the times, cheap wine imports, and poor harvests. These conditions led to the cooperative movement, whereby growers formed associations in order to improve the quality of their wine and their income. The oldest legally recognized German cooperative was founded in Mayschoss (Ahr) in 1868. As of 2010, some 50,000 wine-growing members of about 200 cooperatives produce about one third of an average annual harvest and collectively own ca. 31,000 ha of vineyards. Often abbreviated: WG.
Winzersekt:	A vintner’s vintage varietal sparkling wine produced by the <i>klassische</i> or <i>traditionelle Flaschengärung</i> , the traditional method used in Champagne, France. The grapes must be sourced from the grower’s own vineyards (within one specified region) and ripe enough to qualify as a Qualitätswein.
Yeasts:	The microscopic, single-celled fungi that are the driving force of fermentation. Once in contact with grape juice, an enzyme within yeast begins converting the natural sugar in grape juice into alcohol and CO ₂ . Yeasts are airborne, particularly in and around vineyards and cellars. These natural yeasts are known as ambient, indigenous or wild yeasts. Alternatively, many winemakers prefer to inoculate the grape juice with cultured yeasts, which “perform” with greater predictability and dependability.

Y



	VITICULTURE IN GERMANY: A LONG TRADITION		
As of 50 B.C.:	The Romans conquer Germania. Vineyards are planted along the Mosel and Rhine.	1775:	The monks of Schloss Johannisberg recognize the benefits of a Spätlese (late harvest). By the time the courier, who was sent to Fulda every autumn to obtain permission for the harvest to begin, returns to Schloss Johannisberg, the grapes are rotting, yet the monks harvest them. To everyone’s surprise, the resultant wine is outstanding.
276 - 282:	During his reign, Emperor Probus, promulgates viticulture north of the Alps.	1787:	Prince Elector Clemens Wenzeslaus decrees that within seven years, inferior varieties are to be replaced by Riesling in his vineyards on the Mosel.
330:	The oldest wine cellars still in use in Germany are constructed. Today, they are owned by the Vereinigte Hospitien in Trier.	1803:	Napoleon secularizes the property of foundations, abbeys, and cloisters in Germany. The ownership of vineyards and wine estates passes into public or private hands.
Ca. 371:	The Roman consul and poet Decimus Magnus Ausonius vividly describes the Mosel in 483 hexameters in his poem “Mosella.”	11 February 1830:	The first Eiswein harvest takes place in Dromersheim near Bingen/Rheinhessen.
As of ca. 375:	During the great migrations and concomitant decline of the Roman Empire, viticulture in western Europe suffers a considerable setback and nearly falls into oblivion.	1868:	Eighteen vintners in Mayschoss/Ahr found the world’s first wine-growers’ cooperative, known today as the Winzergenossenschaft Mayschoss-Altenahr.
Ca. 800:	From his palace in Ingelheim/Rheinhessen, Charlemagne is said to have noted that the snow had already melted on the opposite side of the Rhine and orders vines to be planted there (today’s Rheingau). He is also credited as the initiator of the Strausswirtschaft, a wine pub in a grower’s home where he/she can sell his/her wine (and snacks) for a few months of the year. Such a pub is identified by a Strauss (wreath) or Besen (broom) hanging over the doorway.	1868:	Immanuel Dornfeld founds the Royal Viticultural School in Weinsberg/Württemberg, to-day’s State Research and Teaching Institute for Viticulture and Pomology, and home of the Staatsweingut Weinsberg.
884:	Emperor Charles III has Germany’s first Spätburgunder vines planted in Bodman/Lake Constance.	1872:	Baron Eduard von Lade founds the Prussian Royal Teaching Institute for Viticulture and Pomology in Geisenheim/Rheingau, today’s Geisenheim Research Center.
As of 12th C:	French, particularly Burgundian, monks come to Germany to found numerous cloisters; they clear forests along the Mosel and Rhine and their tributaries; and plant vineyards: Kloster Eberbach/Rheingau, 1136; Kloster Marienthal/Ahr, 1137.	1874:	The destructive vine louse phylloxera, a pest imported from North America, is first recorded in German vineyards. It wreaks havoc in the vineyards of Germany and the rest of Europe. Within a relatively short time, researchers discover that grafting vinifera vines onto phylloxera-resistant American rootstock can provide protection, a procedure practiced to this day.
13 March 1435:	The earliest documented mention of Riesling is an invoice from Klaus Kleinfisch to his lord for the purchase of Riesling vines to be planted next to the castle he was building in Rüsselsheim (near Hochheim/Rheingau).	1882:	Professor Dr. Hermann Müller from the Swiss canton Thurgau breeds the grape variety Müller-Thurgau at the Geisenheim Research Center.
16th C:	Viticulture declines with the lower temperatures and shorter growing seasons of the cold period between 1550 and 1850 (“Little Ice Age”).	1892:	German sparkling wine producers form an association to ensure the quality of the sparkling beverage that is extremely popular in Germany and which, at that time, can still be called Champagne.
1618:	By the start of the Thirty Years’ War, Germany’s vineyard area reaches the height of its expansion (ca. 300,000 ha). The ensuing destruction of the countryside and decimation of the population leads to a drastic reduction in viticulture.	1903:	The first official wine inspector is appointed in the Pfalz.
As of 1720:	Prince Abbott Constantine of Fulda decrees that henceforth, Riesling is the only vine to be planted in the vineyards of Johannisberg/Rheingau.	1910:	Friedrich von Bassermann-Jordan publishes his standard work, “The History of Viticulture.”
		1935:	Germany’s first “wine road” – Deutsche Weinstrasse – opens in the Pfalz to help promote tourism.

1949:	Germany elects its first wine queen, Elisabeth Gies, in Neustadt an der Weinstrasse/Pfalz.
1949:	Deutsche Weinwerbung GmbH, today's Deutsches Weininstitut (German Wine Institute), is founded.
1950:	In the aftermath of the Second World War, Germany's vineyard area is at a low: only 49,000 ha of vines remain.
1971:	A comprehensive new wine law lays the foundation for the classification of German wines, a system that has remained largely intact to this day. It sets up 11 specified regions for the production of quality wine. It is also an excellent vintage for German wines.
1979:	The Federal Office of Plant Varieties adds Dornfelder, a red crossing bred by August Herold at the State Research and Teaching Institute in Weinsberg/Württemberg in 1955, to the list of officially permitted varieties in Germany.
1981:	A red wine boom begins in Germany and lasts a quarter of a century. The vineyard area devoted to red varieties increases from 11% to nearly 37% by 2006, after which focus shifts back to white varieties.
1990:	As a result of German reunification, the number of specified regions for quality wine production increases to 13 to include the two wine-growing regions in the east, Saale-Unstrut and Sachsen. Germany's total vineyard area is slightly more than 100,000 ha, and has primarily remained the same since then.
Since ca. 1995:	A worldwide Riesling renaissance leads to a new appreciation of the viticultural quality of German wine.
2001:	For the first time, German consumers spend more on wine than beer.
2010:	The German Wine Institute distinguishes 40 sites as landmarks of wine culture throughout the country. They have particularly helped shape the history and tradition of viticulture in Germany.

MEASUREMENTS		
GERMAN = 1		1 = FOREIGN
2.54 cm	in	cm 0.3937 in
0.3048 m	ft	m 3.2808 ft
1.609 km	mile	km 0.621 miles
0.0929 m²	ft²	m² 10.764 ft²
4047 m²	acre	m² 0.000247 acres
0.4047 ha	acre	ha 2.4709 acres
28.35 g	oz	g 0.0352 oz
0.4536 kg	lb	kg 2.204 lb
29.59 ml	US fl. oz	ml 0.0338 US fl. oz
3.785 l	US gal	l 0.264 US gal
28.41 ml	imp. fl. oz	ml 0.0352 imp. fl. oz
4.546 l	imp. gal	l 0.2199 imp. gal
liter	US fl.oz	imperial fl.oz
bottles		
1.5	50.7	52.8
1.0	33.8	35.2
0.75	25.4	26.4
0.375	12.7	13.2
glasses		
0.25	8.4	8.8
0.2	6.7	7.0
0.1	3.4	3.5
0.5	1.7	1.7

Bottle sizes	US fl.oz	liters
regular = 1 bottle	25.4	0.750
magnum = 2 bottles	50.7	1.5
Jeroboam = 4 bottles	104	3.0
Rehoboam = 6 bottles	156	4.5
Methuselah = 8 bottles	208	6.0
Salmanazar = 12 bottles	312	9.0
Balthazar = 16 bottles	416	12.0
Nebuchadnezzar = 20 bottles	520	15.0

To convert Fahrenheit to Celsius (formerly, Centigrade): subtract 32 from degrees Fahrenheit and divide by 1.8

To convert Celsius (formerly, Centigrade) to Fahrenheit: multiply degrees Celsius by 1.8 and add 32

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