

“The World Atlas of Wine is the single most important reference book on the shelf of any wine student.”

Eric Asimov, *New York Times*

“The most useful single volume on wine ever published... If I owned only one wine book, it would be this one.”

Andrew Jefford, *Decanter*

“Like a good bottle of wine, you’ll find yourself going back to it again and again... Perfect for anyone who has a thirst for greater wine knowledge.”

Edward Deitch, *NBC/today.com*

“There’s an infectious sense of glee about this new atlas. I get the impression that Johnson and, in particular, Robinson with her humorous pedantry, really enjoyed writing it.”

Henry Jeffreys, *Guardian*

“The World Atlas of Wine belongs on your shelf... The essential rootstock of any true wine lover’s library. A multi-layered snapshot of wine and how it has evolved.”

Dave McIntyre, *Washington Post*

COMPLETELY REVISED

The World Atlas of
WINE
8TH EDITION

Hugh Johnson & Jancis Robinson

The Authors

Hugh Johnson has led the world of wine writing in many new directions over the 52 years since his first book, *Wine*, was published. *The World Atlas of Wine*, his *Wine Companion* (now in its sixth edition), the annual *Pocket Wine Book* (since 1977), *The Story of Wine*, following a 13-part TV series, and his memoirs, *A Life Uncorked*, have all been best-sellers. Indeed, his *Pocket Wine Book* has sold over 12 million copies. His unique approach, serious and informed yet entertaining and unpretentious, has earned him the admiration of wine lovers all over the world. He makes complicated subjects accessible and enjoyable.

Hugh's *International Book of Trees*, *The Principles of Gardening*, and his regular gardening column, tradsdiary.com, have gained him another loyal following. In 2011, his *Trees: A Lifetime's Journey* won the Garden Media Guild's Reference Book of the Year award, and its translation was awarded the 2012 Prix Redouté for the best gardening book in the French language. Total sales of his books now exceed 17 million copies. In 2003, Hugh was made a Chevalier of the Ordre National du Mérite by President Chirac, and in 2007, he was awarded an OBE for services to winemaking and horticulture, two of his great passions.

Jancis Robinson is described by *Decanter* magazine as "the most respected wine critic and journalist in the world". Jancis writes daily for her website, jancisrobinson.com (awarded the first ever Wine Website of the Year accolade in the Louis Roederer International Wine Writers Awards 2010), weekly for *The Financial Times*, and bimonthly for a column that is syndicated around the world. But many know her best for her hugely admired reference books; in addition to co-authoring *The World Atlas of Wine*, she is editor of *The Oxford Companion to Wine* and co-author of *Wine Grapes*. Her most recent book is also her shortest, a practical guide to the essentials of wine, *The 24-Hour Wine Expert*.



Critically acclaimed as the "woman who makes the wine world gulp when she speaks" (*USA Today*) and "our favourite wine writer" (*Playboy*), Jancis was the first person outside the wine trade to qualify as a Master of Wine, in 1984. She was awarded an OBE in 2003 by Her Majesty the Queen, on whose cellar she now advises.

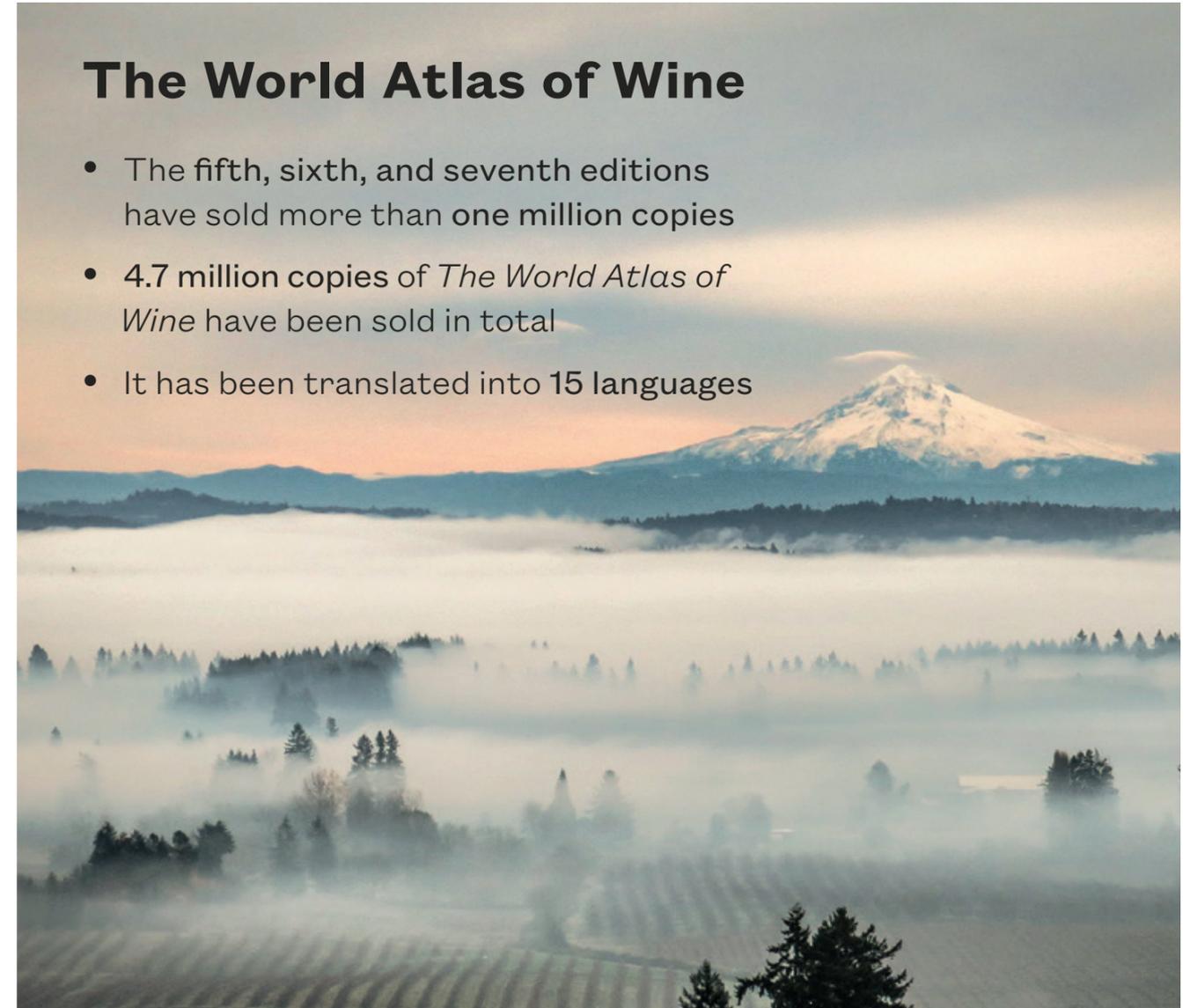
In one week in April 2016 she was presented with France's Officier du Mérite Agricole, the German VDP's highest honour (the golden pin, presented by previous recipient Hugh Johnson) and, in the US, her fourth James Beard Award. She loves and lives for wine in all its glorious diversity, generally favouring balance and subtlety over sheer mass.

"Hugh Johnson and Jancis Robinson are the Lewis and Clark of wine exploration."

TIME Magazine

The World Atlas of Wine

- The fifth, sixth, and seventh editions have sold more than one million copies
- 4.7 million copies of *The World Atlas of Wine* have been sold in total
- It has been translated into 15 languages



NEW FOR THE EIGHTH EDITION

- **Authoritative, inspiring text includes the many changes of the last six years**
- **232 unique maps, including 22 new maps**
- **Three new 3-D maps**
- **Every existing map fully revised and updated**
- **Page count increased to 416**
- **New information panels**
- **New introductory nutshells**
- **New modern infographics**
- **New map annotations**
- **New topics in a fully revamped Introduction**



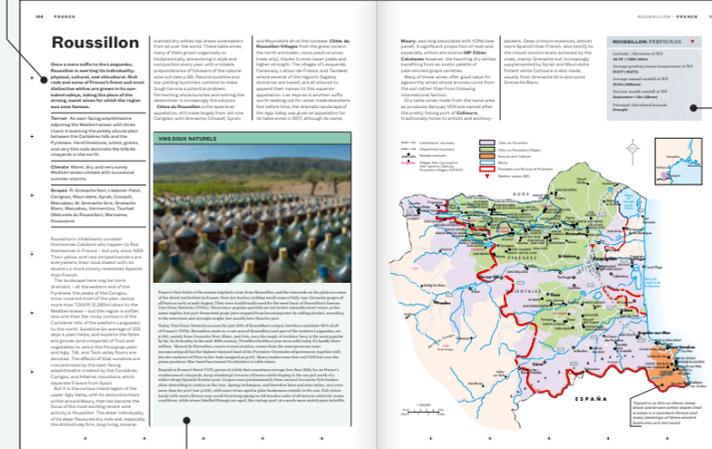
The Seventh Edition

The first edition of *The World Atlas of Wine* made publishing history when it appeared in 1971, and was hailed by the French Government as “*Un événement majeur de la littérature viticole*”. With 150 maps spread over 272 pages, it was a phenomenal success. After flying solo for four editions of this now acknowledged masterpiece, Hugh teamed up with Jancis to combine their world class wine expertise. Together they created the fifth edition, which was published to great acclaim in 2001. The maps were modernized and several new ones added, to keep up with the growing interest in wine. Six years later, the Atlas had to grow in size again, making the sixth edition, at 400 pages, the most expansive revision so far. In 2013, the seventh edition was published. It included 215 unique, detailed maps covering the world’s most significant wine regions. The Atlas was also released as an iPad edition, which won the Best ebook: Illustrated Fixed-Layout category at the 2014 Digital Book Awards.

The Eighth Edition

When the eighth edition is published in October 2019, the status of *The World Atlas of Wine* as the most authoritative and essential wine reference work will be further enhanced. To reflect all the changes in the global wine scene over the past six years, the Atlas has grown in size to 416 pages and 22 new maps have been added. The introduction section has been given a complete overhaul to address the topics of most vital interest to today’s wine-growers and wine drinkers. And the increasing importance of cooler-climate regions is reflected in a new map of Italy’s Alto Piemonte region. Changes in focus and fashion have led to new maps in Germany, Spain, and of the Lebanon, while British Columbia, southern Uruguay, and Brazil’s Serra Gaúcha region are covered in detail for the first time. This book will satisfy every wine lover’s thirst for knowledge and bring readers right up to date with the world of wine.

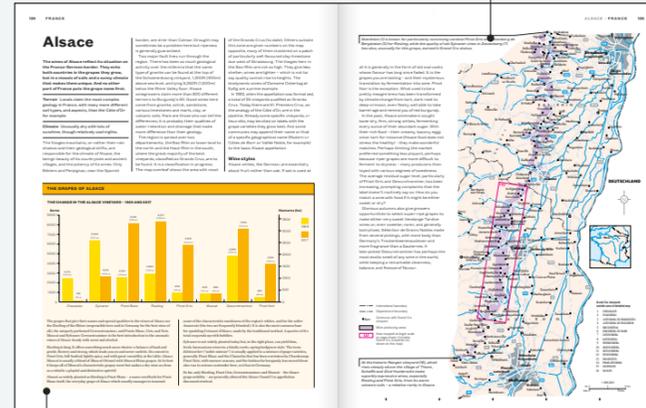
The main wine regions are summarized in a nutshell, with key information on terroir, climate, and grape varieties.



Key facts panels list a region’s vital statistics: location, meteorological data, viticultural challenges, and grape varieties grown.

Brand new informative panels have been added such as this one on Roussillon’s Vins Doux Naturels, the Médoc’s increasingly important white wines, sherry styles, and North America’s cold-hardy grape varieties.

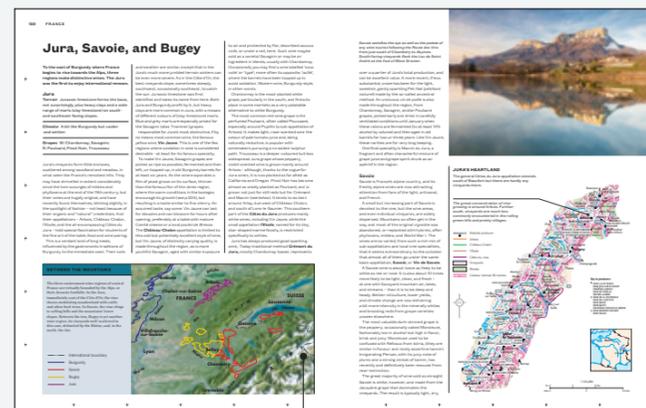
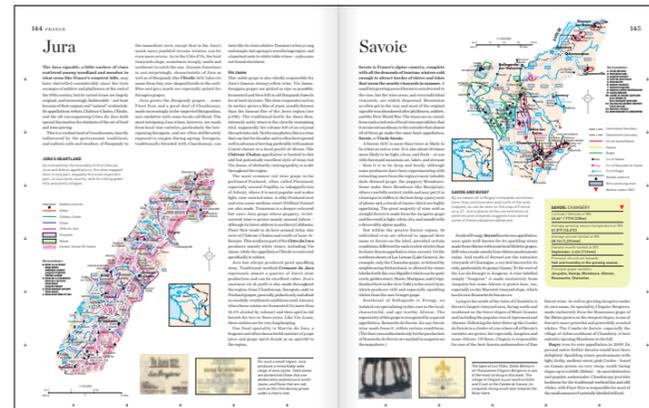
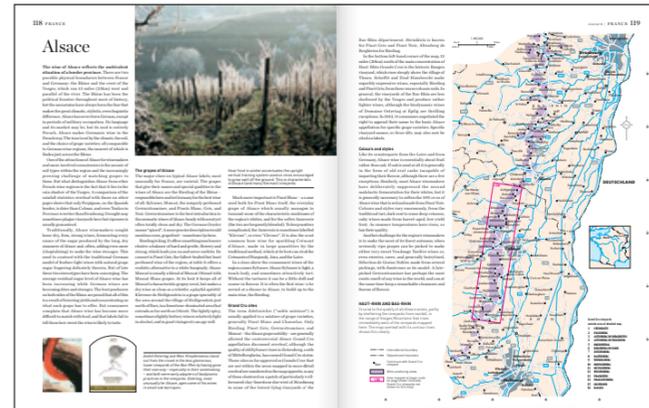
Annotations point to producers, places, and features of particular interest on the maps.



Colourful new graphics bring aspects of a region’s wine statistics to life.



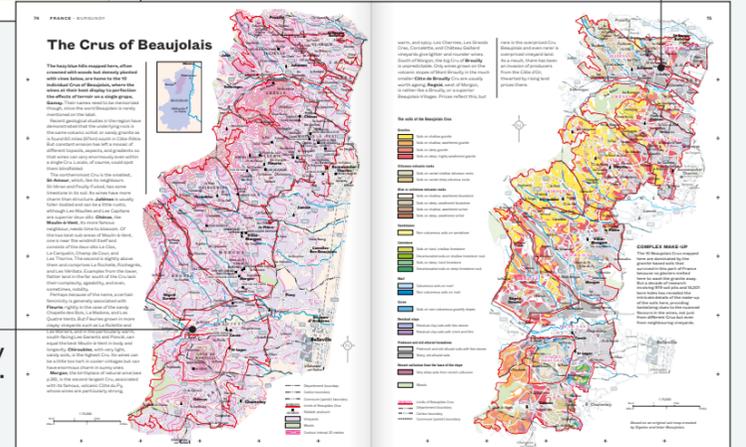
Beautiful photographs introduce the world’s wine-growing continents and most important countries in the Atlas.



Three new 3-D maps reveal the importance of topography in the location of specific wine regions.



Revised Language of the Label panels explain a country’s wine regulations and commonly used terms.



Expertly researched comprehensive maps reveal the geology of individual wine districts. The three soil maps new to the eighth edition reflect an increasing interest in terroir and soil types.

Wine and money

Fine wine has never been more expensive. The most famous names are, deliberately, fetching prices that put them firmly in the luxury asset class. In the early 1980s you could buy a standard unit of fine wine – a case of 12 bottles of a Bordeaux first growth – from the famous 1982 vintage for just over £300. Even first growths from the lauded 2000 vintage were launched at prices well under £450 a case. But as the 21st century has worn on, the number of people on the planet who are interested in wine, or at least interested in putting their money into it while interest rates remain low, has grown out of all proportion to the amount of fine wine produced – with predictable effects on prices. First growths now cost several thousand pounds a case on release, decades before they are ready to drink. (See p.87 for some illuminating figures on how much such wines cost to make.)

Several factors have traditionally tempted investors towards Bordeaux. One is its sheer size; it is world-famous, made in substantial quantities, and generally available. Another is the relative simplicity of its naming system; its wines are easy to identify. Perhaps most important is the longevity of its wines. Investors don't want a commodity they must turn over quickly before it loses value; they prefer one with a longer trading window. A top Bordeaux can offer 20 or more years of probable, even predictable, saleability, and the auction houses and fine wine merchants and traders offer a ready secondary market. Since the mid-1970s, Bordeaux wine producers and merchants became increasingly dependent on selling the latest vintage

en primeur, showing cask samples to the world's media and merchants in the spring after the harvest and then releasing prices for these embryonic wines, prices that became increasingly, and questionably, based on the scores of a handful of 'critics'. There were inevitably tensions between proprietors and merchants (négociants) over how the profits from this system were shared but the upshot was that château owners largely dictated release prices and the quantities released, and négociants tended to accept them for fear of losing their allocations of future vintages.

For some vintages, such as 2009 and 2010, demand was red hot, fuelled by new interest from Asia. As the graph below charting price rises for various fine wine indices on the trading platform Liv-ex since it was founded in 2003 shows, the overheated Bordeaux market plummeted in 2011 as new buyers from China in particular withdrew in disgust when the immediate returns they had been promised failed to materialize. It took until late 2016 for market prices of the 2009s to match the release prices, so overblown were they.

Just as after a similar slip in 2007, the market rallied eventually but in recent years en primeur sales have been generally more sluggish as an increasing number of prospective wine investors have turned their attention to other regions (and Bordeaux négociants have started to hedge their bets with high-profile releases of significant fine wines from the rest of the world).

Burgundy has been seen as the most obvious alternative to Bordeaux – and the fact that the wines of Burgundy are made in so much smaller quantities than the wines of Bordeaux, has only fanned the flames of inflation. The graph shows how price rises for Burgundy's top 150 investment wines overtook those for Bordeaux's fine wines, the so-called Bordeaux 500, back in 2011, and two years later outpaced price rises for even the top wines of Bordeaux, the Bordeaux Legends. The 2015 vintage of Romanée-Conti, the rarest wine from the Domaine de la Romanée-Conti was released at £3,000 a bottle.

The fine wines of Italy have increased considerably in value too, largely thanks to a much wider appreciation of the unique qualities of Barolo and Barbaresco, and the appeal of the best wines of Tuscany. California's most cultish wines were already ambitiously priced back in 2003, but demand for them in the healthy US economy has not exactly slowed.

Less exalted bottles

At the other end of the scale, everyday wine is probably better value today than it has ever been. Winemakers are vastly more skilful than they once were. Technically imperfect wines are extremely rare, and more likely to be the fault of poor-quality corks, storage, or transport than of inept winemakers. Competition for commercial distribution is so fierce at this over-supplied bottom end of the market that margins are wafer-thin. Basic wines may not be thrilling but they are rarely overpriced.

The trick for value-conscious wine drinkers is to find the best deals and most interesting wines in the vast middle ground between supermarket bottlings and trophy wines (many of which may never be drunk, nor moved from its high-quality, temperature-controlled storage while it is shuffled between investors). It pays to keep an open mind and a palate alert to inherent quality rather than established reputation.

Labour, sometimes water, sometimes but decreasingly chemicals, vineyard and cellar equipment, bottles, stoppers, labels, vintage reputation, rarity, maturity, market positioning, taxation, subsidies, currency movements, and ambition all play their part in determining the price of a wine. In Europe, with the exception of Champagne and merchant-bottlers, most wine producers own or lease their own vineyards. Outside Europe, buying in grapes is much more common and necessarily affects prices.

Wherever grapes come from, vineyard land prices play a huge part in determining, and reflecting, wine prices. We have done our best to gather comparable prices from around the world of wine in the list above right. It clearly shows how reputation trumps soil types. The billionaires are no longer content with owning the most famous wines in the world; they want to own the estates responsible for them too. Our figures are conservative; new records for the prices paid per square metre of vines are being set every month.

Vineyard land prices

Prices, the most recent available, have been assembled from all over the world of wine and converted to dollars per acre (often from euros per hectare). They are grouped by country and then listed in declining value. Note that the most famous European wine regions command higher prices than any outside Europe, but that Beaujolais, for instance, looks like a real bargain. There seems a strong correlation between land prices and fashion, as witness the Jerez vineyard price too.

Wine Region	\$/acre
France	
Pauillac	\$940,000
Côte d'Or	\$870,000
Champagne	\$580,000
Sancerre	\$75,000
Beaujolais	\$5,500
Italy	
Barolo	\$822,000
Alto Adige	\$352,000
Montalcino	\$235,000
Chianti Classico	\$96,000
Spain	
Rioja	\$15,000
Jerez	\$12,000
Portugal	
Douro	\$32,000
Germany	
Rheinhessen	\$26,000
USA	
Napa Valley	\$263,000
Sonoma Coast	\$45,000
Santa Barbara	\$12,000
Willamette Valley	\$9,000
South Africa	
Stellenbosch	\$27,000
Australia	
Barossa Valley	\$33,000
New Zealand	
Marlborough	\$59,000

This suggests that famous Bordeaux names command higher prices than top Burgundy vineyards, and certainly the sale of 20% of Petrus in Pomerol in 2018 created a new world record. But it is rivalled by the less publicized sales of tiny slices of Grand Cru vineyards in the Côte d'Or, generally by families who have owned land there for centuries to outsiders.

The glamour of Napa Valley and the prices that Napa Valley grapes can command has had a hugely inflationary effect on land prices there. Land is still relatively inexpensive in the Willamette Valley on the other hand, even though it is Oregon's most celebrated wine region. And the cool climes of Santa Barbara look particularly well-priced.

The relatively high price of land in Stellenbosch presumably reflects the buoyancy of demand from northern Europe for land in this part of the world as holiday homes and winter getaways.

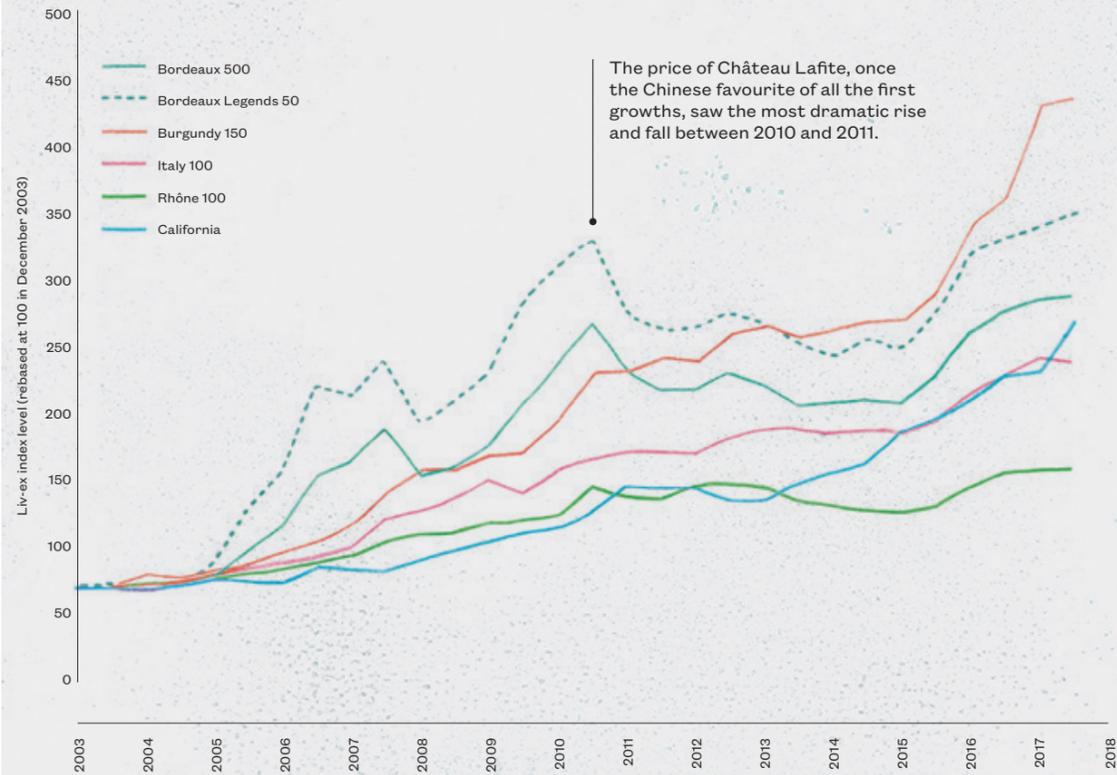
Working for wine

This chart shows how much of a bottle of first-growth Bordeaux a UK worker being paid the average wage could afford to buy after a 4-hour shift in each of the years that this Atlas was published. In the mid-1990s, just four hours' work would earn

more than a bottle of Bordeaux's finest. By 2017, the most recent year for which we have figures, to be able to afford a full bottle would require working more than 20 hours, or half of an average working week on the average wage.

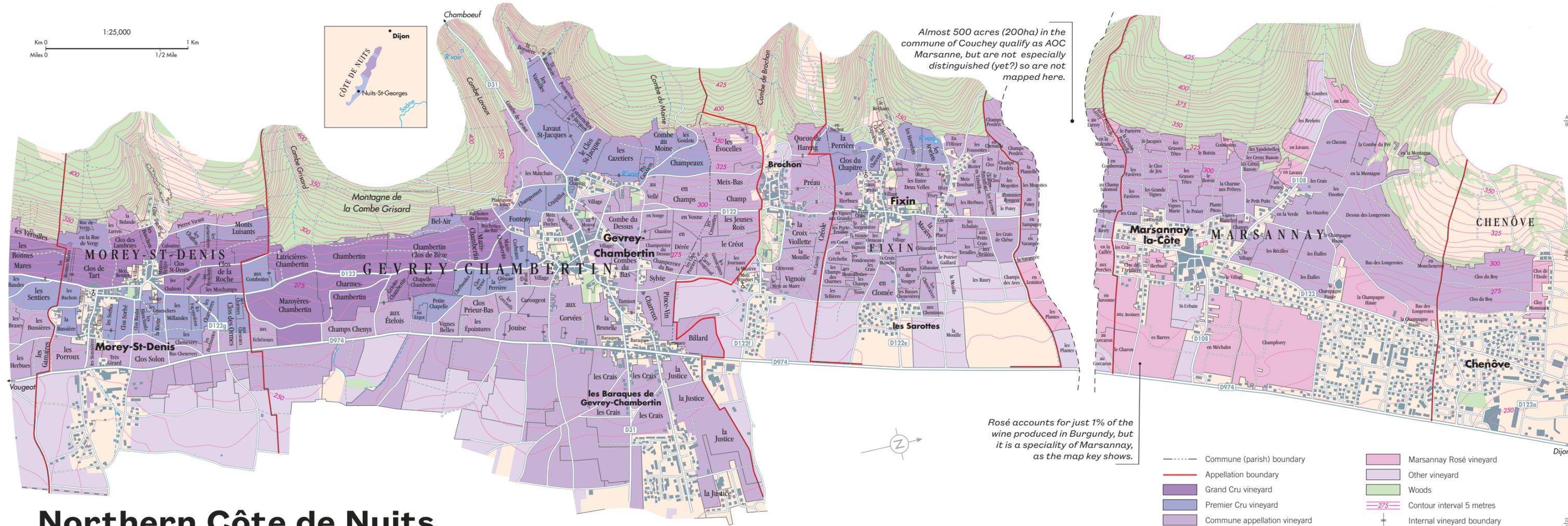


Fine wine trading indices



The most famous wines of Bordeaux, Liv-ex's 50 Bordeaux Legends, have increased in price even more rapidly than the 500 classed growths and equivalent wines that make up the bulk of Bordeaux that is traded. But even they have

been outpaced by recent price rises for the 150 best-known burgundies. The dramatic peaks in 2011 apply only to Bordeaux because they were caused by demand from China that was then entirely focused on red Bordeaux.



Northern Côte de Nuits

The finest, longest-living, and eventually most velvety red burgundies are made at this northern end of the Côte d'Or. Nature adds rich soil to the perfect combination of shelter and exposure provided by the hills. The narrow marlstone outcrop, overlaid with silt and scree, follows the lower slopes. From it Chambertin and the Grands Crus of Morey and Chambolle-Musigny draw their power: wines of weight and muscle, unyielding when young, but the best will offer unmatched complexity and depth of flavour when mature.

The commune of **Morey-St-Denis** is overshadowed in renown by its four Grands Crus plus a little slice of Chambolle's Bonnes Mares. Clos de la Roche, with little Clos St-Denis (which gave its name to the village), are wines of great staying power, strength, and depth, fed by soil rich in limestone. The Clos des Lambrays is a *monopole* making particularly seductive wines that was promoted to Grand Cru rank in 1981 and absorbed into the LVMH luxury goods empire in 2014. Clos de Tart next door acquired its fourth owner in nine centuries

in 2017: the Pinault family, who also own first growth Château Latour in Bordeaux. Don't expect prices to fall. Morey has more than 20 tiny Premiers Crus, few of whose names are well known but whose general standard is very high. The vineyards climb the hill, finding soil higher than anywhere else in the area. The lofty, stony Monts Luisants even produces some excellent white wine.

Gevrey-Chambertin has a vast amount of good land. Suitable vineyard soil stretches further out from the hill here than elsewhere; some east of the main road is still, justifiably, appellation Gevrey-Chambertin rather than the more usual plain Bourgogne. Its two greatest vineyards, Chambertin and Clos de Bèze, acknowledged leaders across the centuries, face east on a gentle slope just under the woods. In the vaulted cellars of Domaine Armand Rousseau, for many Gevrey's holy grail, they vary which of the two is served last to visiting tasters according to each vintage's performance. The constellation of adjoining vineyards – Charmes, Mazoyères, Griotte, Chapelle, Mazis, Ruchottes, and Latricières have

the right to add Chambertin after their names, but not (like Clos de Bèze) before. Burgundian wine law can be more subtle than theology.

The commune also has a slope 160ft (50m) higher with a superb southeast exposure. Its finest Premiers Crus – Cazetiers, Lavaut St-Jacques, Varoilles, and especially Clos St-Jacques – are arguably peers of the Grands Crus. There are more famous individual vineyards in this village than in any other in Burgundy.

The slopes to the north, once called the Côte de Dijon, were until the 18th century considered to be among the best. But growers were tempted to grow bulk wine for the city and planted the "disloyal" Gamay. Brochon, to the immediate north of Gevrey, became known as a "well of wine". Today, its southern edge is included in Gevrey-Chambertin; the rest of its vineyards have the right only to the appellation Côte de Nuits-Villages.

Fixin, however, has a tradition of quality with the Premiers Crus La Perrière, Les Hervelets and Clos du Chapitre potentially

up to the standard of a Gevrey-Chambertin Premier Cru. Couchey, between Fixin and Marsannay, is not mapped because it has no wine reputation to speak of but **Marsannay** is increasingly respected. It specializes in some delicious, unusually ageworthy Pinot Noir rosé made from specially designated vineyards, particularly those uphill of the main road into Dijon, plenty of red that is of serious interest (especially to bargain hunters), and a little, mostly ordinary, white. The proportion of alluvial soils is rather higher here than on most of the rest of the Côte d'Or, but the identification of Premiers Crus is imminent. They are expected to include Clos du Roy, which is technically just north of Marsannay in Chenôve, now sadly under siege from the industrial suburbs of Dijon.

With more than 13 acres (5ha), *Domaine Pierre Damoy* has by far the largest holding in the Clos de Bèze. Every harvest, Damoy keeps the best of the Grand Cru grapes for the domaine and sells the rest to négociants.





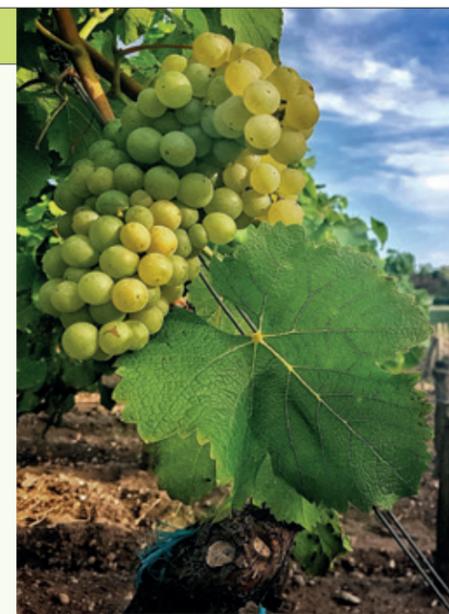
THE BURGEONING WHITE WINES OF THE MÉDOC

Since the 1980s there has been a revival of white wine production in the Médoc (to be followed by a trend towards making white wines on the right bank, too). Château Margaux has the longest modern history of white wine production, having made a white wine since the 1920s with a mention of a white wine in its 19th-century archive. Pavillon Blanc du Château Margaux, the first offering from the new regime when the first growth was acquired by the Mentzelopoulos family, is arguably the world's richest, occasionally oakiest, all-Sauvignon wine, grown on land not particularly suitable for red wine grapes. Apart from providing Médoc proprietors with something to serve with the first course, this is the usual rationale for planting white wine grapes.

St-Julien's Château Talbot has long been associated with its Sauvignon Blanc/Sémillon blend Caillou Blanc. From a small vineyard in Pauillac that had proved unsatisfactory for red wine production,

Blanc de Lynch-Bages was launched with the 1990 vintage. Château Mouton-Rothschild followed the next year by launching Aile d'Argent, aimed at the same luxury market as Pavillon Blanc de Château Margaux, and another St-Julien property, Château Lagrange, has been producing their dry white (including Sauvignon Gris) since the 1996 vintage from a sandy corner of the vineyard.

Interesting dry whites continue to emerge from various vineyards in the Médoc – notably in Listrac from the likes of Fonréaud, Saransot-Dupré, Clarke, and more recently Fourcas Hosten and Fourcas Dupré. All, even those of the first growths, have to make do with the generic Bordeaux appellation, or simply be sold as Vin de France, in the case of those that are not made from the permitted Bordeaux grape varieties Sauvignon Blanc, Sémillon, Muscadelle, and Sauvignon Gris. Producers seem able to ask quite healthy prices for them. See also p.104.



St-Julien

The wines of St-Julien are arguably the most consistent in the Médoc. Such a small commune, with the smallest total production of the Médoc famous four, may not have a first growth but it is a rollcall of excellence, of classic claret. Almost 90% of the vines are owned by classed growths, even if this includes the unclassified Château Lalande-Borie owned by the second-growth Château Ducru-Beaucaillou, Château Moulin Riche belonging to the Cuveliers of Château Léoville Poyferré, and the overperformer Château Gloria run in tandem with Château St-Pierre.

Almost all of St-Julien is superlative wine-growing land: typical mounds of gravel, not as deep as in Pauillac but all are either close to the river or sloping south to the considerable valley (considerable by Médoc standards, that is) drained by the Jalle du Nord and the Chenal du Milieu at the southern edge of the commune.

Thus, the great châteaux of St-Julien divide into two groups. The riverside estates are epitomized by the three Léovilles, situated around the village of St-Julien itself. The southern group is centred on the village of Beychevelle, led by Châteaux Beychevelle, Branaire-Ducru, and Ducru-Beaucaillou, and reaches back past Château Gruaud Larose to Château Lagrange far inland. Around Beychevelle there is a cluster of superior but unclassified châteaux.

If Pauillac makes the most striking and brilliant wine of the Médoc, and Margaux the most refined and exquisite, St-Julien forms the transition between the two. With

comparatively few exceptions its châteaux make rather round and gentle wine – gentle, that is, when it is mature; it starts as tough and tannic in a good year as any.

The three Léovilles

The principal glory of the commune is the vast estate of Léoville, on the boundary with Pauillac, once the biggest in the Médoc, now divided into three. Château Léoville Las Cases has the most extensive vineyards of the three, with 240 acres (almost 100ha), although the heart of the estate is the 131-acre (53-ha) Grand Enclos. Its dense, almost austere, long-lived wine is so obviously “classic”, and the Delon family who run it so astute, that Léoville Las Cases is sometimes priced almost at first-growth levels. Léoville Barton runs it a close race, and belongs to the old Irish merchant family of Barton, who moved to Bordeaux early in the 18th century. Anthony Barton lives in the beautiful 18th-century Château Langoa Barton next door, and makes his two wines side by side in the same *chai*. Langoa is usually reckoned the slightly lesser wine of the two, but both are among the finest of clarets in a traditional manner and are never less than good value, even in tricky years. Léoville Poyferré has perhaps more obvious stuffing and dramatic glamour, and now more than merits its second-growth status.

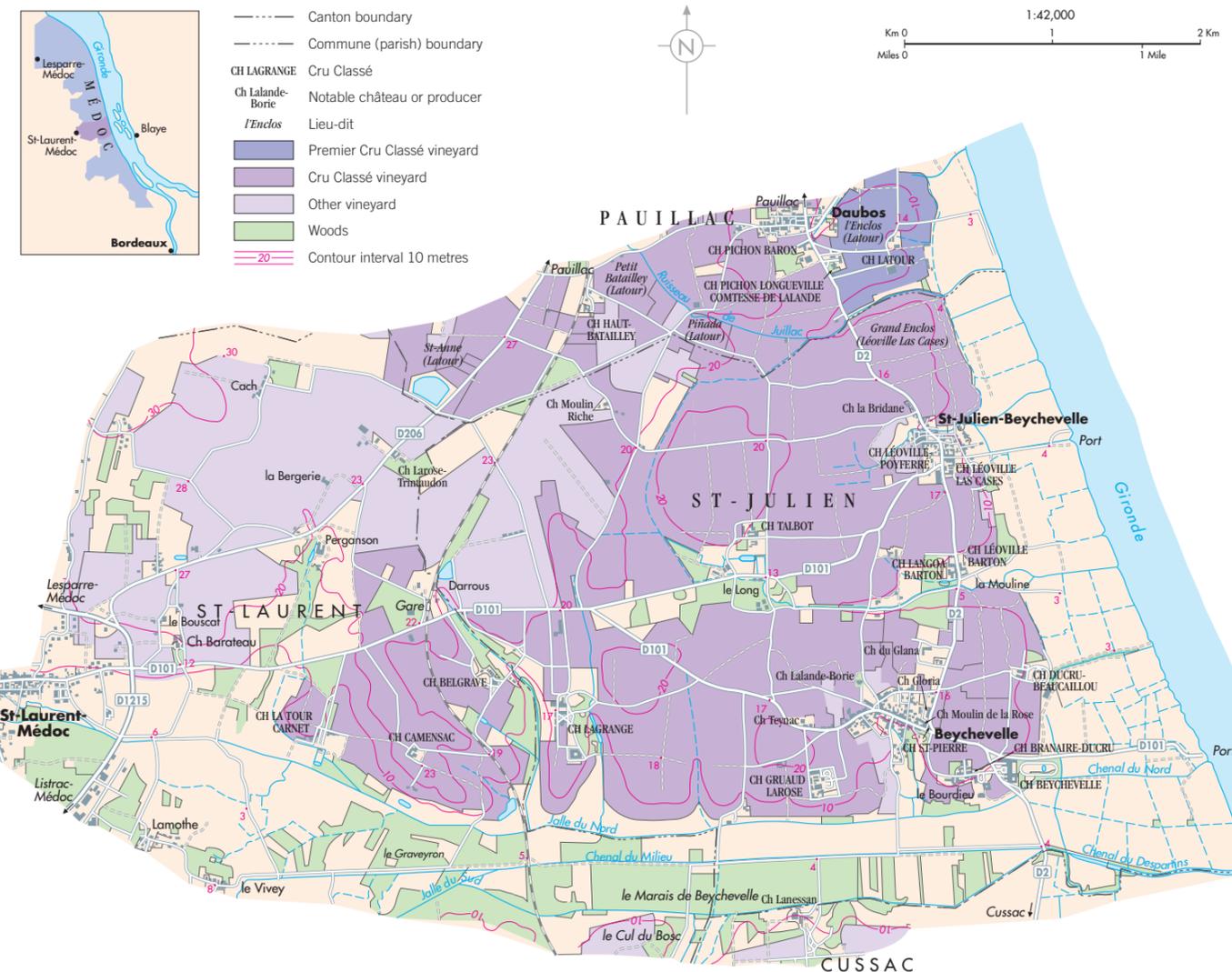
To the south of the Léovilles, Bruno Borie's Château Ducru-Beaucaillou, with its Italianate mansion, has established a style of its own, distinct in emphasizing both richness and finesse at a very high level, while its neighbour Branaire-Ducru equally expresses the suave quality of St-Julien. Château Beychevelle is an 18th-century

In 2017, Beychevelle had a makeover, including a new chai with a maritime theme, a nod to the ship on the château's label. The wine ages under a sea of copper waves.

mansion, enjoying a commanding position on a bend with an eye-catching glass-fronted *chai* and glamorous hotel and restaurant. St-Pierre nearby and its stablemate Gloria have also been updated by an ambitious architect, their wines conveying finesse and elegance with an easy plumpness that is intensely seductive.

Château Gruaud Larose marks the beginning of the “inland” section of St-Julien, with wines whose richness and drive puts them in the very top rank. Château Talbot, which occupies the central high ground of the commune, may be a shade less fine, but is dense, smooth, and savoury – perhaps owing as much to winemaking skill as to its site.

The last of the classed growths, and the largest Médoc classed growth of all, Château Lagrange, used to be very highly regarded for its rich, substantial wine. Suntory of Japan acquired it in 1983 and has brought it back into focus. It lies far back in the sleepy hinterland on the border of St-Laurent (whose appellation is Haut-Médoc, like that of the vast and improving Larose-Trintaudon estate). Here is a group of three more classed growths, all in different stages of resurrection. La Tour Carnet is most advanced and nowadays makes alluring wine. Camensac, now owned by the Merlaut family of Gruaud Larose, was replanted a few years later. Château Belgrave has also been restored, in this case by the négociant Dourthe – but this area never manages to produce quite the class of the vineyards closer to the Gironde.



Northwest Italy

Northwest Italy means Piemonte to any foreign wine lover, but the hills around Alba and Asti (the Langhe and Monferrato mapped in detail overleaf) are not the only great vineyards of this subalpine corner.

Terroir Hillside, sometimes vertiginous, viticulture predominates, with a southern aspect increasingly vital towards the north of the main map.

Climate Inland, especially higher, sites and later-flowering varieties can have trouble ripening before the arrival of autumn but summers can be hot.

Grapes R: Barbera, Nebbiolo, Dolcetto, Rossese; W: Moscato Bianco, Cortese, Arneis, Vermentino

Northwest Italy's noblest grape, Nebbiolo, gives exceptional, if different, results in several parts of the region – most notably in the hills above Novara and Vercelli (famous for rice). Here, under the name of Spanna, it dominates the production of no fewer than 10 different local denominations in Alto Piemonte, each for a different sort of soil.

All benefit from a subalpine climate, a southern exposure, and fast-draining glacial and porphyry soils of volcanic origin that are more acid than the soils of the Langhe. In practice all depends on the grower and the amount of Bonarda, Croatina, or Vespolina grapes added to the Spanna backbone.

The DOCG **Gattinara** is one of the best, heaviest in Spanna (at least 90%), and

easiest to find, with Antoniolo, Nervi (acquired by Giacomo Conterno of Barolo in 2018), and Travaglini providing some of the most convincing examples. **Ghemme** (also DOCG) lags behind a little, but tiny **Lessona** has great potential, and Antoniotti of porphyry-rich **Bramaterra** is emerging as one of Alto Piemonte's very best producers. All have slightly different varietal and ageing requirements, with **Colline Novaresi** an umbrella DOC for Ghemme, **Boca, Sizzano, and Fara** that includes anything from 50% to 100% Spanna and involves none of the mandatory extended cask ageing that can be excessive for these relatively delicate and deceptively long-lived reds. **Coste della Sesia** does the same job for Gattinara and Lessona. Instead of cask ageing, these are wines that benefit from literally decades in bottle, as Vallana in particular can demonstrate. 150 years ago the wines of Alto Piemonte were more highly regarded than the then-emergent Barolo.

Nebbiolo also grows in the far northeast corner of the map opposite, where Lombardy meets Switzerland. In Valtellina, on south-facing, near-vertical suntraps on the north bank of the River Adda, the grape, known here as Chiavennasca, makes elegant mountain reds. The heartland, **Valtellina Superiore** DOCG, which includes the Grumello, Inferno, Sassella, and Valgella subzones, makes infinitely better wine than that sold simply as **Valtellina Rosso**. Some dry Sfursat (Sforzato) is made from semi-dried grapes – a local speciality. Notable producers include ARPEPE, Dirupi, Fay, Nino Negri, and Rainoldi.

North of Turin on the road up to the Valle d'Aosta and the Mont Blanc tunnel to France there are two more Nebbiolos, of high reputation but low output. In tiny **Carema**, still in Piemonte but with its own name for Nebbiolo – Picutener. Both Ferrando and the local co-op are excellent. **Donnas** is made over the provincial boundary within the **Valle d'Aosta**, in Italy's smallest wine region. Alpine conditions may make these Nebbiolos paler and less potent than those from lower elevations but they have their own finesse. Aosta's own red grape is Petit Rouge, which tastes not unlike the Mondeuse of Savoie: dark, fresh, berryish, and bracing. It forms the basis of Enfer d'Arvier and Torrette, among other wines subsumed into the Valle d'Aosta DOC. The Fumin grape makes longer-lived reds. The busy valley also makes some recherché whites from imported grapes: the very light Blancs de la Salle and de Morgex, some winter-weight Malvoisie and Petite Arvine from Switzerland, and some lively Chardonnay.

Where the hilly turbulence of Piemonte merges with the Lombard plain to the east, conditions become less alpine and less extreme. The fulcrum of Lombard viticulture is **Oltrepò Pavese**, the part of the province of Pavia that lies beyond the River Po. Some of Italy's best Pinot Nero, with Pinot Bianco and Chardonnay grown for sparkling wines, come from here (Franciacorta is discussed on p.164).

Gutturnio makes increasingly impressive still red from Barbera and Bonarda while the **Colli Piacentini** south of Piacenza produce lighter, sometimes frizzante, versions.

South from Piemonte over the final curling tail of the Alps, known as the Ligurian Apennines, we are on the Mediterranean, with scarcely enough room between the

mountains and the sea to grow grapes. Liguria's production is tiny, but highly individual and worth investigating. Of its grapes only Vermentino (also known as Pigato here) and Malvasia are widely grown elsewhere. From steep, terraced vineyards, **Cinque Terre** is the white wine served with fish on the coast near La Spezia. Its liquorous version is called Sciacchetrà, made from dried grapes grown in vertiginous seaside vineyards – a real labour of love. But the most memorable Ligurian wine is the haunting, ageworthy, almost burgundian red **Rossese di Dolceacqua** grown, with great difficulty, on steep hillsides increasingly colonized by vegetable growers in this sunny corner of the world.

SIGNIFICANT APPELLATIONS

Italy has so many wine appellations – hundreds of them – that we have had to restrict this and the other regional maps to the most significant. Note how they cluster on hillsides. The flat plain of the Po is not fine wine country.

NORTHWEST ITALY: TORINO ▼

Latitude / Elevation of WS
45.2° / 991ft (302m)

Average growing season temperature at WS
63.8°F (17.7°C)

Average annual rainfall at WS
29.2in (741mm)

Harvest month rainfall at WS
October: 3.0in (75mm)

Principal viticultural hazards
Downy mildew, hail, underripeness

1:1,485,000

Km 0 20 40 60 80 Km
Miles 0 10 20 30 40 50 Miles

--- International boundary
--- Regione boundary

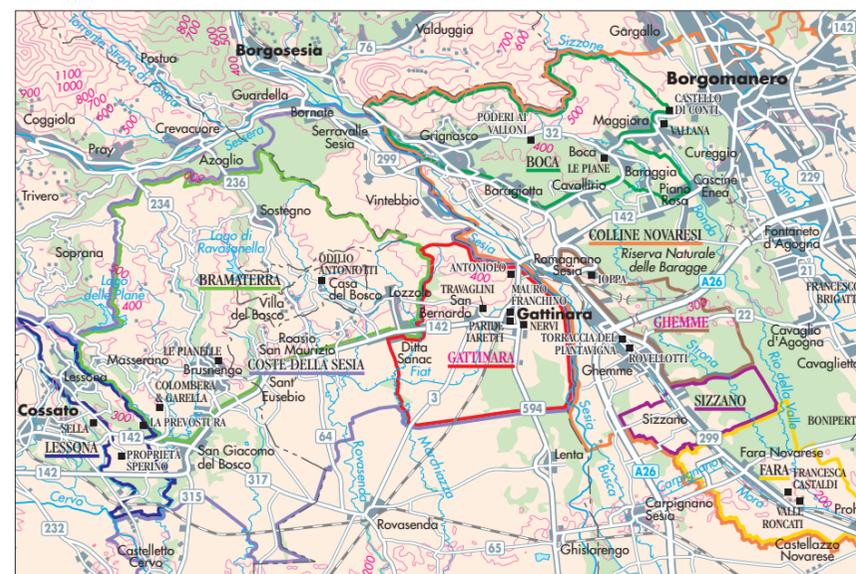
CAREMA Red wine
LANGHE Red and white wine
Cinque Terre White wine

DOCG/DOC boundaries are distinguished by coloured lines

Land above 600 metres

156 Area mapped at larger scale on page shown

▼ Weather station (WS)



1:300,000

Km 0 5 10 Km
Miles 0 5 10 Miles

--- Provincia boundary

GHEMME DOCG
SIZZANO DOC

■ FELLINE Notable producer

DOCG/DOC boundaries are distinguished by coloured lines

Woods

300 Contour interval 100 metres

ALTO PIEMONTE

This is just part, the most important part, of the group of DOCs known as Alto Piemonte, a source of supremely elegant Nebbiolo-based reds that was famous long before Barolo and Barbaresco. Phylloxera was responsible for its decline but it is now resurgent.



Elio Altare of Barolo has a joint venture, Campogrande, here with a local grower. The estate produces complex, iodine-scented whites from Bosco and Albarola grapes grown on vineyards leading steeply down to the sea.

A
B
C
D
E
F
G

A
B
C
D
E
F
G



GERMANY

The world's biggest wine festival, the Wurstmarkt, is held at Bad Dürkheim, Pfalz, every September.

Germany

German wine has rediscovered itself after a dire period in the late 20th century. Climate change has been decidedly on its side; so have new drinkers and their tastes. Whites keep their freshness, vibrancy, and perfume, but in many cases substitute heft for sweetness, while reds have soared in quality.

Terroir A huge range of soils. Slate dominates the Mosel Valley's best sites. Loess and basalt are found in southern Germany.

Climate Increasingly cool towards the north; increasingly continental towards the east, but summers can now be quite hot.

Grapes W: Riesling, Müller-Thurgau, Grauburgunder (Pinot Gris), Silvaner, Weissburgunder (Pinot Blanc); R: Spätburgunder (Pinot Noir), Dornfelder, Portugieser

Germany's determined new generation of growers, often influenced by peers in very distant countries, are clearly inspired by the potential of historically glorious, and excitingly distinct, vineyard sites.

Many of Germany's best vineyards lie almost as far north as grapes can be persuaded to ripen. Some of the best are on land unfit for normal agriculture; if there were no vines there would be forest and bare mountain. All in all, their chances of yielding the world's best white wine look slim. And yet they can, and stamp it with a racy elegance that no one, anywhere, can imitate.

The secret behind these uniquely invigorating wines is of course Riesling, a grape that thrives under the challenging conditions of a cool climate in which grapes only just ripen, sometimes not until late October or even November. Yet this knife edge can result in an irresistible combination of stimulating nerviness and aromatic essence that no other white wine grape can deliver. In the past, it was mainly the delicate balance between refreshing acidity and transparent fruitiness that excited

connoisseurs of German wine, but climate change has added to what German Riesling can achieve: dry, geographically expressive wines with magnificent fruit, brilliant transparency, and great vitality which need no oak to attract attention. An increasing number of them rely on ambient yeast to augment the thumbprint of their provenance.

Almost two-thirds of all German wine, not just Riesling, is now made *trocken* (dry) or *halbtrocken* and *feinherb* (medium dry), although fruity Kabinetts, racy-sweet Spätlesen, richer Auslesen, and of course the unashamedly sweet Beerenauslesen, Eiswein, and Trockenbeerenauslesen are arguably more quintessentially German. The *trocken* wines of today have little in common with the sometimes painfully tart, anaemic renditions of the early 1980s. Most of them are harvested at ripeness degrees equivalent to Spätlese level, even though nowadays more heed is paid to the ripeness of the whole grape, rather than just to precise sugar readings. Members of the premium wine growers association VDP



Northern Sonoma and Sonoma Coast

Sonoma County grows far more grapes than Napa County in more varied conditions, with more potential for planting in cooler areas, notably those on the coast. Sonoma is also where fine wine started in California, early in the 19th century, even if in the late 20th century it was eclipsed by Napa's seminal role in the state's wine renaissance.

Terroir With the Coastal Mountains in the west, the Mayacamas in the east, and rolling hills between, vineyards range from sea level to 2,800ft (850m) in elevation with profoundly varied soils and aspects.

Climate A mix of cool, maritime exposure on the coast and in the western areas of the Russian River Valley and Petaluma Gap, and hot inland areas in Dry Creek and Alexander Valleys.

Grapes R: Pinot Noir, Cabernet Sauvignon, Zinfandel, Merlot; W: Chardonnay, Sauvignon Blanc

As elsewhere in California, climate is a function of the penetration of Pacific breezes, fogs, and the resultant cloud cover. Just south of the area mapped opposite is the wide dip in the Coastal Ranges known as the Petaluma Gap (see panel below). Thanks to this opening, the vineyards in the south (and off the main map) are the coolest.

They are often shrouded in mist until as late as 11 in the morning and from as early as 4 in the afternoon.

Russian River Valley, for instance, is one of Sonoma's cooler AVAs. Its boundary was extended southwards in 2005 to incorporate all those vineyards south of Sebastopol, but north of the Petaluma Gap AVA, within the fog zone. The Sebastopol Hills area, sometimes called southern Sebastopol, is slap-bang in the path of the fog that swirls in through the Petaluma Gap, although the Sebastopol Hills are above the most direct impact of the wind that defines the Petaluma Gap. Even so, it can be a struggle to ripen a commercial crop in the chilliest nooks of the Petaluma Gap, and the coolest parts of Russian River Valley, particularly in its **Green Valley** sub-AVA. The result can, however, be brilliantly lively wine. Both the Sebastopol Hills and Green Valley are on sandy Goldridge soil, while Laguna Ridge just east of Green Valley has the sandiest, fastest-draining soil of all.

Away from the Petaluma Gap, the Russian River Valley gradually warms up. Williams Selyem, Rochioli, and Gary Farrell, some of the first to draw attention to this characterful region, are clustered on Westside Road on the heavier soils of the banks of the Russian River itself in much warmer conditions than many of the newcomers. Grapes replaced apples as the principal crop along the winding roads of the valley with its old oaks and banks of flowers as recently as the 1990s.

Chardonnay was initially the most celebrated variety here, but it was the richness of Russian River Pinot Noir, with its red-berry flavours, that drew critical attention to the region. Thanks to the regular fog shroud, the levels of acidity usually remain notably and refreshingly high here – unless heat spikes in August and September rush ripening. The lowest, sometimes frost-prone, vineyards tend to be the coolest, because this is where the fog hangs longest. Vineyards above the fog line such as Martinelli's Jackass Hill and Dutton's Morelli Lane have long provided notable Zinfandel from vines originally planted by Italians who settled here after the Gold Rush. Higher-elevation vineyards are also showing promise with Syrah.

NORTHERN SONOMA: HEALDSBURG

Latitude / Elevation of WS 38.62° / 108ft (33m)
 Average growing season temperature at WS 67.1°F (19.5°C)
 Average annual rainfall at WS 44in (1,116mm)
 Harvest month rainfall at WS September: 0.3in (8mm)
 Principal viticultural hazards Autumn rain

DEFINED BY THE WIND

The Petaluma Gap was granted its own AVA, outlined on the map in orange, in 2017, the first ever to be defined by wind and its effects. Afternoon breezes throughout the AVA regularly reach 8mph (13km/h) and more, slowing fruit development during the growing season. This tends to result in smaller berries and wines with marked acidity and phenolics, including tannins. Fashionable Pinot Noir dominates plantings although Syrah shows promise. Chardonnay is widely planted. Clay is common near the coast while inland soils are more gravelly, with quite a mix in between. As a result, large portions of the AVA where soils are poor and water is limited are unlikely to be planted with vines.

Cool coastal air is pulled through the 15-mile- (24-km-) wide gap in the Coast Ranges as the inland valley air warms up.



High-profile Sonoma Coast pioneers include Flowers and Marcassin, with Hirsch both supplying fruit and making its own almost burgundian wines.



- County boundary
- AVA boundaries are distinguished by coloured lines
- KNIGHTS VALLEY AVA
- FLOWERS Notable producer
- Tildeschi Vineyard
- Vineyards
- Woods and chaparral
- Contour interval 400 feet
- ▼ Weather station (WS)

NORTHERN SONOMA AVA
 The vast Northern Sonoma AVA, which covers most of this map, was created so that Gallo, whose Sonoma estate represented the company's first California sortie out of the Central Valley, could use a more specific appellation than Sonoma County for its estate brands.