



VINES FOR WINES

A WINE LOVER'S GUIDE TO THE
TOP WINE GRAPE VARIETIES



GEORGE KERRIDGE AND ANGELA GACKLE

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Preface

This book is based on the highly successful guide for professional viticulturists, *Wine Grape Varieties*, which is an aid to identifying the vines. *Vines for Wines*, however, focuses on the wines from an average consumer's point of view, introducing readers to many enjoyable wine varieties that may lie outside their normal experience. The book describes the different wine grape varieties and the wines made from them, including their use in blends. It also includes sufficient wine terminology on taste and aroma to make the average consumer's experience both enjoyable and enlightening.

Both *Vines for Wines* and *Wine Grape Varieties* were preceded by three earlier works by the late Dr A.J. Antcliff, a Senior Principal Research Scientist at the CSIRO Division of Horticultural Research, Merbein: *Some Wine Grape Varieties of Australia* (Antcliff 1976), *Major Wine Grape Varieties of Australia* (Antcliff 1979) and *Minor Wine Grape Varieties of Australia* (Antcliff 1983).

George Kerridge (retired), a senior researcher and winemaker at what was then CSIRO Plant Industry, Merbein, combined those three books and comprehensively updated their information to produce *Wine Grape Varieties of Australia* (Kerridge and Antcliff 1996), which was later revised to become *Wine Grape Varieties*, revised edition (Kerridge and Antcliff 1999).

Vines for Wines incorporates revised statistics and information on most of the varieties covered in the original books, plus information on additional varieties. The photographs, taken by Mr E.A. Lawton, are of material from vines growing at the CSIRO Division of Plant Industry (Horticulture Section), Merbein, or, in a few cases, at the Sunraysia Horticultural Research Institute of the Victorian Department of Agriculture, Irymple.

An enormous amount of research, including physical inspections of vineyards around Australia, was involved in writing the books that underpin this publication. One of the events that inspired their writing was the visit to Australia of the French grapevine identification expert M. Paul Truel. The identity of all varieties illustrated (except Moschata Paradisa and Solvorino, which are names used only in Australia) was confirmed by him, during a visit to Merbein in February 1982. Readers will probably appreciate, from the brief history of wine grapes in Australia contained in this book, just how much uncertainty and confusion there has been about varietal names.

The statistics on areas of grape varieties in Australia and California provided in this book were taken from recent reports of the USDA and the Australian Bureau of Statistics. The authors would also like to acknowledge the support of Ms Ilma Lo Iacono, Librarian at the CSIRO Horticulture Unit, Merbein, for gathering together the photographs of the grape varieties, and Mr Cliff Heard, a wine judge of many years and now retired, for his contribution to the wine notes.

George Kerridge and Angela Gackle



Introduction

Riesling, Chardonnay, Shiraz and Cabernet Sauvignon grapes can make magnificent wines but there are also many other varieties that are both interesting and extremely enjoyable to drink. Australia encompasses climates and landscapes suitable for growing most wine grape varieties. As winemakers find new varieties to suit their region and markets, the diversity of wines in Australia grows. This book aims to reveal the many excellent varieties of wines that are now available but for most of us are rarely experienced.

Wine Flavour and Aroma

Wine drinking, like many activities, can be as simple or as involved as the individual wishes to make it. It can be as uncomplicated as enjoying a glass with a meal or a friend. It can be as rigorous and technical as a wine show, where the decisions of professional judges often lead to great acclaim for winemakers, wine companies or countries.

What does the average consumer need to know to enjoy their wine? The short answer is probably not much beyond what they like the smell and taste of.

The best way to assess a wine is to look at it first, smell it and then taste it. We should select a glass that tapers towards the top, as a glass of this tulip shape retains more of the wine's aroma. Fill it to about a third, and then look at the colour. Colour varies according to the grape variety and wine type but it is also influenced by a wine's acidity and its age. Generally, the younger and more acidic the wine is the brighter its colour will be. Acidic white wines appear slightly green, whereas red wines have an intense purple hue. Wines lose colour and flavour as they age excessively and can eventually become brown and smell or taste unpleasant.

Our sense of smell is just as important in enjoying wine as is our sense of taste. Swirl the wine in the glass, hold it up to the light and look at the colour and the way the wine drains down the surface of the glass. Next, put your nose well into the glass and take a long deep breath. You can repeat this a couple of times before tasting.

Our sense of taste depends very much on where the wine strikes our tastebuds and how much air is mixed with it. Swirling the wine in the glass and then sucking it into your mouth so that it mixes with air releases the volatiles and heightens the flavours and aromas. You will experience more of these sensations as you breathe out through your nose and mouth. Bitter flavours are tasted on the back of the tongue, sweet flavours on the front and sour or acid flavours on the sides.

Having experienced the aromas and flavours of the wines, the following section on wine terminology will give you the tools to help share your discoveries with others and to benefit from their experiences as well.

As you come to enjoy the variety and subtleties of wines you will wish to know more. Wine appreciation courses are a good place to start. The Australian wine industry offers many instructive and enjoyable options to allow people to explore their individual preferences for specific varieties, blends, flavours and styles.

Wine Terminology

Given the number of wine grape varieties available and the way wines are made and blended, it is no surprise that wine tasting has developed a very extensive vocabulary. Becoming familiar with the terms used to describe wine taste and aroma is a learning process that will add to your experience and enjoyment.

The following list is an introduction to the language of wine flavour and aroma; you can learn more in the many fine books available (see the Further Reading list on page 98).

acetic	The taste and smell of vinegar.
acidity	The tart taste of acid in the wine.
aftertaste	The flavour that remains in your mouth after you have swallowed the wine.
anthocyanins	The pigment in red wine grapes
appellation	A system by which some European countries seek to maintain quality and product image for their wines. It specifies the areas of land that may be used for grape-growing, which cultivars may be used, the maximum yield and the minimum alcohol content of the wines. Australia does not have this type of legislation.
aroma	The 'bouquet' or fragrance of a wine.
astringent	The mouth-puckering effect caused by tannin in the wine.
balance	The way flavours such as fruit, acid and alcohol combine.
big wine	A rich and full-bodied wine, high in alcohol and tannin, that will improve greatly with age.
body	Similar to balance. A full-bodied or well-rounded wine is rich and complex with a well-balanced combination of acid, sweetness and alcohol.
botrytised	Under certain conditions the growth of <i>botrytis cinerea</i> mould on ripe bunches of grapes can take a form known as 'noble rot'. This desiccates (dries) the grapes and enhances the sweetness and flavour of dessert wines made from them.
bouquet	The fragrance of the wine.
broad	A wine of no particular definition.
buttery	Describes either the colour or flavour of a wine.
citrus	The smell and flavour of citrus fruit, such as lime, lemon or grapefruit.
cloying	Excessively sweet.
corked	A mouldy unpleasant taste or smell caused by a faulty cork or unclean barrels used in storage.
crisp	A pleasant, tart or acid taste often associated with young wines.
depth	The measure of fruitiness.
dessert wine	A sweet or fortified wine.
dry	A wine whose sugar has mostly been converted to alcohol during fermentation.

earthy	A rich and loamy smell or taste.
finish	Aftertaste. A wine that has good finish lingers in the mouth.
flabby or flat	A dull wine lacking in acid and flavour.
flinty	The smell of dry rocks being struck.
floral	An aroma of citrus blossom, violets or other flowers.
fortified wine	Wine which has had grape spirit or brandy added to it.
fruit	Flavour of fruit. Both sweet and dry wines can exhibit fruit.
grass	See herbaceous . Common in wines made from Sauvignon Blanc.
hard	A wine with excessive tannin in it.
herbaceous	An aroma of herbs, leaves or grass. A varietal character found in many Cabernet Sauvignon and Sauvignon Blanc wines.
jammy	An aroma of stewed fruit.
legs	The rivulets of wine that run down inside the glass after it has been swirled. Rich wines high in alcohol show greater viscosity (ropiness).
length	See aftertaste .
lively	Fresh and fruity. Usually applied to good young white wines with good acidity.
mellow	Well-aged, soft wine
mousy	An unpleasant, flat, vinegary 'off' smell or flavour due to bacterial infection.
mouth-filling	Big and rich.
musky	Pleasant spicy or earthy smell.
musty	Undesirable smell of mould. See corked .
nose	See aroma .
oaky	The vanillin flavour and aroma of oak, particularly from new oak barrels.
open	Ready to drink. Flavours and aromas can change quickly and improve after the wine is opened and in contact with the air.
oxidized	Deterioration due to the wine being exposed to air during ageing. Oxidized wines eventually become brown and smell bad.
pepper	The smell and taste of cracked pepper.
perfumed	A fragrant aroma.
pH	The measure of acidity in a liquid. A pH less than 7 is acid; 7 is neutral and above 7 is alkaline. In a wine a pH between 3 and 4 is acceptable.
pungent	A strong earthy smell.
rich	A full, well-balanced wine, usually with high alcohol content.
room	
temperature	Around 18°C.
rough	A coarse wine, usually with excessive tannin or acid.
rounded	A full-bodied wine with good balance.

spritz	A small amount of effervescence, not desirable in still (non-sparkling) wines.
structure	The completeness of the wine, showing competent wine-making.
tannic	A dry and astringent taste due to tannin. It occurs more often in red wines than in white, and depends on the amount of time the wine stays in contact with grape skins, seeds and stems or in oak barrels.
terroir	The type of soil, drainage and climate affecting vine growth and the finished wine.
thin-bodied	Lacking in body and flavour.
toasty	The flavour of toasted oak in the wine. Depending on how lightly or heavily the inside of the oak barrel is toasted, flavours range from woody to vanilla to spicy and smoky accordingly.
varietal	The distinctive characteristics of a wine made from a single grape variety.
woody	An exaggerated or excessive flavour of oak.
yeasty	Wine matured in contact with sediment containing dead yeast cells can smell or taste of yeast. Usually considered undesirable except in some sparkling wines.

Wine and Health

Australians drank just over 400 million litres of wine in 2002–03, putting us just outside the top 10 wine-consuming countries, led by France, Italy, the US, Germany and Spain. Australians began to drink more wine after the Second World War, and production and wine quality has increased steadily since. The consensus seems to be that moderate consumption of wine – two drinks per day – can be beneficial to a generally healthy person. Drinking more than this, however, increases the risk of harming health. Researchers have been investigating some of the factors relating to wine that may have short- and long-term positive effects on cardiovascular disease, certain cancers and aging or degenerative diseases.

The Australian Wine Research Institute has produced a booklet called *Wine and Health Information*, accessible via its website: www.awri.com.au. The booklet answers frequently raised questions and provides useful contacts. It covers a wide range of issues, including:

- allergies** possible allergic reactions to wine processing agents, including egg, fish and milk products.
- asthma** particular sensitivity to sulfur-containing compounds;
- diabetes** the type of diabetes and other health indicators may determine how much wine to drink, or whether it is advisable for diabetic individuals to drink wine at all;
- ethnic/genetic differences** the presence of an inactive gene in the process that breaks down alcohol in the liver can result in a high concentration of toxic acetaldehyde in the blood, with side effects such as facial flushing, headache and nausea,;
- headaches** following wine consumption are generally related to blood alcohol concentration;
- polyphenolics** a very small component in wine, thought to have a number of health benefits;
- safe alcohol and wine consumption** explored in a number of areas such as drinking and driving, pregnancy and drinking in moderation.



A Brief History

Where There's a Will There's a Way

Grapevines were brought to Australia with the First Fleet in 1788. Grape cuttings and seeds were collected in Rio de Janeiro and from the Cape of Good Hope and planted at Port Jackson in Farm Cove, the present site of the Sydney Royal Botanic Gardens. In 1791 Governor Phillip established the first vineyard when he planted 1.2 ha of vines at Parramatta. Unfortunately, the convicts and soldiers had very little knowledge of grape-growing, and in 1801 the Duke of Norfolk sent out two Frenchmen, Landrier and de Riveau, who had been prisoners-of-war held at Portsmouth. They had little success in controlling a major outbreak of 'blight' and were subsequently sent home (Gregory 1988).

In 1816, G. Blaxland planted a vineyard at Parramatta with vines from the Cape of Good Hope. Wine from this vineyard was sent to London in 1822, where it was awarded a silver medal. A later parcel of wine was awarded a gold medal in 1827. John Macarthur planted a vineyard at Camden Park in 1820 and by 1827 produced a vintage of 90 000 litres.

The Busy Mr Busby

Interest in viticulture (grape-growing and wine-making) in the colony increased rapidly and in 1831 James Busby travelled through Spain and France collecting cuttings of grape varieties for the colony. He was recorded as having collected 433 varieties from the Botanic Gardens in Montpellier, 110 from the Luxembourg Gardens in Paris, 44 from Sion House near Kew Gardens in England, and 91 from other parts of Spain and France. At this time, varieties were not well-characterised and it seems certain that some were included under more than one name, perhaps many more – the same name may also have been used for more than one variety. It is clear from the catalogue of the collection put out by the Sydney Botanic Gardens in 1842 that some of the varieties may also have been confused, for example, Semillon is described as a black grape and Malbec as a white. Unfortunately, this collection was removed in 1857, but not before cuttings had been distributed to Camden, the Hunter Valley and the Adelaide Botanic Gardens from where they spread throughout South Australia.

Although the original collection and those established from it have been lost, more of the varieties have survived in Australia than is generally realised. From the localities in which they have been found, it seems very likely that there are vines of varieties such as Crouchen, Chenin Blanc and Ondenc, as well as better-known varieties such as Semillon, Riesling, Shiraz and Cabernet Sauvignon which can be traced back to Busby (even though the major plantings of some of these varieties may have come from other sources). Among the minor varieties, the discovery of surviving vines of Bourboulenc, Piquepoul Noir, Tocai Friulano and Troyen was greatly interesting. Fer, Gamay, Gueche and Pougnet have also been found and identified, and about 20 other varieties have been distinguished but not yet identified. There are also varieties from older collections with obviously local names, which are yet to be properly identified.

Vineyards rapidly spread to the rest of the Australian colonies – vineyards were planted in the Yarra Valley in Victoria in 1830 and Adelaide in 1837. The first vineyard in the Barossa Valley in South Australia was planted by Johann Gramp at Jacob's Creek in 1847. The first Western Australian plantings were made on the Swan River near Perth in 1829, and the first plantings in Queensland were at Stanthorpe in 1859 and at Roma in 1863.

Pestilence

The arrival of the grape disease *phylloxera*, *Daktulosphaira vitifoliae*, first reported at Fyansford near Geelong in Victoria in 1875, devastated the industry and necessitated the costly process of replanting the infected areas with vines grafted onto resistant rootstocks. Strict quarantine regulations have halted the spread of this serious pest and today most of Australia's vineyards are free of *phylloxera*.

Water

The arrival of the Chaffey brothers from California in 1886 saw the expansion of the irrigated horticultural regions near Mildura in Victoria and Renmark in South Australia. Further irrigated areas were developed in New South Wales with the settlement of the Murrumbidgee Irrigation Area in 1912. These three areas now produce approximately 75% of Australia's wine grapes. These regions initially included major plantings of the classic table wine varieties, but in the early 1900s those were almost all replaced by fortified wine varieties to supply the UK market. This situation continued until the 1950s, when an increasingly multicultural Australian population began demanding high-quality table wines and the varietal mix swung back to favour the classic wine varieties such as Chardonnay and Cabernet Sauvignon. Australia was fortunate in having large areas of Shiraz, originally planted for port wine styles, which, in the warm Australian climate, are ideally suited for the production of full-bodied red wine styles.

What's In a Name?

There has been much confusion of grape varieties' names in Australia. Names were often misspelt or exchanged in the early introductions, and even relatively recent imports from California and elsewhere are seen to be incorrectly named. Dr Allan Antcliff began collecting varieties into a major germplasm collection at the CSIRO Division of Horticulture at Merbein, Victoria, in the late 1950s for use in a grape-breeding program which commenced in the early 1960s. It soon became apparent that many of the varieties were wrongly named and in 1976 M. Paul Truel was brought to Australia to sort out the confusion (Antcliff 1976).

Sorting Out the Confusion

M. Truel was the curator of the INRA grape germplasm collection at Vassal near Montpellier in the south of France. During his visit to Australia, M. Truel found that most of

the major wine grape varieties – Shiraz, Grenache, Cabernet Sauvignon, Mataro, Riesling, Semillon, Doradillo, Pedro Ximenez, Trebbiano and Palomino – were generally correctly identified, although some incorrectly named plantings were found (e.g. a Riesling called Semillon). Some of the minor varieties – Graciano, Marsanne, Mondeuse and Sauvignon Blanc – were also found to be correctly identified. However, some of the errors included Chenin Blanc called Semillon in Western Australia and Albillo in South Australia. Chenin Blanc was also the major component of a Chardonnay planting in the Rutherglen area of Victoria. Bastardo was found under the name of Touriga in New South Wales and as Cabernet Gros in South Australia. The true Malbec was found to be correctly identified, but a Malbec in South Australia was found to be Tinta Amarella and one in Victoria was found to be Dolcetto. More recent introductions were also found to be incorrect, e.g. a Gamay Beaujolais which was actually a clone of Pinot Noir, and Napa Gamay which proved to be Valdiguie. Even more recently, two clones of Pinot Blanc were found to be Semillon.

New Tools for Grapevine Identification

We can use molecular biology techniques to establish DNA profiles or genetic ‘fingerprints’ which provide objective identification of varieties, even if two cultivars look identical, or one cultivar looks different when grown in a different environment. CSIRO Plant Industry developed semi-automated DNA-profiling technology specifically for the identification of grapevine cultivars. A commercial DNA-typing service is provided by the Australian Wine Research Institute.

International Standards

In countries of the European Union, the term ‘recommended’ applied to a vine variety has a more defined meaning than in Australia or California. In EU countries, vines can be grown only on land with planting rights for those vines – the land may be fully planted with recommended varieties, partly planted with authorised varieties and not planted at all with other varieties. The recommendations apply to local government areas, not the country as a whole.

The Australian System

Australia’s Geographic Indication, the official descriptions of Australian wine zones, regions or subregions, can be compared to the appellation naming system used in Europe (e.g. Champagne and Burgundy) but is much less restrictive in terms of viticultural and wine-making practices. In fact, the only restriction is that a wine with the regional name must include at least 85% of its fruit from that region. This protects the integrity of the label and safeguards consumers, so that they know they are actually drinking wine from the Hunter Valley, for example, if that is what the label says. For more information see the Australian Wine and Brandy Corporation website: www.awbc.com.au.



Wine Grape Varieties and Their Wines



Aleatico



Aleatico (*ahl-ih-at-ik-oh*) is an Italian variety found in most areas, with the largest plantings in Tuscany and the island of Elba. It is also grown in Corsica and it is a minor variety in California. It has a muscat flavour and is somewhat like a black form of Muscat à petits grains.

 In Italy, Aleatico is used to make a highly regarded sweet, ruby coloured, muscat wine. Aleatico can be used to make white wines and fortified wines and could be tried as a substitute for Muscat à petits grains where there are problems with that variety.

Alvarelhao



Alvarelhao (*ahl-vah-rel-oh*) was recommended, along with Bastardo and Touriga, by Mr F. de Castella, former Government Viticulturist in Victoria, for the production of port. However, in the variety classification used in the Douro Valley in Portugal, Bastardo and Touriga are rated as very good but Alvarelhao is rated as only reasonable. So it is perhaps not surprising that less Alvarelhao than Touriga and Bastardo has been planted in Australia, with a few small plantings in north-east Victoria and southern New South Wales only. There appears to be very little of this variety grown outside Portugal. It is not clear whether it is present in California, as the variety imported from there as Alvarelhao proved to be actually Touriga.

 Alvarelhao is lower in colour and tannin than the other port varieties and although widely planted in Portugal, does seem to be more suitable for red wine rather than port. It has been reported as producing red wines with good acidity and balance.

Barbera



Barbera (*bar-beer-ah*) is the leading wine grape of Italy, grown mainly in Piedmont. It is used in wines of controlled appellation, sometimes alone and sometimes mixed with other varieties. Argentina grows some Barbera. It was popular in California in the 1970s, reaching 8600 ha in 1977, with around 4000 ha currently. There are 141 ha of Barbera planted in Australia.

 Wines from Barbera have good colour, tannin and acidity, and a distinctive varietal character which may not be immediately acceptable to Australian wine-drinkers. When aged in oak the wines can be complex and full-bodied with a delicate bouquet. In Italy it is mostly used for making full-flavoured dry red wines with earthy character, soft tannin and ripe currant flavour, but sweet red and sparkling red wines are also made from it.

Bastardo



Bastardo (*bas-tah-doh*) is considered one of the better port varieties in Portugal, although it is not as widely grown as Touriga or Tinta Amarella. It is also grown under the name of Trousseau in the Jura region in eastern France. It is probably one of the 'port sorts' in South Africa and there may be a little in California and South America, but not enough to be recorded separately. The exact area of planting in Australia is uncertain. There is a small quantity in South Australia as Cabernet Gros, a little in north-east Victoria and nearby in New South Wales called Bastardo. Some plantings called Touriga in New South Wales are also Bastardo.

 Under most Australian conditions this potentially sweet, full wine is best suited for fortified wines. The fruit ripens early and attains a high sugar concentration, which increases even further as the berries wilt. It does not provide much colour in the wine but will combine with other varieties that provide colour and flavour.

Bianco d'Alessano



Bianco d'Alessano (*be-ank-oh dal-ess-ah-noh*) is a late-ripening white wine grape variety from the Puglia region of south-east Italy with substantial plantings in the province of Taranto near Bari. Bianco d'Alessano produces yields of about 30 tonnes/ha in the warm irrigated regions of Australia. The juice is sweet and neutral in flavour.

 The wines tend to be neutral in character and have been given only average scores by tasting panels.

Biancone



Biancone (*bee-yan-kowhn*) has the distinction of giving the highest commercial yield of any variety in Australia. Almost all is grown in the Riverland of South Australia. The variety comes from Corsica, where its excellent production has led to one of its names being Pagadebiti, literally 'payer of debts'. Small areas of Biancone have been grown under the name of Grenache Blanc Productif and it was probably imported into Australia under this name. The Biancone of the island of Elba is thought to be the same variety but it does not appear to have become established in any other countries.

 Biancone with its high yields has little character, and this soft and fruity wine is mainly used for distillation or bulk production in the Riverland. There is some evidence that it can produce a distinctive dry white wine in cooler areas.

Bonvedro



Bonvedro (*bon-ved-roh*) is the Portuguese name of this variety, which is also grown in north-eastern Spain as Cuatendra. It possibly also occurred in France as an obscure variety and may have arrived in Australia as part of a large collection, such as Busby's. In this way it could have become confused with Carignan, the name generally used for Bonvedro in Australia. There may also have been confusion with another variety from north-eastern Spain, Miguel de Arco, as the vines grown under this name in Australia also seem to be Bonvedro. Small quantities of Bonvedro are grown in Australia, mostly in South Australia and a little in New South Wales and Victoria.

 Wines made from Bonvedro in Australia have a pleasant varietal character but are soft and lacking in tannin, and in the past were unfavourably compared with other varieties of wine with more colour and tannin. Increasing interest in lighter red wines may encourage a reappraisal of this position.

Bourboulenc



Bourboulenc (*bor-buh-lahnk*) is a recommended variety throughout Mediterranean France and is found mainly in the lower valley of the Rhone. It is an approved variety for wines of controlled appellation such as Chateauneuf-du-Pape and Cotes du Rhone. It appears four times, under different names, among Busby's imports into Australia in 1832, but has not survived in any of the official viticultural collections. It is found only as odd vines in old vineyards in Great Western and Rutherglen and possibly elsewhere.

 In France, standard dry white wines from Bourboulenc are delicate and lightly aromatic with some varietal character developing with bottle age. Wine from very ripe grapes has a more special character. In practice Bourboulenc is usually harvested and fermented mixed with other varieties.

Cabernet Franc



Cabernet Franc (*ka-ber-nay frahnk*) is an important variety of the Bordeaux area of France. There have been small plantings in recent years, but Cabernet Franc generally occurs in Australia as odd vines in plantings of Cabernet Sauvignon, particularly in north-east Victoria where it sometimes occurs to the extent of more than one vine in ten. In France, it is also grown in the Loire Valley and is now recommended throughout the entire south, including Corsica. In Italy it is regarded more highly than Cabernet Sauvignon and recommended in more provinces. The Cabernet varieties, particularly Cabernet Sauvignon, are important in eastern Europe and South America but they are not always recorded separately. Cabernet Franc, with 1427 ha recorded in 2002, has not achieved the same recognition as Cabernet Sauvignon in California. 834 ha of this variety were harvested in Australia in 2003.

 Cabernet Franc makes a red wine of excellent colour and rich flavour with good tannin. These wines have a pronounced varietal character and because of their good tannin they age particularly well. They can be distinguished from the wines of Cabernet Sauvignon and the presence of Cabernet Franc may be partly responsible for the special character of Cabernet wines from north-east Victoria.

Cabernet Sauvignon



Cabernet Sauvignon (*ka-ber-nay so-vin-yohn*) comes from the Bordeaux region of France and is the major variety in some of the best wines of the Medoc area. It is also prominent in Chile and has increased rapidly in recent years in California (30 754 ha in 2002), Australia (28 871 ha in 2003) and South Africa. In Italy it is a minor variety recommended only in the extreme north. It is probably more important in eastern Europe and Argentina.

 The excellent quality of the wines of Cabernet Sauvignon is well-known and the grape is very widely grown. The wines are deep purple in colour and have high tannins and a full rich flavour with a pronounced varietal character, which is very intense when the vines are grown under cooler conditions. They show complex black currant and other small berry characters, but if harvested before full maturity they can show excessive herbaceous aromas. With their high tannin they require aging and are often blended with Shiraz, Cabernet Franc or Merlot to produce magnificent wines. The best wines can take 20 years to reach their peak.

Cañocazo



Cañocazo (*kan-o-kah-zo*) is a minor Spanish variety, not listed for use in any wines of controlled appellation and not authorised for planting in any part of Spain. Scattered small plantings still exist in the sherry area and it is one of four varieties used as parents in a breeding program at the national research station at Jerez; the others are Palomino, Pedro Ximenez and an authorised variety called Garrido. It was probably brought to Australia in early collections from the sherry area and was formerly grown under the names of Palomino and Pedro. In Australia, Cañocazo is grown mostly in South Australia with a little in the Murray Valley Irrigation Areas of New South Wales and Victoria.

 From its origin Cañocazo should be suitable for fortified wines and for distillation. The fruit is neutral in flavour, somewhat reminiscent of Doradillo but ripening much earlier. Viticulturally it is more reliable than Pedro Ximenez and perhaps also Palomino, but does not have the same reputation for wine quality.

Carignan



Carignan (*kah-rig-nan* or *kah-rin-yon*) is best known as a French variety although it is of Spanish origin, taking its name from the town of Carinena in Aragon. It is a prominent variety in several areas of Spain but has not made much headway in other European countries. The formerly large area of Carignan planting in Algeria has been considerably reduced since 1962. It is still an important red grape variety in California where it is known as Carignane, although the area has declined and currently stands at around 2445 ha. It is grown to a lesser extent in Chile and Argentina. In 2003 there were 51 ha of Carignan growing commercially in Australia. It should not be confused with Bonvedro, which was incorrectly called Carignan in South Australia.

The variety is more susceptible to fungal diseases than most other wine grape varieties and needs a higher level of light for full photosynthetic efficiency. In

Australia, therefore, it should do best in the inland irrigation areas.

 Carignan gives fairly acid red wines of moderate colour and high tannin. The wines can lack fruit and softness and are sometimes bitter. In France and Spain it is often crushed with varieties such as Grenache, Cinsaut and Tempranillo to give very pleasant wines ready for drinking when young.

Chambourcin



Chambourcin (*sham-bour-sin*) is a complex hybrid produced in France by the private breeder Joannes Seyve (JS26-205). Its parentage has not been published but it would be based on the better Seibel hybrids and involve up to eight of the US species of *Vitis*. It was officially released in 1963. It is being grown commercially in the eastern US and was introduced into Australia by CSIRO in 1973.

Chambourcin shows very good resistance to downy and powdery mildews and to *phylloxera*, both against damage to the root system and galling on the leaves

 Wines from Chambourcin have drawn some favourable comments even in France, where the planting of hybrids is heavily discouraged. In Australia these aromatic wines have shown good ruby colour and acidity and have scored well in blind tastings.

Chardonnay



Chardonnay, (*shah-don-nay*) rather than the former name of Pinot Chardonnay, is now the official name for this variety in France and California, two places where it is widely grown, to avoid confusion with Pinot Blanc. In France most of the plantings are in the Burgundy and Champagne regions. In California it was not widely grown until selected clones of high yield became available. Expansion since then has been rapid and there are now around 40 000 ha planted. Chardonnay is grown in many other countries but it is sometimes difficult to know how much confusion there may be with Pinot Blanc. There have been small plantings of Chardonnay in Australia for many years, but only relatively recently has that the variety has become popular, with plantings now in excess of 24 000 ha.

 Chardonnay is used in the fine white wines of Burgundy and Chablis, and is one of the varieties used in Champagne. In California it is recommended for the cooler areas. The most suitable areas for the variety in Australia have still to be determined, but it appears to be possible to make high-quality wines in a wide range of Australian climates. Australian wine-makers make less use of oak in the fermentation and maturation of Chardonnay. It is a wine capable of many different characters – fruity, floral, and sometimes acid – and blends well with wines such as Semillon and Colombard. Most Chardonnay wines develop quickly in the bottle and change substantially over a few years. The best wines are well balanced, soft and full-bodied with complex melon and dried peach characters. Except for the very best, most of these wines are designed to be consumed within two to five years.

Chasselas



Chasselas (*shas-el-as* or *shas-ah-lah*) is an important table grape in Europe with extensive plantings for this purpose in France and Italy. It ripens early but is popular in Europe even when other varieties are available. The pleasant flesh texture outweighs the presence of seeds in the berries, which are rather small for a table grape. It is used as a white wine grape in cool areas and may have originated in Switzerland where it is the principal white wine grape. There are plantings in Alsace, Germany, Austria and eastern Europe. About 100 ha are recorded in Australia. In Victoria, which has about half the area, it is used for wine. In Western Australia and New South Wales, which share the rest, a fair proportion of the crop is marketed as table grapes. The variety is sometimes known as Golden Chasselas or Chasselas Doré, but Palomino has been mistakenly called Golden Chasselas in California and this mistake may have carried through into Australia.

 Chasselas is an old grape variety and in cooler areas is used to produce pleasant, light, white wines with no pronounced varietal character. In hot areas, the fruit is too low in both sugar and acid to be satisfactory for wine-making.

Chenin Blanc



Chenin Blanc (*shen-in blohnc* or *shan-in blohnc*) is the official name for this variety in France, but it is often called Pineau de la Loire. It is the main variety of the Loire Valley. In California there was a rapid increase in area planted, until the early 1990s. The variety called Pinot Blanco in Chile and Argentina is Chenin Blanc. The largest area of Chenin Blanc is in South Africa, where it is planted under the name of Steen. The variety seems to have been brought to Australia under several names and its identity lost. In Western Australia it was formerly incorrectly known as Semillon, and in South Australia it was wrongly named Albillo or Sherry. 748 ha of Chenin Blanc were recorded in Australia in 2003.

 Chenin Blanc has a good acidity and is used very successfully in South Africa and California for well-balanced dry white wine with good body and sometimes a floral aroma. The best wines can have an elegant honey bouquet of peaches and apricots, and age well. In favoured parts of the Loire Valley it can be affected by noble rot, and produces excellent luscious sweet wines. It is also used in some very good sparkling wines.

Cienna



Cienna (*sih-en-nah*) is one of three new varieties of wine grape varieties developed by CSIRO and granted Plant Breeders Rights in 2000. Cienna, Rubienne and Tyrian are all progeny of a cross between the Spanish variety Sumoll and Cabernet Sauvignon, made in 1972 by the late Allan Antcliff at the Merbein research station. Each of the new varieties was selected using criteria including good (grape juice) sugar:acid ratios, low pH, good colour and flavour and adequate yields. The aim was to produce high-quality red varieties suited to Australian conditions. The best few varieties were extensively trialled and evaluated by industry panels and under a range of climatic and cultural conditions.

 Wine made from Cienna can be described as having medium to dark colour, with herbaceous berry aromas and cherry flavours and good tannin structure.

Cinsaut



Cinsaut (*sahn-soh*) (sometimes spelt Cinq-saou or Cinsault) is a variety from the Mediterranean region in the south of France. Some Cinsaut is registered for the purpose of table grapes but its main importance is as a recommended variety for improving the quality of the wines from the south of France. In South Africa it is called Hermitage. It was formerly grown quite widely in Algeria and, being the black variety best adapted to the hot dry conditions there, plantings of it may not have been as drastically reduced as those of other varieties. It is grown in Italy under the name of Ottavianello in the province of Brindisi. In California, the small planting (63 ha) is also called Black Malvoisie. In Australia, some is grown in South Australia, Victoria and New South Wales. It has been called Blue Imperial in north-east Victoria, Black Prince at Great Western and often Ulliade or Oeillade in other areas.

 By itself Cinsaut gives fruity wines which have an attractive red colour and pleasant fruity bouquet but are low in tannin. It is generally used to add smoothness in conjunction with varieties such as Grenache and Carignan in France, and Primitivo in Italy. In France it is used in many wines of controlled appellation including Cotes du Rhone, Tavel, Chateaneuf-du-Pape, Cassis and Bandol. It can produce excellent rose wines.

Clairette



Clairette (*klair-reht*) is an important variety in the south of France. It was also the most important white variety in the French colony of Algeria before the country gained independence, with an estimated 10 000 ha. It does not appear to be grown in Europe outside France and the only major plantings elsewhere appear to be in South Africa and Australia, nearly all in the Hunter Valley of New South Wales. In France it is sometimes known as Blanquette and this name is used in New South Wales. (The so-called Blanquette of South Australia is a clone of Doradillo.) Two other varieties in France have also been referred to as Clairettes – Ugni Blanc (synonym, Trebbiano) is sometimes called Clairette Ronde in both France and Italy, and Bourboulenc has been called Grosse Clairette or Clairette Doree.

 Oxidation occurs very readily during wine-making with Clairette, and ‘rancio’ wines made with overripe grapes are still covered by the French-controlled appellation regulations. Clairette also imparts a distinctive varietal character in the absence of oxidation and is used in many appellation wines, both still and sparkling. It is sometimes used alone but more often in combination with other varieties: some red wines contain up to 20% Clairette.

Colombard



Colombard (*kohl-om-bard*) is a variety from the Bordeaux region of France. Although it has fallen from favour in France in recent years, with a decline in plantings, it has seen a remarkable expansion in California, where the plantings are about 14 200 ha. It is also grown in South Africa. There were a number of introductions into Australia from California and in 2003 the planted area of Colombard here was 2700 ha.

 In France, Colombard is regarded only as an accessory variety for white table wine. The fruit will remain on the vine in good condition after it is ripe and retain a good acidity, but if left too long may give an unpleasant character to the wine. It produces a brandy of high quality, but not superior to that from Folle Blanche or Saint Emilion (Trebiano). In California, because of its high acidity, Colombard is considered suitable for blending to produce quality white table wines that are crisp and fruity. It is also used for producing sparkling wines.

Crouchen



Crouchen (*kru-shen*) is a French variety which has now practically disappeared from France. It is still a recommended variety in the south-west near the Pyrenees and appears on the list of varieties which can be used in the wines of Bearn. Crouchen was used in the excellent 'vin de sable' produced near Capbreton before the afforestation of the Landes displaced the vineyards during the twentieth century. The name used there for the variety, Sable Blanc, may well correspond with the 'Sales Blanc' introduced into New South Wales by James Busby in 1832.

The variety now seems to be grown only in South Africa and Australia. In South Africa it came to be called Riesling, and seems to have been introduced from there to the Adelaide area as Riesling. It spread from there to the Clare and Riverland areas before the mistaken identity was discovered. It was then called Clare Riesling, until finally identified as

Crouchen. It was also brought into the Barossa Valley, where it was mis-identified as Semillon, and taken from there to the Sunraysia area as Semillon before it was identified as Clare Riesling.

 Crouchen does not adapt successfully to as wide a range of climates as Rhine Riesling does. It does not ripen in very cool areas and loses its character in a hot climate. In areas to which it is adapted, it produces pleasant dry white wines with a delicate varietal character that can improve with ageing.

Dolcetto



Dolcetto (*dol-chet-oh*) is an important variety in the Piemonte region of Italy. Unlike some of the other red varieties of the region, which are also grown in other parts of Italy, Dolcetto is regarded as having a special adaptation limited to Piemonte. There is very little Dolcetto in other countries, with only a few hectares in both Argentina and Australia. Australian plantings are confined to South Australia and Victoria. The area in South Australia, where the variety has been correctly named, has decreased over the years, while in Victoria, where it has been confused with Malbec, there have been a few small new plantings which were intended to be of Malbec.

 In Italy, Dolcetto is used alone in the denomination of origin wines Dolcetto d'Acqui and Dolcetto d'Ovada, which are well-regarded wines of medium body and characteristic quince and almond aromas. Wine from Dolcetto can be velvety with a fine bright-red colour, which may lack intensity if the vines are heavily cropped or grown in unsuitable conditions. There appear to be situations in the cooler areas of Victoria that are well-suited to the variety.

Doradillo



Doradillo (*dor-ad-il-loh*) is a variety which seems to have found its greatest acceptance in Australia. It was imported under that name from Spain by James Busby in 1832. It was also taken to South Africa and further importations were made to Australia from there. It does not seem to be a commercial variety in South Africa and it is not recorded separately in Spanish plantings. It may perhaps be included under Jaen, a name said to have been used for more than one variety in Spain. Jaen that was imported to Merbein from the Estacion de Viticultura y Enologia et Requena in Valencia province has proved similar to, but distinct from, Doradillo. Of the 145 ha of Doradillo in Australia, about three-quarters grows in South Australia and the rest in New South Wales and Victoria.

 In Australia, Doradillo is used mainly for distillation and for the production of sherries. The variety yields consistently well but the fruit matures late and is quite neutral in flavour.

Dourado



Dourado (*du-rah-doh*) is a variety from the Tagus Valley of Portugal. Its full name is Gallego Dourado. In South Africa it is planted as (False) Pedro. It is likely that it was brought from South Africa to Australia as it is known here as Pedro, sometimes Pedro Ximenez in error, but more usually distinguished as Rutherglen Pedro. It may also have come in James Busby's collection in 1832 under some other name or unnamed, as it occurred unidentified in vineyards which might be sourced from Busby's collection. Dourado can be found as odd vines in most of the older wine-growing districts. Appreciable numbers of vines are mixed with other varieties at Mudgee and Great Western and small plantings are present at Roma, in the Murrumbidgee Irrigation Area and north-east Victoria.

 Because of the confusion with Pedro, the variety has probably been mostly used in fortified wines in Australia but it can be successfully used for pleasant dry white wines.

Durif



Durif (*dur-if*) has been known as a variety for only about a century, and owes its name to Dr Durif who propagated it in the Rhone Valley in France around 1880. It resembles Peloursin and may be a seedling or a sport from this variety. It was popular in France as it appeared to have some resistance to downy mildew. However, it is no longer recommended or authorised and its planted area in France is declining. It is sometimes known as Pinot de l'Ermitage but is in no way related to the true Pinots. Another name, Syrah Forchue, refers to its tendency to produce forked shoots. The Petite Sirah of California may be a mixture of Durif and Peloursin, although the proportions are unclear. All clones imported to Australia have proved to be Durif. Vineyards examined have shown roughly equal numbers of the two varieties – the total area of plantings in 2003 was 331 ha.

 Durif produces red wines of intense colour and high tannin, requiring long ageing. Some excellent full-bodied wines have been produced in north-eastern Victoria.

Farana



Farana (*far-ah-nah*) is the Algerian name for this variety. It is grown in other countries around the Mediterranean Sea, and is known as Planta Pedralba in Spain, Mayorquin in France, Beldi in Tunisia and Damaschino in Sicily. The major plantings were in Algeria and Spain, but as wine grape plantings have declined in Algeria since independence, Spain probably now has the largest area. In Australia a little is grown in the Barossa Valley, where it was formerly confused with Trebbiano.

 In Spain, Farana is classed with Palomino and Pedro Ximenez as a variety for making dessert wines of high quality. In North Africa it is sometimes used as a table grape, but in the cooler mountainous areas of Algeria it is used in making superior dry white wines.

Folle Blanche



Folle Blanche (*fol blonsh*) was best known as the variety used in making the brandies of Cognac and Armagnac. The use of rootstocks, which became necessary after the *phylloxera* invasion, accentuated its susceptibility to *Botrytis*; in affected areas its replacement by Saint Emilion (syn. Trebbiano) and, to a lesser extent, Colombard is well advanced. This is reflected in the decrease in planted area in France from 15 800 ha to 3600 ha between 1958 and 1988. However, it is maintaining and even slightly increasing its area in the lower valley of the Loire, where it is used to make a wine exported to Germany for making sparkling wines, or a white table wine, high in acid and low in alcohol, for which there is some demand.

In California it accumulates enough sugar to make a good table wine, yet retains enough acid to be excellent for sparkling wine. However, expansion is restricted by problems with bunch rot.

The variety has not been grown commercially in Australia. Plantings which might have been Folle Blanche have proved to be the variety known as Sercial in Australia.

 The white wines of Folle Blanche are usually pale, thin and very acid with a fresh and fruity character. In France, brandy made from Folle Blanche is regarded as the best. The Cognacs produced have excellent perfumed bouquets.

Furmint



Furmint (*fer-mint*) is a famous white grape variety but there seems to be only one major planting in the world – in Hungary, for making the special wines of Tokaj-Hegyalja. Furmint has been taken to many other countries but does not seem to have been planted extensively in any of them. It has probably been in Australia since Busby's import of 1832 but is found only as odd vines in plantings of other varieties, including a mixed planting at Great Western dating from 1868. A variety imported from Italy as Furmint has proved to be another, as yet unidentified, variety.

 In Hungary Furmint is used in about equal proportions with another variety, Harslevelu. The famous Aszu wines are made by a complex process in which the berries dried by noble rot are separated and prepared for sweetening the wine made from the rest of the fruit. These are very fine wines, comparable with the best of the noble rot wines from other countries, but the dry and sweet wines made by simple fermentation in years when there is not enough noble rot for making Aszu wines also show excellent bouquet and flavour.

Gamay



Gamay (*ga-may*) ranks after Carignan, Grenache, Merlot, Cinsaut, Cabernet Sauvignon and Aramon among the red wine grapes of France. A little over half the total planting is in the Beaujolais region, the rest is scattered through Burgundy and the Loire Valley. Gamay is also grown in the north of Italy and neighbouring areas in Yugoslavia. It has not been grown in California and there has been confusion in Australia because varieties introduced from California as Gamay proved to be wrongly named. The Gamay Beaujolais imported in 1962 was in fact a clone of Pinot Noir with an upright growth habit, and the Napa Gamay imported in 1968 was Valdiguie. Clones of the true Gamay have since been imported from France and a single vine was found in an old planting at Great Western.

 Wine from Gamay should be light and fresh, bright-red in colour and low in tannin. They are ready for bottling and drinking without ageing. The best wines have a violet, purple colour with high acidity and a fruity aroma. As with Pinot Noir, the best wines are likely to come from the cooler areas. The original Gamay variety has fruit with colourless juice. Since 1800, mutants with coloured juice have been selected: first, Gamay de Bouze, from which came Gamay Freaux and Gamay de Chaudenay. Gamay Freaux has the most intense colour but is reputed to give the poorest-quality wine. The others are nearer the original Gamay in both the colour and quality of their wines.

Graciano



Graciano (*grah sih-ahn-oh*) is primarily a Spanish variety. Although it is not one of the major varieties used in bulk wines, there are a few thousand hectares of Graciano in the Ebro Valley where, along with Carignan and Tempranillo, it is an important component in the appellation wines of Rioja and Navarra. In France the variety is called Morrastel and is recommended in the south, but little remains, possibly because of its relatively low yield. The area of Graciano in Australia is very small. The variety should not be confused with the so-called Morrastel of South Australia, which is really Mataro, nor with the Mourastel imported from California, which is Carignan. In Algeria, large areas of Mataro were mistakenly called Morrastel. Xeres imported from California proved to be Graciano.

 Graciano produces a red wine that is strongly coloured and high in acid and tannin, and ages well. The wines are full-bodied, of high quality and with a delicate bouquet.

Grenache



Grenache (*gren-ahsh*) is a very important variety in southern Europe. There are large plantings in Spain, where it is known as Garnacha. In France the area of Grenache was around 87 000 ha in 1988, and has no doubt continued to increase at the expense of the high-yielding but poor-quality variety Aramon. It is an important variety on the island of Sardinia, where it is called Cannonao. Grenache is also grown in Sicily and the southern Italian mainland under the names of Granaccia and Alicante. Other than Europe and remnant plantings in Algeria, the only appreciable areas are in California and Australia. Australia has 2322 ha, most in South Australia and the rest fairly evenly divided between New South Wales, Victoria and Western Australia.

 The wines of Grenache are low in colour by Australian standards and age rapidly. Nevertheless, Grenache is regarded as a premium variety in France if it is not cropped too heavily. It is used alone only in rosé and fortified wines. For red table wines it is usually combined with varieties such as Carignan and Mataro, which provide acid and tannin, and Cinsaut which gives smoothness. Shiraz, Clairette, Mourvedre and other varieties may also be included to increase complexity.

Harslevelu



Harslevelu (*hahsh-lev-ee-loo*) is an old white grape variety from the Tokay region of Hungary, where it is blended with Furmint to make the famous sweet wines of the region. Both of these varieties seem well-suited to the concentrating effect of *Botrytis cinerea* – ‘noble rot’ – and produce wines that more than rival the wines from the Sauternes region of France.

 The juice is sweet and aromatic with a spicy perfume that is an important part of the famous Tokay sweet dessert wines when blended with Furmint. Dry Harslevelu wines can also produce full flavoured and aromatic wines in the south of Hungary.

Jacquez



Jacquez (*jak-ez* or *jah-kay*) is one of a group of varieties to which the species name *Vitis bourquiniana* or *V. bourquina* has been given. The original members, including Jacquez, appear to be natural hybrids between *V. aestivalis* and *V. vinifera*. Jacquez, generally known as LeNoir in the US, is thought to have originated in Georgia or the Carolinas but has not been widely grown in that country. It became very popular in France after the vineyards were devastated by *phylloxera*, but was banned from the production of wine for sale about 50 years ago. It may still be used as a rootstock and remains popular for this purpose on suitable soils in South Africa. In Australia, where it has been called Troya, annual production has been about 100 tonnes, mostly in the Murrumbidgee Irrigation Area with a little in the Hunter Valley.

 Red wine from Jacquez has a deep colour and a strong, unusual flavour, less unpleasant than those of the hybrids of *V. labrusca*.

Malbec



Malbec (*mahl-bek*) (sometimes spelt Malbeck) is an approved synonym for Cot, the official French name of this red grape variety. Another synonym used in some areas is Auxerrois. Most is grown in Gironde, some in the départements to the east of Bordeaux, and some in the Loire Valley. It is permitted in wines of controlled appellation in all these areas and is the principal variety in Cahors. It does not seem to have spread elsewhere in Europe and there is only a little in California, but it is one of the most important black varieties in Argentina. There is a significant amount in Chile. In Australia at least two other varieties, Dolcetto and Tinta Amarella, have sometimes been incorrectly called Malbec, but in 2003 plantings were recorded at 488 ha.

 With moderate yields in cooler areas, Malbec makes a balanced red wine of good colour which has a less intense varietal aroma and is softer than Cabernet wines. It combines well with the other Bordeaux varieties to give wines designed for earlier maturity rather than very long holding. In the Loire Valley it is sometimes used alone to give rosé wines with strong fruit character; in Cahors it is used with up to 30% of Semillon or three other minor varieties to give a very deep-red wine which is aged for several years before bottling.

Marsanne



Marsanne (*mah-san*) is a minor French variety from the Hermitage area in the Rhone Valley. There is also a little growing in the Valais in Switzerland under the name of Ermitage. About 265 ha are planted in Australia, the vast majority in the Goulburn Valley and north-eastern Victoria and the rest in New South Wales.

 In France, Marsanne used alone has the reputation of producing light white wines with little varietal character, which age very quickly. The addition of a proportion of another variety, Roussanne, is considered to improve quality. Wines from Marsanne in Australia appear to have more body and character, but the major plantings include an appreciable proportion of other varieties, which may take the place of the Roussanne. Some of the wines made from Marsanne in the past have been rather heavy; now they are light and fruity with a perfumed fragrance.

Mataro



Mataro (*mat-ahr-roh*) is another variety from southern Europe, and needs more warmth than Grenache. In Spain it is also called Monastrell or Morastell. In France, apart from small plantings under the name of Balzac in the Cognac area, where the fruit does not ripen properly, it is confined to the warmest areas of Provence, where it is called Mourvedre. It was a very successful variety in Algeria but it is not clear how much of the 20 000 ha formerly planted has survived. There are about 264 ha in California. The 1092 ha in Australia are in South Australia, New South Wales and Victoria. The name Balzac is used at Corowa, and at Great Western the variety is called Esparte.

 Mataro alone gives red wines that are deep-coloured and rather neutral in flavour, and can be very astringent. This could explain why it has not been very highly regarded in Australia. However, it combines well with other varieties such as Shiraz and is an important component in some European wines. Mataro wines age well.

Melon



Melon (*meh-lohn*) is the official French name for this white grape variety and is used in Burgundy where it originated. However, very little is now grown in this area, compared with the lower valley of the Loire, where it is known as Muscadet. In California, where it is erroneously called Pinot Blanc, there were about 650 ha in 1992. It was imported into Australia from California in 1962 under the name of Pinot Blanc so care is needed to ensure that it is not confused with the true Pinot Blanc, which was imported from Europe more recently.

 The white wines of Muscadet produced in the Loire Valley are dry and fresh with a good bouquet, and are highly regarded as wines to be drunk young. Good wines have also been produced in California, where a high content of tannin in the skins has been noted and special care in wine-making has been recommended to prevent darkening. The wine can improve with ageing on lees.

Merlot



Merlot (*muh-r-loh*) is the principal black variety of the Bordeaux area and is also recommended in the south of France. The area planted in France increased dramatically between the late 1950s and the late 1980s. The variety has been introduced into other European countries and replaced local varieties. In Italy it is now recommended in more provinces than any other single variety, although it is far from surpassing Italian varieties such as Barbera and Sangiovese in area or production. In California there were almost no plantings before 1970, but by 1992 the area of Merlot was approximately 4050 ha and ten years later had increased to 21 121 ha. It is a minor variety in Chile and Argentina. No early introduction into Australia has been traced. There were 10 350 ha of Merlot in production in Australia by 2003.

 The red wine of Merlot has a distinctive plummy flavour clearly related to that of the Cabernets. It has good colour with a plummy flavour but it is softer and ages more quickly than Cabernet wines. Although it can be used alone, it is more often blended with the Cabernets in the finest wines of controlled appellation of the Bordeaux region. The wines can be full-bodied and well balanced with supple tannins and with a bouquet reminiscent of black currants.

Meunier



Meunier, (*meuh-nyay*) or Pinot Meunier as it is often known, is a sport of Pinot Noir and could have been established independently on a number of occasions. It has recently been shown that Pinot Meunier is a chimera. The greatest area of the variety is in France. As with Pinot Noir, the area has been expanding, nearly all in the Champagne area where it is the major variety. In Germany it is grown mostly in Wurtemberg, where it is known as Schwarzriesling. In Australia, where the name has sometimes been translated as Miller's Burgundy, the 120 ha of plantings are confined to a few small areas in Victoria. In 1960 there was a very small quantity in New Zealand, but it has since lost favour and very little remains.

 In France Meunier is used for champagne, blended with Chardonnay and Pinot Noir. In Australia it is used to make attractive, light, dry red wines.

Monbadon



Monbadon (*mohn-bah-don* or *mohn-bah-dn*) comes from France and is found mainly in the Bordeaux and Cognac areas, with a little in Provence. It is no longer recommended or authorised, and has declined in area. It is a minor white grape variety (approximately 602 ha) in California, where it is known as Burger. In Australia there is a little Monbadon in the Corowa–Wahgunyah area of north-east Victoria.

 In France and California Monbadon is used only as an accessory variety, giving light, neutral wines which can be blended with wines from more distinctive varieties. At Corowa–Wahgunyah it accumulates enough sugar to be useful for dessert wines.

Mondeuse



Mondeuse (*mohn-deuhs*) is a minor variety in eastern France and its area has been decreasing slowly. In California there was a more rapid decrease, to about 40 ha in 1980. Although the variety is called Refosco in California it is different from any of the varieties known as Refosco in Italy. In Australia a small area of Mondeuse is grown commercially in north-east Victoria.

 The red wines of Mondeuse are notable for their colour and tannin. In California they are used for blending. The limited quantity of this spicy wine in Australia produces wine which is usually combined with other varieties.

Montils



Montils (*mohn-tils*) is a minor white grape variety of the Cognac area of France, mainly grown close to the coast. Although it remains an authorised variety for the area, plantings have declined considerably. In Australia there are small plantings in the Hunter Valley, some as Montils and some under the name of Aucarot or Aucerot. This name is a corruption of Amarot, a variety introduced by James Busby in 1832, but, as happened in other cases, the plants were confused; Amarot is a large black grape. Montils was also tried experimentally in north east Victoria but the Aucerot in this area appears to be a different, as yet unidentified, variety.

 In France, Montils is considered to make a white wine comparable with that of Colombard. At Merbein, Montils usually ripens about 2 weeks later than Colombard and has excellent low acidity. Yields of the two varieties are comparable. Wines from Montils over 4 seasons scored at least as well as those from Colombard, and Montils was one of the most promising varieties in trials in north-east Victoria. In France it has produced excellent brandies.

Moschata Paradisa



Moschata Paradisa (*mos-kah-tah par-ah-dihsa*) is the name by which this white grape variety is known in Australia and so far it has not been traced to any variety grown or described overseas. It is known to have been planted commercially only at Mudgee although there may be odd vines elsewhere. The early maturity and rapidity with which the fruit then deteriorates, combined with the softness and slightly unusual flavour of the berries, suggest that there may be a little *Vitis labrusca* in the ancestry of the variety. On the other hand the leaves show no sign of any species other than *V. vinifera*. There is some resemblance to the Malvasia Bianca imported from California but the two varieties are distinct.

 While care is needed to harvest the fruit as soon as it is ripe, Moschata Paradisa can be used to make a pleasant varietal white wine.

Müller-Thurgau



Müller-Thurgau (*muhl-ah toor-goh*) was introduced into commerce in about 1920, and by 1970 passed Sylvaner and Riesling to become the leading wine grape of Germany. It is also grown in central Europe, particularly Czechoslovakia, Austria and Hungary but, apart from a very small area in Alsace, not in France or in North or South America. It comes from a cross made at Geisenheim in 1882 by Dr Müller, a Swiss from Thurgau, who returned to Switzerland taking his promising seedlings with him. In 1913, when its great potential was obvious, it was brought back to Germany for testing. It is supposed to be a cross of Riesling and Sylvaner, but recent DNA typing showed that Sylvaner could not have been a parent. From its character, some experts think that it is a cross of two Riesling clones, but DNA typing also showed that although Riesling was one parent of Müller-Thurgau, it could not have been both. In Switzerland and some other

countries it is called Riesling × Sylvaner in deference to its breeder's wishes. In Luxembourg it is called Rivaner. There has been very limited planting of the variety in Australia.

 The white wine from Müller-Thurgau, although it has little acid and lacks the very distinctive bouquet of Riesling, has a definite aromatic, muscat character and is well-regarded among German wines. In warmer regions the wines tends to lack acid and finesse.

Muscadelle



Muscadelle (*mus-kah-del*) is a white grape variety of the Bordeaux region, where it forms a minor component in the famous wines of Graves, Barsac, Sauternes etc. There are currently around 174 ha of this variety in Australia where it is also known under the name of Tokay. Sauvignon Vert introduced from California has also proved to be Muscadelle. Sauvignon Vert is no longer favoured in California. There also appear to be plantings in Hungary, Romania and the Ukraine. Muskadel in South Africa is a different variety, Muscat à petits grains.

 In France, Muscadelle gives a white wine with a marked bouquet somewhat reminiscent of muscat and only a small proportion is needed to achieve the desired degree of character. In California Sauvignon Vert is used on its own, and has an objectionable bitterness on the palate. The fruit ripens early and can attain very high sugar content, however, the wines tend to be sensitive to oxidation. The use of very ripe, partially raisined grapes for a sweet fortified wine seems to be unique to Australia and is very successful.

Muscat à petits grains



Muscat à petits grains (*mus-kat ah-peti-gran*) is the official French name for this variety, and means simply Muscat with small berries. There are three colour variants – white, rose and red. The two coloured forms mutate readily from one to the other and to white, but there appear to be two types of white – one is stable and the other mutates to the coloured forms.

The white form seems to predominate in Europe. In Italy the official name is Moscato Bianco, and there are plantings in other Mediterranean countries. The name Muscat Blanc in California seems to indicate that only the white form is used there, and the plantings in Argentina are listed as Moscato d’Asti, among the white varieties. In South Africa most of the Muskadel, as the variety is known there, are of the red form. In Australia there are 560 ha. A little more than half is the red form and the

name Brown Muscat used in north-east Victoria is very appropriate.

The fruit ripens early and, if left on the vine, wilts to give a very high sugar concentration.

 The red form of Muscat à petits grains does not have enough colour to make a red wine, but this fragrant and fruity variety with its relatively high acidity can be used to make a range of excellent wines, from highly flavoured sparkling wines to luscious fortified wines. It can also be used to accentuate the flavour of dry white wines made from other varieties.

Muscat Gordo Blanco



Muscat Gordo Blanco, (*mus-kat gorh-doh blohn-koh*) the name used in Australia for this variety, comes from Spain and translates as 'fat white muscat'. The name best known internationally would probably be Muscat of Alexandria. The variety is also called Moscatel de Malaga in Spain, Muscat de Setubal in Portugal, Zibibbo in Italy and Hanepoot in South Africa. Although widely grown, it does not cover a very large area in any country. Australia has about 2500 ha. The fruit can attain a very high sugar content in the warmer areas but is then low in acid and has a high pH.

 Muscat Gordo Blanco is a true multipurpose grape. It is used as a table grape, dried for raisins, which may be deseeded for use in baking and confectionery or kept as clusters for dessert use (muscatels), and crushed for unfermented grape juice as well as for wine. In the Australian wine industry it is used for fortified sweet wines of the type known as cream sherry, and for white table wines, often in conjunction with a more neutral variety such as Sultana.

Muscat Ottonel



Muscat Ottonel (*mus-kat oht-ohn-el*) is an early ripening white grape variety grown in Austria, Germany and in Alsace in France. There is very little grown in Australia. Muscat Ottonel was propagated from a seedling by Robert Moreau and its parents are uncertain although probably Chasselas × Muscat de Saumur.

 In Australia both yields and sugar levels have been low. It is not as highly flavoured or fragrant as Muscat à petits grains, giving the wine an attractive, delicate muscat flavour that has been rated highly by taste panels.

Nebbiolo



Nebbiolo (*neb-ee-ol-oh*) is a red wine grape variety from the Piedmont region of northern Italy around Turin. Two famous wines made from the variety are Barolo and Barbaresco, named after villages in the Monferrato hills near Alba. Further north in the Novaro region the variety is known as Spanna. There are only about 5000 ha of Nebbiolo in Italy, but its reputation far exceeds its volume. There are small plantings of the variety in Switzerland, Uruguay, Argentina and California, the latter reporting 80 ha in 1997. In Australia, around 17 vineyards list plantings but the total planted area is very small.

 Wines made from Nebbiolo in the most favourable situations in Piedmont are high in alcohol, acid and tannin, and are traditionally aged for several years in large oak casks. This is followed by further years of bottle-ageing to develop intense flavours of roses, raspberries and violets. Less-favourable sites can produce softer wines with lower tannin levels. It is remarkable that a variety which produces some of the best red wines in the world has not found a major place in other growing regions. Finding a suitable microclimate for Nebbiolo in Australia could make an interesting challenge for an aspiring young winemaker.

Ondenc



Ondenc (*on-denk* or *on-dohn*) is a rather obscure French variety, which has been defined relatively recently (late 1980s). It was grown in different areas of south-western France under different names without being recognised as the one variety. The name Ondenc comes from an area near Toulouse.

In Australia it has been known as Sercial in South Australia and as Irvine's White in Victoria. There were 23 ha of Ondenc in Australia in 1990. It was probably among the many varieties called Piquepoule collected by James Busby in 1832 and the Victorian plantings may come from that source. The identity was lost and the name Irvine's White commemorates the vigneron at Great Western who made the first substantial plantings. It appears in the Rutherglen collection as Blanc Select, so was presumably imported at some time as Blanc Selection Carrière.

 In Armagnac Ondenc is used for brandy; elsewhere in France it is used for white table wines. It is regarded as too neutral to be used on its own and is generally combined with varieties of more character such as Sauvignon Blanc. Its use in sparkling wine seems to be a very successful Australian innovation.

Orange Muscat



Orange Muscat (*orong muskat* or *or-ongh mus-kat*) is an old variety which has been used as a table grape in Europe. Its French synonym, Muscat Fleur d'Oranger, translates as Orange Blossom Muscat, doubtless derived from the subtle aroma of its juice. Other synonyms are Muscat Primavis and Muscat de Jesus. It has not been widely planted worldwide. There were 66 ha in California in 2002 and probably about the same in Australia. One source suggests that its origin is Syrian.

 The variety is sensitive to oidium (a type of vine mildew) and the berries split easily. It has been used commercially in Australia to produce high-quality white wines with a distinctive orange blossom bouquet.

Palomino



Palomino (*pal-oh-mee-noh*) is an important Spanish white grape variety, providing about 90% of the grapes used for sherry. In South Africa it was formerly known as White French and is an important and widely grown variety. The areas elsewhere are rather small. In California, where about 300 ha are planted, it has sometimes been erroneously called Golden Chasselas; in France it is known as Listan; in Australia it has sometimes been known as Paulo. It should not be confused with the so-called Common Palomino in Australia, which is in fact Cañocazo. 92 ha of Palomino were harvested in Australia in 2003.

 Palomino is better suited to the production of fortified wines than table wines, and is a preferred variety for premium dry sherries in Australia. In Spain it produces fino sherries that have a pale straw colour, a delicate bouquet and are of very high quality.

Pedro Ximenez



Pedro Ximenez (*ped-roh zim-e-nes* or *ped-roh him-ay-nes*) comes from Spain, where there are substantial plantings of this white grape variety, mostly in the Extremadura, Andalusia and Levant regions. Although it is a permitted variety for sherry, only a small proportion of the plantings are in the sherry area. It is the most important recognised white wine variety in Argentina. In California there were less than 100 ha by 1976 and no new plantings had been made for many years. Around 68 ha of Pedro Ximenez are planted in Australia. For best results it needs a reliably dry period for ripening and harvest, which Australian viticultural areas cannot provide.

 In Spain the variety is used for both dry and sweet fortified wines such as Montilla-Moriles, Malaga and Jumila. Sweet wines can be produced by adding alcohol before fermentation is finished or by adding mistelle (fortified grape juice) or grape juice itself to fully fermented wines. Wines are also made from grapes partially sun-dried after harvesting. In Australia it provides excellent sherry material; in cooler areas it can also give good, fresh, neutral table wines suitable for blending with more highly flavoured varieties.

Petit Verdot



Petit Verdot (*pe-ti vehr-doh*) is a minor red grape variety from the Bordeaux region of France. It has long been part of the varietal mix in Bordeaux but has probably never exceeded 5% of the total planting. The area planted in France decreased from 685 ha in 1958 to 338 ha by 1988, then underwent a minor revival to reach 380 ha by 1994. It is grown mainly on the left bank of the Gironde from Margaux to Saint-Estephe, and produces a high-quality wine.

In Argentina two varieties are grown under the name Verdot: one is a clone of Malbec, the other is the true Petit Verdot. It is also planted in Chile, and there were 359 ha of Petit Verdot in California in 2002. In 2003 the total area harvested in Australia was 1337 ha, a rapid increase from less than 100 ha in 1998. There has been increasing interest in the variety, with some excellent wines produced.

 It is the last variety to be harvested in the Medoc region and the red wines produced from it are deep-coloured and spicy. Because of their high acid, tannin and alcohol levels these are full-bodied wines and age well.

Pinot Gris



Pinot Gris, (*pee-noh grih*) like Pinot Noir, is grown in many countries including France, mostly in Alsace, in Germany where it is known as Rulander, and in northern Italy. It is also grown throughout central and south-eastern Europe, one of its more interesting names being Szurkebarat (Grey Friar) in Hungary. In 2002, 1637 ha of Pinot Gris were harvested in California. Pinot Blanc is probably the least-grown of any of the Pinot family. The situation has been confused because Chardonnay has often been called Pinot Chardonnay or even Pinot Blanc Chardonnay and so has come to be called Pinot Blanc in some areas. In South America Chenin Blanc has been wrongly identified as Pinot Blanc, while in California the variety Melon has been wrongly called Pinot Blanc. The true Pinot Blanc has only recently been imported into Australia and earlier plantings by that name would be either Chardonnay or derived from the Californian Melon. There is some true

Pinot Blanc in France, mainly in Alsace, in northern Italy and a little in Germany and central Europe.

 Pinot Gris differs from Pinot Noir only in having much less pigment in the skin of the berries, which can vary from greyish-blue to pink to white. Depending on the skin colour, it can be used to make a deep golden wine that at first sight may suggest an oxidized white wine. As with colour, the style can vary from dry crisp whites to rich sweet wines such as the Tokay of Alsace, which is highly regarded in Europe. Pinot Blanc differs from Pinot Noir and Pinot Gris only in having no pigment in the berry skin. It makes a distinctive, fairly full-bodied dry white wine with less varietal character than Riesling or Chardonnay.

Pinot Noir



Pinot Noir (*pee-noh nwah*) is the variety used in the superior red wines of Burgundy and one of the principal Champagne varieties. Plantings in France increased from 8500 ha to 17 300 ha between 1958 and 1979 and reached 22 000 ha by 1988. It is one of the few black varieties that ripens early enough to succeed in the coolest viticultural areas, such as those of Germany and Switzerland. It is grown in practically every wine-producing country, usually not extensively and only in the cooler areas such as northern Italy or the coastal valleys of California. There were nearly 10 000 ha in California in 2002, and in 2003 Australia had 4270 ha.

Pinot Noir is a very old and variable variety and we can see its progression from vines similar to the wild grapes that grew in Europe before cultivation, to high-yielding selections sometimes thought to show less varietal character in the wine. There are about 30 different recognised

clones in Australia with observable differences in growth habit, bunch shape and so on. It is quite possible that some clones are better adapted to particular areas and this needs to be taken into account when evaluating the variety.

 The colour of red wines from Pinot Noir is never intense and fruit from hot areas may make uninteresting wines lacking in colour and flavour. The quality and flavour of these wines can also vary considerably with age. In cool areas the wines have a distinctive varietal bouquet with tones of mulberry and rose petals. The best French Burgundies can attain their peak after as much as ten years.

Riesling



Riesling (*rees-ling*) is the noble white wine grape variety of Germany, second only to Müller-Thurgau. Although often regarded as the standard by which white wine varieties are judged it is not planted to the same extent in any other country. There are modest areas in France, northern Italy and the eastern European countries. There is a little in Argentina and very little in Chile and South Africa. Most of the so-called Riesling in South Africa appears to be Crouchen. California (747 ha) and Australia (nearly 4000 ha) may well have the largest areas outside Germany and France.

In Australia it is often called Rhine Riesling to avoid possible confusion with Hunter River Riesling (Semillon) and Clare Riesling (Crouchen). The tendency to use the name Riesling for other varieties is not confined to Australia and similar distinctions are needed in other countries. Thus it is called Riesling Renano in Italy, Rheinriesling in Austria, Rajnai Rizling in Hungary and Rajnski Rizling in Yugoslavia,

mainly to distinguish it from the variety known as Riesling Italico, Welschriesling, Olaszrizling or Rizling Vlassky respectively, which provides much of the Riesling wine from these countries. In California it is called White Riesling, to separate it from Grey Riesling, a grey-fruited form of Bastardo, and there are also such names as Frankenriesling (Sylvaner), Breisgauer Riesling (Ortlieber), Budai Rizling (Kleinweiss) and Banati Riesling (Creaca).

 Riesling has a definite but not overpowering elegant floral varietal character, which is at its best in cool climates. It can show up well in dry or slightly sweet white wines made from sound grapes, in luscious sweet wines made from grapes affected by noble rot or from the concentrated juice separated from the ice of grapes partially frozen by severe frost. The best of these cool climate white wines can improve with age over several years.

Rkaziteli



Rkaziteli (*ruh-kat-sit-elli* or *ruh-kat-set-elli*) is a local white grape variety from the Tbilisi region of Georgia. It is also grown in Moldavia on the Black Sea coast, where it is known as Gratiesti, and in Bulgaria where the wine is exported to Germany under the name of Sonnenküste. It was imported into Australia in 1971 and a small amount has been planted in the warm irrigated region of the Murray River Valley.

 In Australia the yields are medium to low. The white wines are well-balanced but generally lack character.

Roussane



Roussanne (*ruh-sahn*) is a minor white wine grape variety from the Rhone Valley of southern France, where it is often overshadowed by its more widely planted counterpart Marsanne, with which it is often blended. There were 120 ha planted in France in 1990, mainly in the departement of Herault and Vaucluse. It is a permitted addition in several regional appellations in the south of France, including Chateauneuf-du-Pape. It is also grown in the province of Lucca in Italy. Five vineyards in Australia listed Roussanne among their plantings in the 1998 *Australian and New Zealand Wine Industry Directory*, but the overall area is quite small.

 Wine produced from Roussanne has been described as fine and complex, with honey and apricot flavours. These white wines age well and develop in the bottle. It is said to add elegance and aroma to the wines of Chateauneuf-du-Pape.

Rubired



Rubired (*ruh-bi-red*) is a relatively new variety from H.P. Olmo, released in 1958. It is a cross of Tinta Cao, a port variety, and Alicante Ganzin, which has an Aramon \times Rupestris rootstock as one parent. This means Rubired has one-eighth of the wild American species *Vitis rupestris* in its make-up. This has some advantages, such as a degree of resistance to fungus diseases, but also leads to some problems, such as dense foliage and numerous light bunches. Plantings in California reached 5300 ha by 1974, declined to 2773 ha by 1992 then increased to 5345 ha. A few fairly substantial plantings were made in Australia around 1970 but they have been largely grafted over or removed. A related variety, Royalty, a cross of Bastardo and Alicante Ganzin, was released by Dr Olmo at the same time as Rubired. It is reported to be more demanding as to soil type, less vigorous and lower-yielding. Originally planted in California to about the same extent as Rubired, Royalty did not expand

to the same degree, reaching only 1200 ha by 1974 then declining to its current level of 222 ha.

 Wines from Rubired are opaque with a very intense deep-red colour. They have an unusual aroma, which is often found in wines made from varieties with red juice, but are neutral enough to be blended in small quantities to improve the colour of wines deficient in this respect. Both varieties were originally released for making fortified wines of the port type and Royalty appears preferable for this purpose.

Ruby Cabernet



Ruby Cabernet, (*ruh-bi kab-er-nay*) a cross between Carignan and Cabernet Sauvignon, is a variety bred by H.P. Olmo at the University of California, Davis, and released in 1948. Its major commercial exploitation has been in California, where approximately 3300 ha are planted. The area currently planted in Australia is 2530 ha.

 The variety was designed for producing high-quality red wines in the hot dry areas of California where Cabernet Sauvignon is not recommended. Unfortunately, very few wines made in these areas have achieved the characteristics of Cabernet Sauvignon, while in the cool areas where it has succeeded its yields are reduced. It has, however, produced some excellent wines at Merbein although the wines may mature more quickly than those of Cabernet Sauvignon. At Merbein, Ruby Cabernet ripens at the same time as Cabernet Sauvignon and has shown no difference in sugar or sugar:acid ratio, suggesting that it should be preferred for that reason.

Sangiovese



Sangiovese (*san-gi-o-ve-see*) is the leading red wine grape of Italy, in terms of area planted and grapes produced. Because of mixed plantings (trees and vines) the area is not well-defined, but approximately 500 000 tonnes of grapes are produced each year. The variety is thought to originate from Tuscany but it is also recommended for many other parts of Italy. Apart from Argentina, Sangiovese does not appear to have been planted much in other countries. In Australia it was found only as odd vines at Mudgee under the name of Canaiolo, another Tuscan variety. The planted area in Australia is currently 657 ha.

 Sangiovese is used in many wines of controlled appellation in Italy, sometimes alone, but quite often mixed with three or four other varieties. Perhaps the best-known of these wines would be Chianti, in which 50–80% of the grapes used are Sangiovese, along with Canaiolo, Trebbiano, Malvasia del Chianti and a little Colorino. The best of the Italian wines have an intense ruby colour, medium tannin and a bouquet reminiscent of violets. The wines can sometimes have a slightly bitter finish.

Sauvignon Blanc



Sauvignon Blanc (*so-vin-yohn blohnc*) ranks high among the white wine grape varieties of France. The main plantings are near Bordeaux, where it is used as a minor but important partner of Semillon. There are smaller plantings in the Loire Valley, where it is used on its own. There would be a few thousand hectares of Sauvignon Blanc in northern Italy and it has also spread to eastern European countries. California has 5884 ha, but most of the so-called Sauvignon in Chile is a closely related variety known as Sauvignonasse in France and as Tocai Friulano in Italy. In Australia most of the 2953 ha of Sauvignon Blanc is grown in South Australia with the rest divided between Victoria, New South Wales and Western Australia.

 In the coolest Australian areas, Sauvignon Blanc produces white wines that are crisp and herbaceous. Varietal character is less strongly developed in warmer areas, where Sauvignon Blanc makes pleasant, fresh, acid wines. It is considered a very desirable component in the white wines of Bordeaux, and similar mixtures of Semillon and Sauvignon Blanc are encountered frequently in Australia. In New Zealand the wines from the Marlborough region have become famous for their distinctive herbaceous flavours.

Semillon



Semillon (*sem-il-on* or *se-mih-yohn*) is the major white wine grape variety of the Bordeaux area of France. A little is planted in Italy and Yugoslavia and perhaps more in the former Soviet Union. California currently has around 500 ha, but the main plantings outside France are in the southern hemisphere. Semillon is the leading white variety in Chile, and there is somewhat less grown in Argentina and South Africa, where it is known as Greengrape. In Australia, of the total 6283 ha about three-quarters is growing in New South Wales and most of the rest in South Australia. It proved to be well-suited to the Hunter Valley and became known as Hunter River Riesling. There has been much confusion between Semillon and several other varieties in Australia.

 In France, Semillon is often affected by noble rot, which concentrates the berry constituents and modifies the flavour. Such grapes are used in the luscious sweet wines of Sauternes and Barsac, while unaffected grapes are used for dry wines. In both cases the Semillon is fermented together with a smaller quantity of Sauvignon Blanc and often a little Muscadelle to add further desirable flavour components. In Australia, Semillon is used for dry white wines which, particularly when yields are not too great, have a distinctive varietal character which lends itself to ageing.

Shiraz



Shiraz (*shi-rahz*) comes from the Hermitage area of the Rhone Valley in France, where it is known as Syrah. One tradition suggests that it was brought to Hermitage from Shiraz in Iran by the hermits, another that it was brought from Syracuse by the Roman legions, but it seems quite likely that it originated in the Rhone Valley. It is sometimes called Hermitage in Australia, but should not be confused with the Hermitage of South Africa which is really Cinsaut. The Petite Sirah of California is a different variety, Durif, which comes from the same part of France where it has occasionally been incorrectly called Petite Syrah. There was a dramatic increase in the area planted to Syrah in France between 1968 and 1988, mainly to add character to wines based on Grenache or Carignan. Australia currently has more than 37 000 ha of this variety in production. A little is grown in Tuscany in Italy and some in Argentina and South Africa.

 Australia has a particularly good reputation for its Shiraz wines, where it is grown in all viticultural areas and used for all types of red wines. It has proved to be a very versatile variety, producing wines that can be spicy and peppery with good tannin and that develop flavours of blackberry and blackcurrants with age. It is sometimes used alone but is often blended with other red varieties such as Cabernet Sauvignon.

Solvorino



Solvorino (*sol-vor-ee-noh*) is another white grape variety which is known only from Australia at this stage. It has clearly been in Australia for well over 100 years and may have been one of the varieties introduced by Busby in 1832. Two varieties bred as table grapes have been named Solferino, a white in France from about 1850 and a red in Italy from about 1920. Both are thus too late to be connected with the Australian variety. Solvorino is grown commercially at Roma in Queensland and also occurs as previously unidentified vines in mixed plantings on two vineyards at Great Western in Victoria. One of these was planted in 1868 and can be traced to earlier plantings in Australia.

 Although Solvorino has little pronounced varietal character, it appears to be suitable for good standard white wines such as those produced from Chenin Blanc and Colombard.

Souzao



Souzao (*suh-zay-oh*) is a Portuguese variety, this name being used for it in the Douro Valley where it is ranked in the second highest-quality group for producing port. It is also grown in the Minho region where it is known as Vinhao, and to a slight extent in the neighbouring areas of Spain under the name of Souseon. It has also become very successful in California and South Africa.

 The main contribution of Souzao to the wines in which it is used is its excellent deep purple colour. It is equal or superior to some varieties with coloured juice such as Alicante Bouschet or Grand Noir de la Calmette in this respect. It also retains a good acidity and has a strong raisin flavour. For both ports and dry red wines (vinhos verdes) in Portugal it is used in conjunction with different varieties which provide the other desired characters in the wine.

Sultana



Sultana (*sul-tah-nah*) is primarily a drying grape but in some seasons, in Australia, more sultanas are crushed for white wine than grapes of any other single variety. In 2003 about 9685 ha of Sultana was used for wine-making in Australia. In California it is called Thompson Seedless to distinguish it from another variety introduced earlier, erroneously, as Sultana. An even larger proportion of the crop is used for wine in California and there are also districts which specialise in the production of table grapes. In western Europe the variety is known as Sultanine or Sultanina. It seems to have originated in Asia Minor or the Middle East and is grown for dried fruit throughout the area from Greece to Afghanistan and north into the neighbouring republics. There are also small plantings in South Africa and South America.

 Sultana is more difficult to process for wine than specialised wine grapes because of its firm flesh and lack of seeds. However, it has a good acidity and produces fresh, rather neutral white wines, which are quite attractive on their own and form an excellent base for sparkling wines or for blending with highly flavoured varieties. Lack of seeds and the firm flesh make Sultana attractive as a table grape even at its natural berry size. Berry size can be increased by various cultural treatments but this results in loss of flavour.

Sylvaner



Sylvaner, (*sihl-vah-nah*) spelt Silvaner in Germany, was formerly the leading white wine grape of that country, but in recent years has declined considerably with the rise of newly bred varieties such as Kerner, Scheurebe and Bacchus. The variety may have originated in Austria (although only a small area is planted there) and it can be found under various names through central and south-eastern Europe. There are small plantings in France, California and Australia.

 Under some circumstances Sylvaner can give a distinctive fruity wine with high acidity, but usually it gives a neutral white wine which is well-suited to blending. One of the recent German varieties, Morio Muskat, which is considered rather highly flavoured for sole use, has found a place as a blending partner for Sylvaner.

Taminga



Taminga (*tam-ihn-gah*) is a white grape variety bred by CSIRO Plant Industry at its Merbein laboratory in Victoria. It is a cross of the Merbein selection MH 29-56 (Planta Pedralba × Sultana) and Traminer. The cross was made in 1970 and the variety released in 1982. Approximately 200 ha have been planted in Australia, mainly in the Murray River Valley. Taminga is a high-yielding, late-ripening variety, which produces high-quality wines with a distinctive spicy bouquet. The juice composition has been good with low pH and high titratable acidity.

 Taminga has been used commercially in Australia to produce a high-quality botrytised sweet wine, and for blending with more neutral-flavoured varieties to improve their flavour.

Tarrango



Tarrango (*ta-rang-goh*) was also bred by CSIRO Plant Industry Division of Horticulture at Merbein. This red grape variety is a cross of the Portuguese port variety Touriga and the ubiquitous multipurpose variety Sultana. Approximately 170 ha of Tarrango have been planted in Australia, mainly in the warmer regions along the Murray River.

 The wines have a distinctive highly fruity flavour, bright colour and very low tannin. They have a high tartaric acid:malic acid ratio which, combined with low pH, gives excellent colour stability and hue. The wine has also been used successfully as a base for sparkling wine. The raspberry bouquet from Tarrango wines is reminiscent of the Californian Zinfandel and could fill a similar niche in Australia. It has proved quite successful on the United Kingdom market.

Tempranillo



Tempranillo (*tem-prah-nil-oh*) is one of the most highly regarded varieties in Spain for making red wine. Blended with Carignan, it makes the best wines of the Rioja. In La Mancha it is known as Tinta Fino or Cencibel and is used in the claretes of Valdepenas and Manzanares. In Portugal it is known as Tinta Roriz, and Negretto in Italy may be the same variety. Tempranillo was authorised in 1976 for planting in the Mediterranean region of France. It is an important variety in Argentina, and less in California (308 ha), where it is called Valdepenas. Current plantings in Australia are small, at 216 ha.

 Tempranillo gives red table wines with good colour intensity and a slightly blue hue, but because of its low acid and alcohol levels it is often blended with other wines such as Grenache. Wines made solely from Tempranillo mature quickly and are ready for bottling and drinking in the year of vintage. In Portugal, as Tinta Roriz, the variety is ranked in the highest-quality group for producing port. The young wines can show light berry fruit characters.

Terret



Terrets (*te-ret*) are old recommended varieties from the Languedoc area in the south of France. Three colour variants are known – Terret Blanc (white), Terret Gris (grey) and Terret Noir (black) – and chimeras are sometimes seen in all combinations. In Australia there is a small area of Terret Noir in the Barossa Valley.

 Terret Noir is listed among the varieties used for a number of French appellation wines, including Chateauneuf-du-Pape and Cotes du Rhone, but it is unlikely that it would ever be more than a minor component of the wine. Terret Noir alone makes wines that do not have much colour but that are light, fresh and distinctive, capable of combining well with those from more full-bodied varieties such as Mataro.

Tinta Amarella



Tinta Amarella (*teen-tah am-ah-rel-ah*) is best known as a port variety. It is widely grown in the Douro Valley, where it is regarded as a good – rather than very good – variety. It seems to be little grown outside Portugal, but is distinctly different from the other common port varieties and it is thought that it may have come from France. It could perhaps have been the Amarot of Landes, listed among Busby's imports into Australia. The small plantings in Australia are all in South Australia, where this red grape variety is known as Portugal. It is not uncommon as odd vines in plantings of other varieties and this seems to have led to confusion with Malbec: some intended plantings of Malbec have actually been planted with Tinta Amarella.

 Wines from Tinta Amarella have a good colour and body but no particular varietal or other special character. They could perhaps be used in blending to soften harsh or astringent wines.

Tocai Friulano



Tocai Friulano (*toh-kay frih-uh-lah-noh*) probably originated in France, where it is known as Sauvignasse, and appears to be related to Sauvignon Blanc. However, it would seem more appropriate to use the Italian name of Tocai Friulano, because the variety has almost disappeared from France yet has become very popular in the Friuli-Venezia Giulia region of Italy, where several thousand hectares are planted. Tocai Friulano is also the preferred name in Argentina. In Chile it has been erroneously called Sauvignon. It is widespread in Australia, but only in plantings of other varieties in Mudgee, the Goulburn Valley and Great Western.

 The white wines of Tocai Friulano have a delicate but definite floral bouquet and a slight bitterness on the palate, which is appreciated in Italy. The proportion of Tocai Friulano in some Australian plantings may be high enough to influence the character of the wine produced.

Touriga Nacional



Touriga Nacional (*too-ree-gah nah-syu-nahl*) is the most widely planted of the top-quality group of port varieties in the Douro Valley in Portugal. This red grape variety is also grown in other parts of Portugal for other types of wine, but there seems to be very little outside Portugal. There are a few hectares in California and it is probably one of the 'port sorts' in South Africa. There is a small amount of Touriga in Australia (82 ha), mostly in South Australia.

 The pre-eminence of Touriga as a port variety is justified. In Australia it also produces fortified wines with excellent colour, tannin and flavour. The wines can have a light mulberry or black currant bouquet.

Traminer



Traminer (*tram-ih-nher* or *trah-mee-nher*) is another old white grape variety showing primitive characters. It is valued mainly for its strong aromatic character in making white wine and, as there are large clonal differences in this respect, the more aromatic clones are sometimes distinguished as Gewürztraminer. Being a specialised variety, it is not required in large quantities and thus there are modest plantings in Germany, Austria, France and California. The variety has been in Australia for a long time but only in relatively small quantities (673 ha in 2003).

 Wines from Traminer grown in hot climates are likely to be undistinguished, although this is not always the case. Under cooler conditions, and particularly when the berries are infected with noble rot, it can give luscious wines with an intense, spicy varietal character. The Gewürztraminer wines from Alsace in France are perfumed, golden, full-bodied wines that can improve greatly with age.

Trebbiano



Trebbiano (*treb-ih-yahn-oh*) is the Italian name of this white grape variety; it is more specifically known as Trebbiano Toscano to distinguish it from several similar varieties also known as Trebbiano. It is by far the leading grape for producing white wine in Italy, probably because it ripens reliably in most areas of the country – it has no other distinguishing characteristics. It spread into the south of France and from there into the Cognac area when a new variety was needed to take the place of Folle Blanche, which suffers from bunch rot when grafted. The official French name is Ugni Blanc but in the Cognac area it is known as Saint Emilion. In South Africa, California and Argentina it is a minor variety. In Australia there are about 490 ha. It has sometimes been known as White Shiraz or White Hermitage, but it does not appear to be in any way related to Shiraz and is not grown in the Hermitage vineyards in France.

 In a cool climate Trebbiano gives acid wines, excellent for distillation for brandy. In warmer areas it gives fresh neutral wines that blend well with more fruity types. It is an important component of a number of named wines in both France and Italy, including the red wines of Chianti and Cotes du Rhone.

Tyrian



Tyrian (*tih-rih-an*) is the product of a cross between the Spanish wine variety Sumoll and Cabernet Sauvignon. The original pollination was made in 1972 by the late Allan Antcliff at the CSIRO Merbein laboratory. The aim of the program was to produce high-quality red wine grapes suited to Australian conditions. Extensive evaluations were made of Tyrian, Ciena and Rubienne in three wine-growing regions; Coonawarra (South Australia), Avoca (central Victoria) and Sunraysia (northern Victoria).

 Tyrian wine made from grapes grown in the three regions had a titratable acidity similar to or higher than Cabernet Sauvignon, a lower wine pH and a higher colour density. Sensory evaluation of the wine from each region was carried out by experienced industry tasting panels over several seasons. Tyrian wine from each region scored equal to or slightly better than Cabernet Sauvignon. It has a very deep colour, with high total and ionised anthocyanins, with rich redcurrant and fragrant berry fruit aromas and spicy flavours. It is full-bodied with a rich palate, high tannins and excellent ageing potential.

Valdiguie



Valdiguie (*val-dig-u-ay*) was introduced into Australia from California as Napa Gamay. It is a variety which is authorised, but not recommended, for the south of France and is grown mainly in Languedoc and Provence. There are some plantings (258 ha) in California.

 In France, Valdiguie gives red wines which are regarded as common and uninteresting. They have good colour but are lacking in alcohol and flavour. However, in California it is esteemed for the production of both red and rosé wines. Wines made at Merbein have scored well in blind tastings.

Verdelho



Verdelho (*vehr-del-oh*) is a Portuguese variety grown on the island of Madeira and in the Douro Valley, where it is known as Gouveio. There are also some small plantings in the Loire Valley in France. In Australia there are small plantings in Western Australia, South Australia and New South Wales, with a total planted area of around 1600 ha. The name Madeira has sometimes been used for the variety in New South Wales, a possible source of confusion because the same name was erroneously used for some of the Semillon in South Australia.

 In Portugal Verdelho is used for fortified wines, in white port and as the predominant variety in one of the four types of Madeira. In France it is used for dry white table wine. In Australia it is generally used for white table wines and shows a strong and attractive varietal character with a delicate nutty bouquet. The wines can be golden coloured and have distinctive tannin on the palate.

Viognier



Viognier (*vih-onyay*) is an old variety restricted to the right bank of the Rhone River south of Vienne in France. In the appellation Cote-Rotie it is blended with Shiraz to add perfume to the red wine, but in Condrieu it is vintaged alone to make a dry white wine with a floral scent and a long spicy aftertaste. Chateau Grillet, at the centre of Condrieu, with its 1.6 ha of Viognier, is the smallest vineyard with its own appellation in France – and one of the most famous.

 Viognier has not been grown extensively in Australia but there has been an increase in interest in this white grape variety and there are currently 541 ha. With its distinctive aroma of dried apricots the wine could be useful as a specialty line in some of the cooler regions of Australia. It has been used to produce a full-bodied sweet white wine in some of the warmer regions of the country with some success.

Zinfandel



Zinfandel (*zihn-fahn-del*) is the Californian name for this variety, where in 2003 it was the third most widely planted red wine grape after Cabernet Sauvignon and Merlot. It does far better in warmer regions where it ripens well, and is also becoming established in Australia, South Africa and South America. It has now been confirmed that it is the Italian variety Primitivo, which is grown quite extensively in the province of Taranto. It is also grown in the Dalmatian region of Yugoslavia under the name of Plavac Veliki.

 Zinfandel should give spicy, full-bodied red wines of a bright colour and distinctive varietal character. In California it is recommended that such wines not be blended. Its strong raspberry flavour can sometimes be overpowering to people unaccustomed to the style.

Synonyms

Grape Name	Synonym
Aleatico	None
Alvarelhao	None
Barbera	None
Bastardo	Trousseau (France), Cabernet Gros (South Australia)
Bianco d'Alessano	None
Biancone	Pagadebiti (Corsica), Green Doradillo (Australia), Late Doradillo (Australia), White Grenache (Australia), Grenache Blanc Productif (France)
Bonvedro	Cuatendra (Spain)
Bourboulenc	Grosse Clairette, Clairette Doree
Cabernet Franc	None
Cabernet Sauvignon	None
Cañocazo	Palomino (Australia), Pedro (Australia)
Carignan	Carignane (US)
Chambourcin	None
Chardonnay	Pinot Chardonnay, Pinot Blanc Chardonnay
Chasselas	Golden Chasselas, Chasselas Doré
Chenin Blanc	Chenin (France), Pineau de la Loire (France), Steen (South Africa)
Cienna	None
Cinsaut	Cinq-saou, Cinsault, Oeillade (France and Australia), Ulliade (Australia), Hermitage (South Africa), Ottavianello (Italy), Black Malvoisie (US), Blue Imperial (north-east Victoria), Black Prince (western Victoria)
Clairette	Blanquette (France and New South Wales)
Colombard	None
Crouchen	Sable Blanc (France), Riesling (South Africa), Clare Riesling (Australia)
Dolcetto	None
Doradillo	None
Dourado	Gallego Dourado (Portugal), Pedro (Australia), Rutherglen Pedro (Australia)
Durif	Pinot de l'Ermitage (France), Syrah Forchue (France)
Farana	Planta Pedralba (Spain), Mayorquin (France), Beldi (Tunisia), Damaschino (Sicily)
Folle Blanche	None
Furmint	None
Gamay	None
Graciano	Morrastel (France)

Grape Name	Synonym
Grenache	Garnacha (Spain), Cannonao (Sardinia), Granaccia (Sicily), Alicante (Sicily)
Harslevelu	None
Jacquez	LeNoir (US), Troya (Australia)
Malbec	Cot (France), Malbeck (France), Auxerrois (France)
Marsanne	Ermitage (Switzerland)
Mataro	Monastrell (Spain), Morastell (Spain), Balzac (Cognac, France, Victoria), Mourvedre (Provence), Esparte (western Victoria)
Melon	Muscadet (France)
Merlot	None
Meunier	Pinot Meunier, Schwarzriesling (Germany), Miller's Burgundy (Australia)
Monbadon	Burger (US)
Mondeuse	Refosco (Italy)
Montils	Aucarot (Australia), Aucerot (Australia)
Moschata Paradisa	None
Müller-Thurgau	Riesling × Sylvaner (Switzerland), Rivaner (Luxembourg)
Muscadelle	Tokay (Australia), Sauvignon Vert (California)
Muscat à Petits Grains	Moscatel Menudo (Spain), Muscat de Frontignan (France), Muscat d'Alsace (France), Moscato d'Asti (Italy), Moscato di Canelli (Italy), Frontignac (France)
Muscat Gordo Blanco	Muscat of Alexandria, Moscatel de Malaga (Spain), Muscat de Setubal (Portugal), Zibibbo (Italy), Hanepoot (South Africa)
Muscat Ottonel	None
Nebbiolo	None
Ondenc	Piquepout de Moissac (Armagnac, France), Blanquette (Bordeaux), Blanc Selection Carrière (Cognac), Dourec (Pyrenees), Plant de Gaillac (Pyrenees), Irvine's White (Victoria)
Orange Muscat	Muscat Fleur d'Oranger (France), Muscat Primavis, Muscat de Jesus
Palomino	White French (South Africa), Listan (France), Paulo (Australia)
Pedro Ximenez	None
Petit Verdot	None
Pinot Blanc	None
Pinot Gris	Rulander (Germany), Szurkebarat (Hungary)
Pinot Noir	None
Rkaziteli	Gratiesti (Moldavia), Sonnenkuste (Bulgaria)
Riesling	Rhine Riesling (Australia), Riesling Renano (Italy), Rheinriesling (Austria), Rajnski Rizling (Yugoslavia), Rajnai Rizling (Hungary), White Riesling (California)

Grape Name	Synonym
Roussanne	None
Rubired	None
Ruby Cabernet	None
Sangiovese	None
Sauvignon Blanc	None
Semillon	Greengrape (South Africa), Hunter River Riesling (Australia), Barnawartha Pinot (Australia)
Shiraz	Syrah (France), Hermitage (Australia)
Solvorino	None
Souzao	Vinhao (Portugal), Souson (Spain)
Sultana	Thompson Seedless (US), Sultanine (western Europe), Sultanina (western Europe)
Sylvaner	Silvaner (Germany)
Taminga	None
Tarrango	None
Tempranillo	Tinta Fino (Spain), Cencibel (Spain), Tinta Roriz (Portugal), Negretto (Italy), Valdepenas (US)
Terret Noir	None
Tinta Amarella	None
Tocai Friulano	Sauvignonasse (France)
Touriga Nacional	None
Traminer	Highly aromatic clones referred to as Gewürztraminer
Trebbiano	Trebbiano Toscano, Ugni Blanc (France), Saint Emilion (Cognac), White Shiraz (Australia), White Hermitage (Australia), Clairette Ronde (France, Italy)
Tyrian	None
Valdiguie	Napa Gamay (Australia, US)
Verdelho	Gouveio (Portugal)
Viognier	None
Zinfandel	Primitivo (Italy), Plavac Veliki (Yugoslavia)

Further Reading

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