

# WINE

Get acquainted with the basics of wine – how it's made, how to taste it and how to serve it – as well as some of Australia's most

recognisable wine regions.

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## WELCOME TO THE WORLD OF WINE

There is much more to wine than just fermented fruit juice – from where and how the grapes are grown to the techniques used to turn them into wine to how we experience it in the glass.

This program explores several introductory topics through the lens of Australia's innovative wine community and unique wine styles.

### **FUN FACT**

**ABOUT 600-800 GRAPES GO**

INTO MAKING JUST ONE  
BOTTLE OF WINE.

# WINE ?

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## WHAT IS WINE?

Wine can be both very simple and incredibly complex. It's an alcoholic drink made by fermenting grape juice. Most wine as we know it is made with grapes, but it can technically be made from other fruits too, such as apples, blueberries and strawberries.

Why have grapes become the standard?

There are two main reasons. Grapes contain acids – malic, tartaric and citric acids – that preserve the wine, allowing it to be aged for decades or even centuries. Secondly, grapes have a much higher sugar content than other fruits, which allows them to ferment so successfully and produce complex wines.

Wine grapes:

Not your average snacking grape

Wine grapes are very different from the grapes you buy in the grocery store. Around 90% of cultivated wine grapes worldwide are 'Vitis vinifera'. Within this species there are thousands of different varieties – both red and white. Some varieties are more common than others due to their ability to produce high-quality wine.

## WINE GRAPES TABLE GRAPES

Key differences:

- Origin
- Size

- Skin thickness
- Sweetness
- Seeds

WINE GRAPE TABLE GRAPE

## THE BUSINESS OF GRAPE GROWING

Grapes are a big business. Around the world, there are approximately 7.5 million hectares dedicated to growing grapes, with roughly half dedicated to table grapes and half to wine grapes\*. Australia is the fifth largest producer and exporter of wine internationally.

\*Source: 2017 World Vitiviniculture Situation,  
International Organisation of Vine and Wine  
<http://www.oiv.int/public/medias/5479/oiv-en-bilan-2017.pdf>

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## KEY FACTORS INFLUENCING GRAPE GROWING

How these regional factors interplay has a significant impact on the quality and characteristics of the grapes. This explains why grapes from different regions and even specific sites within regions have a signature style and taste. This is what's referred to as "terroir" or "regionality".

### ADVANCED NOTES

Australia's terroir is incredibly diverse and spans 65 wine regions, from the Mediterranean climate of McLaren Vale to the cooler climates of Tasmania and parts of Victoria, and from the low humidity of the Barossa Valley to the warm-to-hot climate and moist soils of the Hunter Valley. This diversity allows Australian winemakers to produce nearly every major wine variety while ensuring each wine has a strong sense of place.

# WINE

# I S M A D E

1. HARVEST 2. DESTEMMING  
& CRUSHING  
3. FERMENTATION 4. PRESSING  
5. MALOLACTIC  
FERMENTATION  
9. BOTTLING 8. FINING &  
FILTERING  
7. MATURATION 6. BLENDING

## FROM VINE TO WINE: HOW WINE IS MADE

In its simplest form, wine doesn't require much at all. It is simply fermented grape juice – and fermentation is a natural process that occurs with or without human intervention.

What makes wine complex – and extremely enjoyable – is the potential to influence the winemaking process in many ways, and this is what gives us all different kinds and styles of wine. The fact is, you can technically make wine by letting a pile of grapes ferment in a bucket or your bathtub. But it probably won't be wine you want to drink! The process is slightly different for red and white wines, and, of course, the exact process and techniques vary across wineries and winemakers. What follows is an overview of the basic winemaking steps for red and white wine.

## RED WINE

### Harvest

The grapes are either cut from the vine by a machine or by hand with shears. They need to be harvested at just the right time and optimum ripeness – you can't make a good wine from bad grapes.

### De-stemming and crushing

The grapes are usually separated from their stems and leaves, often by a de-stemmer, before they are crushed to get their juices flowing. Methods for crushing range from barefoot stomping to elaborate and expensive machines.

This is where winemaking differs depending on which style of wine is being produced.

Some winemakers opt to crush grapes 'whole cluster', which means with the stems left on. Stems can be included to add extra tannin structure to some red wines, but

many winemakers remove the stems before crushing as they do not want these extra tannins.

Once crushed, red and rosé wines are fermented on their skins for varying lengths of time, while white wines are pressed, separating juice from skins, before fermentation. Skin contact time is essential for darker wines – it's what gives them their colour and imparts flavour and tannin. But those same skins would ruin delicate white and sparkling wines. Seeds are very high in tannin and can also impart an unpleasant astringency to the wine.

### Fermentation

Fermentation is when yeast turns sugars into alcohol, with two by-products: carbon dioxide and heat. This process can occur naturally because yeast already exists on grapes and grapevines. However, some winemakers also add cultivated yeast to better control the process and produce different outcomes.

It's during the fermentation and ageing stages that winemakers can have the most influence and things get exciting, particularly in countries like Australia where winemaking guidelines are less restrictive.

This more experimental approach has led to many new inventions and creative solutions, with innovation becoming the engine of Australia's winemaking success – and benefiting winemakers the world over.

#### Pressing

Once fermentation is complete, the grapes are pressed to remove the skins from the wine.

#### Malolactic fermentation

Nearly all red wines undergo a secondary fermentation called malolactic fermentation. During this process, malic acid in wine is converted to lactic acid, which has a creamier, fuller mouthfeel. It reduces acidity in the wine, giving it a more velvety texture, and releases carbon dioxide.

#### Blending

Different batches of wine can be mixed together before bottling to create a desired style and taste. For example, a winemaker might blend different varieties to achieve a more 'complete' and consistent wine, such as in GSM (Grenache Shiraz Mataro). Or they may blend different batches of the same variety to adjust acid or tannin levels.

#### Maturation

Maturation can be done in a number of ways and for varying lengths of time, allowing winemakers to influence the finished product. Wine can be aged in oak or stainless steel, or in traditional vessels such as amphora or concrete – or a combination of these. Depending on the style and desired characteristics, it can be aged for several months or as long as several years.

#### Fining and filtering

These processes help to create a more polished and refined wine. During fining, an agent is added to the wine that binds to sediment and particles, helping to remove tannins and reduce astringency. These particles fall to the bottom of the vessel ready to be removed. During filtration, the wine is passed through a filter to remove particles. Filtration removes particles that make the wine look cloudy as well as organisms that can make the wine unstable. Winemakers can choose whether they remove all particles or only the larger ones.

#### Bottling

The wine is bottled, with sulfite often added to help preserve the wine. It's then sealed, usually either with a traditional cork or a screw cap, and labelled. And that, of course, is where we as drinkers come in!

# WINE

# I S M A D E

1. HARVEST 2. DESTEMMING  
& CRUSHING  
3. PRESSING  
4. JUICE SETTLING  
5. FERMENTATION  
10. BOTTLING 9. FINING &  
FILTERING  
8. STABILISATION  
7. BLENDING  
6. MATURATION

## WHITE WINE

### Harvest

### De-stemming and crushing

Grape stems add extra tannin structure that is unwanted in white wines, so the stems are removed before crushing.

### Pressing

Once crushed, the grapes are pressed, separating juice from skins, before fermentation.

### Fermentation

The major difference between white and red wine is that the juice is fermented without the grape skins when making white wine.

White wine is generally fermented at lower temperatures than red wine, to preserve its fresh, fruity flavours, and can be done in stainless steel or oak barrels. During primary fermentation, yeast converts the sugars into alcohol. A secondary fermentation, malolactic fermentation, is optional, allowing the winemaker to either preserve the racy malic acid (such as in Riesling), or convert it to softer, creamier lactic acid (such as in many Chardonnays).

### Settling

This is the optional process of clarifying juice after pressing. Solids that remain in the juice after pressing potentially lead to harsh, bitter characteristics in the final wine. It should be noted that these solids can, in the right circumstances, add character and structure to certain wines e.g. skin contact white and "orange wine" styles.

### Stabilisation

Nearly all white wine needs to be stabilised, and most goes through cold stabilisation, where the wine is kept at a consistently low temperature for several days to remove acid tartrates.

### Blending

### Maturation

Like red wine, white wine can be matured in oak or stainless steel, but is generally aged for less time.

### Fining and filtering

### Bottling

# ART

- Oak barrels or stainless steel?
- New oak or used barrels?
- French oak or American oak?
- How long will the wine age for?

It could be anywhere from a few months to several years

## DID YOU KNOW

How a winemaker ages wine depends on the kind of wine they want to create.

Some of the questions they need to ask include:

- Ageing in oak barrels or stainless steel?
- If ageing in oak, will they use new oak (which releases more oak flavours and tannin) or used barrels? French oak or American oak?
- How long will the wine age for? It could be anywhere from a few months to several years. Some whites can be bottled after just three months, while many dry reds can be aged for 12–24 months.

# STAINLESS STEEL TANKS

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## ADVANCED NOTES

### THE OAK EFFECT

Ageing in oak affects the colour, flavour, tannins and texture of a wine. Wines can either be barrel-fermented in oak or moved to oak after fermentation for maturing or ageing.

Does oak make wine taste better? This is open to interpretation, but most of the world's most expensive wines are oak-aged in some way. It's important to note that new oak adds greater aroma and flavour from the oak, whereas older oak imparts little flavour and tannin.

There are two main types of oak used in winemaking:

French oak: Most popular for ageing premium wines, it tends to impart more subtle flavours and aromas due to its tighter grains, and gives wines a silky, cedary or satiny mouthfeel.

American oak: With its looser grains, American oak adds more flavour to the wine, often coconut and vanilla, and gives it a creamy mouthfeel.



# TASTE

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## HOW TO TASTE WINE

The five steps of wine tasting:

- 1.
- 2.
- 3.

- 4.
- 5.

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# LOOK

- Glass about one-third full
- Hold it at a 45-degree angle against a white background
- Observe the colour of the wine

## 1. LOOK

Your glass should be about one-third full. Hold it at a 45-degree angle (ideally against a white background) and observe the colour of the wine. This will give you clues about the wine's style, body and character. If it's a red, is it deep garnet or light magenta? If it's a white, is it pale lemon, buttery or deep golden? Colour can also reflect the age of the wine. Generally, white wine deepens in colour as it ages while red wine gets paler.

T H E O F

# WINE

stRA w

leMO n yellow

gold

bRO wn

pink

salmon

magenta

purple

ruby

GA rnet

ta wny

brown

Next examine the clarity and brightness. Is the wine clear or hazy? How much does it reflect light? A cloudy or hazy wine usually

means the wine is either intentionally unfiltered or it is flawed. A brilliant wine is unmistakable: it's usually a pale, young white wine such as a Semillon from Australia's Hunter Valley.

- Swirling wine helps to open

up the aromas

- Swirl the glass while holding firmly on a flat surface
- See if the wine forms 'legs' or 'tears'
- A wine with more legs is generally bigger, riper and more mouth-filling

## 2

# SWIRL

### 2. SWIRL

Give the glass a swirl while holding it firmly on a flat surface. This spreads and aerates the wine, releasing its aromas. After you swirl, see if the wine has 'legs' or 'tears' running down the sides of the glass. A wine with lots of legs has higher alcohol and glycerine content, which generally means it's a bigger, riper, more mouth-filling wine than one with fewer legs.

## 3

- The most important step

# SMELL

- Humans can identify thousands of different odours
- Experts can learn almost everything about a wine by smelling it
- Deep inhalation versus quick short sniffs
  - find a style that works for you

### 3. SMELL

Smell is the most important sense. While humans can only taste five flavour sensations (sweet, sour, bitter, salty and umami), we can identify thousands of

different odours. So a good sniff of your wine will reveal more complexity than if you jump straight into tasting. In fact, experienced tasters can find out almost everything about a wine by smelling it.

Experts develop their own unique way of smelling wine: some put their nose right in the glass and inhale deeply, while others hover their nose over the top and take a series of quick, short sniffs. You might like to experiment and find a technique you like best.

## THE THREE TYPES OF

### THE THREE TYPES OF AROMAS

#### Primary aromas:

Depending on the growing conditions, each grape variety has certain flavours and aroma profiles. These are most commonly fruit flavours, as well as herbs and florals. For example, Australian Cabernet Sauvignon is typically associated with blackcurrants and herbs.

#### Secondary aromas:

These come from the winemaking process. Bready or yeasty aromas such as cheese rind or stale beer are a result of fermentation. Ageing in oak produces savoury aromas such as toast, vanilla, chocolate and spice. In the case of aged Riesling or a Hunter Valley Semillon, secondary aromas develop without oak ageing.

#### Tertiary aromas:

Ageing in the bottle can produce a new set of aromas, sometimes referred to as the wine's 'bouquet'. As wine ages, its primary flavours soften and other notes become

more prominent, such as earth, mineral, leather and tobacco.

Note that when you're just starting out with wine tasting, it can be difficult to identify aromas beyond 'red wine' and 'white wine', and this can be frustrating. But through practice, your brain will begin to pick up on more complex smells and you will learn to distinguish and identify these. Simply be curious, trust your instinct and enjoy the process.

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## 4. TASTE

It's time to confirm what you've hopefully already smelled and to find out more about the wine, including structure – that is the level of alcohol and acidity, the tannin and the finish. Take a small sip and breathe in gently to draw the aromas into both your mouth and nasal passages in the back of your throat.

There are five main elements to take note of when you taste:

- Sweetness/dryness.
- Acidity.
- Tannin.
- Alcohol.
- Body.

# SWEETNESS/ DRYNESS

## SWEETNESS/DRYNESS

First notice the taste structure: is it sweet, sour, bitter? Sweetness in wine isn't like the artificial flavour you get from something like chocolate – it's more of a natural sweetness derived from the grapes. Dryness is simply the opposite of sweet, meaning the wine has no residual sugar. However you can still taste fruit in a dry wine. Most wines are dry

or off-dry.

#### WHAT IT FEELS LIKE:

- A bone-dry wine can feel as though it's drawing moisture from your tongue. But this sensation can also be due to high tannin
- Light tingling sensation on the tip of your tongue
- Slightly oily sensation on the middle of your tongue
- Sweeter wine will have sweetness on the finish
- The natural sweetness of fruit juice.

#### SWEETNESS

##### SCALE

Bone-dry  
Dry  
Off-dry  
Medium-dry  
Medium-sweet  
Sweet

#### What it feels like:

A light tingling sensation on the tip of your tongue and a slightly oily sensation on the middle of your tongue. You'll also notice sweetness on the finish of a sweeter wine.

A bone-dry wine can feel as though it's drawing moisture from your tongue. Be careful though: a dry wine can sometimes be confused with having high tannin.

#### Comparison:

The natural sweetness of fruit juice.

- Green apple
- Figs
- Herbs
- Honey
- Lemon
- Tropical fruit

– Tropical fruit

- Tart fruit
- Herbs
- Dark berries

- Candied fruit
- Honey
- Flowers
- Ripe berries

# ACIDITY

WHAT IT FEELS LIKE:

- Mouth-watering
- Tart
- Rush of juiciness

on both sides of  
your tongue

COMPARISON:

Eating a green apple  
or lemon.

ACIDITY

SCALE

Low

Medium

High

ACIDITY

What it feels like:

Mouth-watering, tart, a rush of juiciness on  
both sides of your tongue.

Comparison:

The reactive sensations in your mouth  
caused by eating a green apple or lemon.

# TANNIN

TANNIN

Tannins come from grape skins and the oak  
barrels used to age wine. In moderation,  
they add structure, backbone and  
complexity to a wine, particularly in reds.

They're also vital if the wine is intended to  
age, as they act as a preservative.

Tannins can help a wine feel ripe and soft  
as opposed to green or stalky, and coarse  
rather than fine-grained.

Tannins add structure,  
backbone and complexity

to a wine, particularly in reds. They're also vital if the wine needs to age, as they act as a preservative.

WHAT IT FEELS LIKE:

- Bitterness on the sides of your tongue
- Texture throughout your mouth
- Strong tannins make your tongue and teeth dry out and cause a puckering feeling on your gums

COMPARISON:

Strongly brewed tea turned cold.

TANNIN

SCALE

Low

Medium

High

What it feels like:

Bitterness on the sides of your tongue and texture throughout your mouth. When tannins are strong they make your tongue and teeth dry out and cause a puckering of your gums.

Comparison:

Strongly brewed tea turned cold.

# BODY

BODY

Swish the wine around in your mouth so it coats your tongue, cheeks and palate, and consider the weight of the wine. It will sit somewhere along the spectrum of light to full-bodied. Generally the more alcohol, the fuller the body.

Swish the wine around your mouth to coat your tongue, cheeks and palate. Generally the more alcohol, the fuller the body.

WHAT IT FEELS LIKE:

- Light-bodied wine: lighter, thinner, less viscous mouthfeel

- Full-bodied wine:

heavy or creamy

COMPARISON:

- Light-bodied wine:

non-fat milk

- Medium-bodied wine:

whole milk



- Very full-bodied wine:

heavy cream

BODY

SCALE

Light-bodied

Medium-

bodied

Full-

bodied

What it feels like:

A light-bodied wine will have a lighter, thinner, less viscous mouthfeel, whereas a full-bodied wine will feel heavy and creamy in your mouth.

Comparison:

Light-bodied wine – non-fat milk.

Medium-bodied wine – whole milk.

Very full-bodied wine – heavy cream.

# ALCOHOL

ALCOHOL

What it feels like:

Wines high in alcohol give a sensation of heat in the middle of your tongue, your throat and your chest. A fortified wine such as port will produce a warming glow in your mouth, throat and chest.

WHAT IT FEELS LIKE:

- Heat in the middle of your tongue, throat and chest

- Fortified wine will produce a warming glow in your mouth, throat and chest

COMPARISON:

The warm, burning sensation of spirits.

TASTES:

Wines high in alcohol can taste more tannic or sweeter.

ALCOHOL

SCALE

8% Low

9%

10%

11%

12%

13%

14%

15%

16%

17% High

Comparison:

The warm, burning sensation of spirits.

Tastes:

You shouldn't be able to taste alcohol in wine, but wines high in alcohol can taste more tannic or sweeter.

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## 5. CONCLUDE

Savour the wine and notice how it finishes: short or long? Consider your overall opinion of the wine. Everyone has a unique palate so we experience the same wine in different ways. Does it taste balanced? Are there any particular characteristics that stand out? What have you learned about the wine?

### BALANCE AND HARMONY

All winemakers seek balance: that perfect harmony of components where no one characteristic shouts over the others. There's no single formula for wine, and varying opinions abound on what makes a great one, but there should always be a balance between five elements: alcohol, acidity, sweetness, tannins and fruit. If a wine is too sugary, too astringent or too sour, it's not well balanced. A balanced wine is enjoyable to drink and is often described as elegant.

ADVANCED

## NOTES

### VINTAGE: WINE'S BIRTH DATE

A wine vintage is simply the year the grapes were harvested and turned into wine. Although the same wine variety may be made at the same winery in exactly the same manner, wines can vary greatly year to year. This is mainly due to the influence of weather on the vines. In Australia, the growing season is October to April, with grapes

usually harvested between January and April.

A vintage wine indicates that all the grapes were picked in a single year. The weather in a given growing season – and primarily the amount of sunshine – is the biggest influence determining whether it's a good or bad vintage. Plenty of sunny days help grapes ripen fully – but not too many or they can burn – and generally lead to better-quality grapes.

Non-vintage wine is made by blending multiple years together. A traditional non-vintage wine is Champagne or sparkling wine, labelled as 'NV', in which a certain amount of reserve wine – that is, older wine – is added to achieve complexity and the desired style and consistency.

### IS VINTAGE IMPORTANT?

The significance of vintage depends on the grape-growing region. It can be very important in less predictable climates, where some seasons are warmer and sunnier than others and produce better quality grapes. A poor vintage is less likely in warmer regions, where the weather tends to be more consistent.

## ADVANCED

### NOTES

#### WHY DO SOME WINES TASTE BETTER WITH AGE?

As wine ages, its colours, flavours and aromas change. White wines grow darker in colour while red wines become paler. Their primary, fruity aromas begin to soften and make way for earthier, more savoury tertiary aromas such as leather, chocolate and spice. These changes are due to complex chemical reactions that scientists are still unravelling, but are largely a result of tannins and acid interacting with oxygen.

The adage that wine gets better with age does not apply universally: most wine we buy from the bottle shop or liquor store was made to be opened within months and will lose its fruit characters if left too long. Wines that age well usually have high levels of tannins and acid, which act as preservatives that slow oxidation and flavour-changing chemical reactions. This also means they may not be pleasant to drink young.

# SPARKLING

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## SPARKLING WINE

The pop of a cork, the splash of foam, the bead of fine bubbles: nothing says celebration like a bottle of sparkling wine. Traditionally synonymous with Champagne in France, sparkling wines from other regions, including cool-climate regions in Australia, have stepped up to compete. Of all wines, sparkling wines are the most technical and time-consuming to make because they have to undergo two fermentations: first to make the wine and second to produce bubbles.

### How it's made

Over time, a number of methods have been developed for producing sparkling wine, each resulting in a slightly different style. This includes, from highest quality to lowest:

- Traditional method (méthode traditionnelle): This is the most well-known method and the one used to make Champagne – which legally can only be produced in the French region of Champagne, using approved grape varieties and made according to specific rules. Despite this, the traditional method can also be used in other countries, such as in Australian sparkling wine regions like Tasmania and Adelaide Hills.

- Transfer method.

- Ancestral method (Méthode Ancestrale):

This is the oldest – and most difficult to control – method of making sparkling wine, and in recent years it's had a resurgence. It's used to make Pétillant

Naturel, also referred to as 'Pét-Nat', which is currently making a splash in the Australian wine scene.

– Tank: Popular method used in many countries. Used to make Prosecco and Sekt.

–  
Carbonation.

### Sparkling Shiraz

The evocative sparkling Shiraz is a unique style made the same way as sparkling wine, but with Shiraz most often used as the base wine instead of Chardonnay and Pinot Noir. Sparkling red can actually be made with any red wine grape, but Shiraz is the most predominant. It should be served slightly chilled.

### COMPLEMENTARY READING

#### THE STORY OF AUSTRALIA'S RUBY RED BUBBLES

Australians have been drinking sparkling wine for many years. Indeed, as far back as 1881, Victoria was home to the Victorian Champagne Company. This was where French winemaker Auguste D'Argent made one of the first examples of Australian 'sparkling burgundy' (out of Shiraz). The Victorian Champagne Company didn't last, but Hans Irvine at Great Western took up the sparkling burgundy baton and the trend continued under Seppelt with the legendary Colin Preece. His delicious, rich, long-lived sparkling reds have inspired many other producers to create their own take on this unique Australian style – a style that is still sought out by connoisseurs.

# R I E S L I N G

### REGIONS

### CHARACTERISTICS

#### GROWS

#### PRIMARILY IN:

Clare Valley

Eden Valley

Tasmania

Orange

Canberra District

Great Southern

Henty

- Citrus fruits
- Green apple
- Perfumed
- Bright fruit characters

## LIGHT-BODIED WHITE WINE

These popular wines are light, dry and easy-drinking, with particularly good examples coming from cooler climates.

Popular wines in this category include Riesling, Sauvignon Blanc, Pinot Gris and Pinot Grigio.

Characteristics: Crisp, light-bodied wines are generally enjoyed for their zesty acidity, and flavours and aromas of citrus, green apple, white stone fruit, white flowers and fresh herbs.

### Australian examples

Riesling: Australian Rieslings are some of the world's best, with many local winemakers taking a minimalist approach to let the wine's clarity, freshness and purity speak for itself.

# SEMILLON

## REGIONS

LIGHT TO  
MEDIUM-BODIED  
GROWS IN  
MANY REGIONS  
particularly the  
Hunter Valley and  
Margaret River.  
The unique style  
of Hunter Valley  
Semillon ages well

- Citrus
- Floral
- Green apple
- Stone fruits

Semillon: Semillon has a long history in Australia and is grown in many regions across the country. Hunter Valley Semillon is one of the wine world's great wonders, morphing over time from a zesty, crisp young wine into a deep golden, nutty, honey and straw-scented wine – almost as if it has spent time in oak (even though it hasn't). Margaret River produces a lighter-style Semillon that can be similar to Sauvignon Blanc. It's also commonly blended with Sauvignon Blanc.

# CHARDONNAY

## REGIONS

GROWS IN

ALL REGIONS

## CHARACTERISTICS

- Pear
- Apple
- Peach
- Citrus
- Toasty
- Subtle oak

Big oaky  
styles replaced  
by wines with  
crisper acidity,  
minerality and  
elegance

## FULL-BODIED WHITE WINE

These are richer, creamier, textural and fuller wines, often with characteristics developed through the winemaking process. For example, ageing in oak adds new flavour compounds. Popular examples include Chardonnay and Viognier, with some expressions ranging from medium to full-bodied.

Characteristics: These diverse wines offer flavours ranging from lemon and green apple through to guava and mango. Those from warm climates have ripe tropical fruit flavours or those aged in oak can have flavours of vanilla, caramel, butter, spice and ripe tropical fruits, along with a bold yellow colour and smooth, creamy mouthfeel. Cool-climate Chardonnays typically have aromas and flavours spanning citrus and stone fruit, and are minerally and floral. With age, they can develop appealing flavours of fig and a savoury dimension.

## Australian example

Chardonnay: One of the most planted white wine grapes in the world, Chardonnay is an iconic wine in Australia. Previously known for the big, oaky styles of the 1980s and '90s, which subsequently became less fashionable, modern Australian Chardonnay is all about acidity, restraint, elegance and minerality.

# MOSCATO

## PAIRING

Best  
examples  
from cooler  
regions

- Light, refreshing, sweet wine
- Pretty, floral characteristics

## AROMATIC WHITE WINE

These floral, fruity wines are full of aromas that leap out of the glass. They are often refreshing, yet have complex, pronounced aromas that come from the grapes themselves rather than the winemaking process. Classic aromatic varieties include Gewürztraminer, Riesling and Sauvignon Blanc.

Characteristics: Aromatic wines often have tropical fruit, exotic flowers and perfumed characteristics. Look for aromas such as melon, peach, citrus fruits, passionfruit, orange blossom and rose.

### Australian example

Moscato: This is a light, sweet wine popular in Australia for its refreshing character and low alcohol content. Moscato is the Italian name for the Muscat family of grapes. It's produced in many Australian regions including the Hunter Valley, McLaren Vale, Adelaide Hills, Barossa Valley and Margaret River.

# ROSÉ

REGIONS

### FRESH RED FRUITS:

- Cherry
- Strawberry
- Raspberry

### EXTREMELY

### DIVERSE STYLES

made from a variety of red wine grapes

## ROSÉ WINE

Rosé is made from red wine grapes, with the skins only left on long enough to stain the wine pink. It can be made from a single grape variety or a blend of two or three, and its pretty colours can range from soft peach



to deep magenta. Another – less popular – method involves blending red wine with some white wine. Rosé wines are made all over the world in both sweet and dry styles. Characteristics: Rosé wines vary greatly depending on where they are produced and from which grapes. Their primary delicate and fresh flavours often include red fruits such as strawberry, raspberry and cherry, and flowers, citrus and melon.

#### Australian examples

Rosé is diverse in Australia, with wineries across the country producing different styles using a wide variety of grapes including Shiraz, Grenache, Merlot and Nebbiolo. In the past, Australian rosé wines erred on the side of sweet, medium-bodied and dark pink. But today the style proving most popular is the light and delicately flavoured dry rosé.

# PINOT NOIR

bright red  
and black fruit  
flavours

#### CHARACTERISTICS

more complex  
characters such  
as tobacco, forest  
floor, earthsmoke  
and spice

#### LIGHT-BODIED RED WINE

Light red wines are typically paler in colour than fuller-bodied wines and much lower in tannins, making them easier to drink for many people. As a result, they are easy to pair with food. Common varieties include Pinot Noir and Gamay.

Characteristics: These elegant wines are often slightly translucent in colour, with a delicate mouthfeel and aromas of red berries, flowers and sometimes the savouriness of spice.

#### REGIONS

FOCUS ON COOL-CLIMATE

regions such as Yarra  
Valley, Mornington  
Peninsula and Tasmania

depending on region  
and winemaking process

#### Australian example

Pinot Noir: Australia's favourite light red

wine. Australian Pinot Noir offers an array of characteristics depending on where it's grown and how it's made. The best examples are cool-climate wines that are light-bodied yet intensely aromatic with multi-layered characters and long length.

# SHIRAZ

WORLD'S  
OLDEST  
SHIRAZ VINES  
STILL IN  
PRODUCTION

## FULL-BODIED RED WINE

Boasting rich flavours, high tannin and high alcohol content, these wines are bold, dark and rich. They get their deep colour and much of their flavour from the skin of the grapes. Popular varieties include Shiraz, Cabernet Sauvignon, Merlot and Malbec. Characteristics: Full-bodied red wines appear in deep reds and purples, and have a heavier, rounder and sometimes velvety mouthfeel. Flavour characteristics tend to centre on black fruits along with savoury aromas like leather and tobacco.

**REGIONS**  
GROWN IN  
ALL REGIONS  
with the Barossa  
Valley and Hunter  
Valley the most  
well-known

Rich, ripe fruit  
flavours,  
spicy styles  
**CLIMATE**

Fresh, mid-weight,  
elegant styles

## Australian examples

Shiraz: Shiraz is firmly established as Australia's iconic grape and its most famous wine export. It has the world's oldest Shiraz vines still in production, with vineyards dating back to 1843, and displays innovative modern-day winemaking techniques. Shiraz is grown in virtually every wine region, one of the most famous being the Barossa Valley, and a wide range of quality exists – from affordable everyday drinking to some of the world's greatest expressions

of the grape.

# CABERNET SAUVIGNON

THICK  
SKINNED,  
ROBUST, FIRM  
TANNIN  
STRUCTURE

## CHARACTERISTICS

- Blackcurrant
- Capsicum
- Mint

Cabernet Sauvignon: This is Australia's third most planted grape variety (after Shiraz and Chardonnay), and while it's often blended with Merlot or in multi-varietal blends, single-varietal Cabernet Sauvignon can create well-structured, complex wines. Grown across Australia – most successfully in a moderate climate – styles range from soft, approachable and elegant to powerful, plush and tannic.

## REGIONS

GROWN ACROSS  
AUSTRALIA

in moderate  
climates, notably  
in Coonawarra,  
Margaret River  
and Yarra Valley

with Merlot,  
Shiraz, Cabernet  
Franc and Petit  
Verdot

# BOTRYTIS SEMILLON

## REGIONS

BOTRYTIS BREEDS BEST  
IN HUMID CONDITIONS  
SUCH AS THE RIVERINA AND  
HUNTER VALLEY REGIONS

Pale yellow  
to deep golden

in colour

## BOTRYTIS SEMILLON

- Stone fruit flavours, most often apricot
- Citrus
- Honey

### LATE HARVEST AND SWEET WINE

While there are numerous styles and production methods, sweet wines are characterised by high levels of sugar, achieved in part by leaving grapes to ripen longer. Another style involves allowing the growth of a fungus called 'Botrytis cinerea', or 'noble rot', which sucks the water out of the grapes and concentrates their juice.

#### Australian example

Botrytis Semillon: This elegant wine is Australia's most celebrated sweet wine style, along with Botrytis Riesling. Botrytis breeds best in humid conditions, including New South Wales' Riverina and Hunter Valley regions, and a number of these wines such as De Bortoli Noble One Botrytis Semillon are highly sought after globally.

# F O R T I F I E D W I N E

### FORTIFIED WINE

Fortified wines were the backbone of the early 20th century Australian wine industry. Fortified wines are often rich, luscious and molasses-like, with sticky sweetness and great complexity. Alcohol levels vary between 15.5% and 20%.

The standard winemaking process is followed up until fermentation, when the grape spirit is added to the base wine.

The length of time a wine ferments before being fortified determines whether it will be sweet or dry, because once the alcohol is added the yeast stops converting sugar to alcohol, leaving residual sugar. For a sweeter fortified, spirits are usually added within the first day and a half of fermentation. For a dry fortified, the full fermentation process is left to run its course.

#### REGIONS

RUTHERGLEN

MUSCAT:

Rutherglen is a  
benchmark region,  
renowned for its  
incredible Muscats

RICH, LUSCIOUS  
AND MOLASSES-LIKE,  
WITH STICKY  
SWEETNESS AND GREAT  
COMPLEXITY

While Portugal is known for its Port and  
Madeira and Spain for its Sherry, Australia  
produces some of the world's finest Muscat,  
Topaque, Vintage and Tawny fortified wines.  
Like Champagne, fortified wines are  
protected by the European Unions' Protected  
Designation of Origin guidelines. In Australia,  
we now use names such as:

Port → Vintage, Ruby and Tawny fortified.

Sherry → Apera.

Tokay → Topaque.

Australian example

Rutherglen Muscat: Rutherglen is a  
benchmark region, renowned for its  
incredible Muscats. A rich, complex and  
intense fortified wine, local winemakers take  
their Muscat very seriously and use a tiered  
system to classify the wine, based on how  
long the wine is aged for.

The foundational Rutherglen Muscat

displays fresh raisin aromas and great  
length of flavour on the palate, while  
Classic Rutherglen Muscat is produced by  
blending selected parcels of wine, often  
matured in various sizes of oak cask to  
impart the distinctive dry 'rancio' characters  
produced from maturation in seasoned  
wood. Grand Rutherglen Muscat displays  
complexity that imparts additional layers  
of texture and flavour, and Rare Rutherglen  
Muscat is rare by both name and nature  
– fully developed and displaying the  
extraordinary qualities that result from  
the blending of only the very richest and  
most complete wines in the cellar.

# VERSUS

SINGLE VARIETALS VERSUS BLENDS

Varietal wines are made from a single grape

variety, whereas blended wines are created by combining two or more. Blends are based on the idea that the whole is more than the sum of its parts, with each grape bringing different qualities to the final blend. Blending is used to enhance a wine's aroma or improve its flavour, and it can help balance a wine's acidity, tannin or alcohol level. Blending also adds complexity to the wine's flavour and texture.

# WINES

If a wine is labelled as a blend, the varieties on the label will be listed in order of percentage composition. Reds are more common as blends, but white blends shouldn't be discounted.

Varietal wines, on the other hand, are able to tell a clear story of the grape, the region, the climate and soil, and the winemaker.

That said, many wines sold as single varietals contain a percentage of other grapes; in Australia, single varietals can have up to 15% other grapes.

Many of the world's most famous wines employ the best winemakers to blend wines made from different grapes, vintages and regions. This is where the expression of terroir takes a backseat and the winemaker's art comes to the fore, creating a unique style and signature of a particular wine. Winemakers have blended for centuries and Australia's best-known wine, Penfolds Grange, is a multi-regional blend.

- Made from a single grape variety
- Able to tell a story of the grape, region, climate and soil, and winemaker

- Some wines sold as single varietals contain a percentage of other grapes – in Australia up to 15% (15% in France, 25% in US)

## DID YOU KNOW

### LABELLING LAWS

Rules apply to all variety claims stipulating the minimum amount of a single grape that a wine must contain for that wine to be labelled as a single variety. An 85% rule applies in Australia, which means at least 85% of the wine must be from the grape in question.

This percentage varies from country to country – for example, it's 75% in the US and 85% in the EU.

# CLASSIC AUSTRALIAN BLENDS

## REGIONS

BAROSSA VALLEY  
AND MCLAREN VALE

contributes tropical  
fruits and sharper  
acidity  
SEMILLON BRINGS  
LEMONY NOTES

Grassy,  
herbal aromas  
MATA RO  
(MOURVÈDRE)  
gives perfume  
and anise  
characters and  
grainy tannins  
provides  
aromatic  
spiciness and  
delicacy

## CLASSIC AUSTRALIAN BLENDS

Australian blends showcase the innovation and craftsmanship of the Australian wine community and are tasting better than ever. The freedom to blend at a winemaker's whim is producing modern Australian wine styles that are pleasing palates around the world.

### Sauvignon Blanc Semillon

Originating in Bordeaux, this zesty blend helped put Western Australia's Margaret River region on the map, and along with Chardonnay it's the region's signature white wine style. The two varieties compete and complement each other, with Semillon contributing flavour and roundness to the more austere, sharper Sauvignon Blanc notes.

### Grenache Shiraz Mataro

The emergence of Grenache blends in Australia has led to a renaissance in red blends, with winemakers experimenting

with classic and alternative varieties. Grenache Shiraz Mataro (Mourvèdre), or GSM, is a classic red blend from Châteauneuf-du-Pape in France and has become a particularly important style in South Australia's Barossa Valley and McLaren Vale, where some of the country's oldest and best Grenache grapes are grown.

# CLASSIC AUSTRALIAN BLENDS

## FLAVOURS

- Blueberry
- Black fruits
- Mint
- Olive

## LONG FINISH

## CHARACTERISTICS

## LONG FINISH

## WELL BALANCED

## AROMAS

- Cassis
- Mocha
- Sweet spice

## Cabernet Shiraz

Cabernet Sauvignon is one of the tougher grapes to grow and make successful as a varietal wine. Cabernet Franc, Merlot, Malbec or Petit Verdot help flesh it out and ensure that a quality wine can be made in almost all years. In Australia, vignerons in the 1950s didn't always have these varieties to turn to. But one thing Australia has had and always will have is access to exceptional Shiraz.

Cabernet Shiraz has great ageing potential, and stylistically these two varieties blend well. Cabernet captures structure and texture, which is overlaid by the suppleness and generosity of Shiraz. Cabernet also retains freshness and has its 'hole in the middle' palate structure, which is filled texturally by the sweet fruit of Shiraz.

This uniquely Australian blend has become



one of the world's great wines, in large part thanks to winemaker Max Schubert who created the iconic Penfolds Grange. Penfolds' 1962 Bin 60A Cabernet Shiraz is widely regarded as one of the best red wines ever made in Australia.

#### Cabernet Merlot

This is a classic blend, famous for being the combination of varieties originating from Bordeaux. Margaret River, in particular, produces some excellent Cabernet Merlot blends.

The Cabernet Sauvignon provides a fine structure – tannins and acidity – while the Merlot fills it with fruit flavours like plums and cherries. And while the Merlot has little structure but is full of fruity flavours, the Cabernet possesses a robust structure and offers blackcurrant nuances.

#### COMPLEMENTARY

#### READING

#### THE ILLUSTRIOUS HISTORY OF AUSTRALIA'S RED BLENDS

Blending grapes to make an (arguably) better wine has been happening since humans first started making wine. Regions like Bordeaux and the Southern Rhône have built global fine-wine reputations on blends, and Australia is no different. Things really got going when Australia's first great winemaker, Maurice O'Shea, convinced his widowed mother to purchase Charles King's property in the Pokolbin area of the Hunter Valley in New South Wales.

Maurice O'Shea made thrilling table wines at a time when the vast majority of wine produced and consumed in Australia was fortified. He was an innovator, using varietal labelling for his wines alongside the first names of friends, grapegrowers and relatives while others were using vat numbers and letters. From a simple shack on the side of a hill, he defined just how great fine Australian wine could be.

Over the course of 35 years he gained the respect and admiration of wine lovers across Australia. Maurice was a master blender and a creative genius. Varieties like Shiraz and Pinot Noir were blended to make wines that were much greater than the sum of their parts. Wines were sourced from wine regions across Australia to make seamless blends that thrilled wine drinkers. While he may have trained overseas, Maurice embraced the freedom that making wine in Australia gave him. He laid the groundwork for generations of innovative Australian winemakers to come.

#### AUSTRALIA'S WELL-KNOWN

# WINE REGIONS

Adelaide Hills, SA  
Barossa Valley, SA  
Canberra District, ACT  
Clare Valley, SA  
Coonawarra, SA  
Heathcote, VIC  
Hunter Valley, NSW  
Margaret River, WA  
McLaren Vale, SA  
Mornington Peninsula, VIC  
Tasmania  
Yarra Valley, VIC  
0 500  
Kilometres

TASMANIA

## AN OVERVIEW OF AUSTRALIA'S WINE REGIONS

The Australian wine community today is founded on the explorers of the past who identified the optimal vineyard sites. From the iconic to the lesser known, Australia's 65 wine regions boast distinct characteristics that are expressed in wines produced by makers attuned to their land.

The wine regions of Australia are largely concentrated in the south east and south west of Australia where temperatures don't climb too high.

# W I N E R E G I O N S

## ADVANCED NOTES

### MULTI-REGIONAL BLENDING

Multi-regional blends take the best from multiple regions to create balanced and consistent wines. The concept has long been part of Australia's revolutionary winemaking history.

It takes advantage of regional strengths and allows the winemaker to develop the style, lessen the effect of vintage variation and replicate the wine year after year.

Strict regulations in some regions prevent European winemakers from using this method – and varying opinions exist about its merits. In Australia, it's an example of a bold, risk-taking approach paying off. Some of the country's most successful wine producers are multi-regional brands producing globally coveted and premium wines. The most famous of these is the Penfolds Bin 60A, a blend of Coonawarra Cabernet Sauvignon and Barossa Valley Shiraz.

# TEMPERATURE

SPARKLING  
WINE:  
ICE COLD  
LIGHT-BODIED  
RED WINE:  
COOL

## WHITE WINE AND ROSÉ:

FRIDGE COLD

HOW TO SERVE AND ENJOY

Temperature

Sparkling wine: Ice cold (5–10°C, 41–50°F)

White wine and rosé: Fridge cold (7–14°C, 45–57°F)

Light-bodied red wine: Cool (12–17°C, 54–63°F)

Full-bodied red wine: Slightly cool (17–21°C, 63–70°F)

# SELECTING

## THE RIGHT GLASS

SPARKLING  
WINE  
WHITE

WINE ROSÉ LIGHT-BODIED

RED WINE  
FULL-BODIED  
RED WINE FORTIFIED  
WINE

## FUN FACT

CENOSILLICAPHOBIA  
IS THE FEAR OF  
AN EMPTY GLASS.

# FOOD PAIRING

-

-

## PAIRING FOOD AND WINE

The aim of food and wine pairing is to create a good balance between a dish and the characteristics of a wine. Also consider the progression of a meal: usually from lighter dishes and wines through to heavier courses and more lush wine styles. In many ways it's a science, but it also comes down to your personal preferences.

### Complement or contrast

A complementary pairing creates balance through similar flavour profiles, with neither the wine nor the food overpowering the other.

A contrasting pairing creates balance by combining opposing qualities that still have a common element to link them.

# AND WINE PAIRINGS

## SALAD

Light white

## FISH

Light to medium  
white

## SPICY FOOD

Aromatic, off-dry  
white

## SHELLFISH

Medium to

full-bodied white  
POULTRY  
Light red or medium  
to full-bodied white  
CURED MEAT  
Light red  
PORK  
Medium red  
RED MEAT  
Full-bodied red  
DESSERT  
Sweet white,  
dessert wine  
CHEESE  
Hard: bold red.  
Soft: light red or sparkling.  
Pungent: medium  
red or dessert wine

#### CLASSIC PAIRINGS

While the pairings above are tried-  
and-tested classics, wine is all about  
experimentation. So try new combinations  
for yourself and see what works well  
with your palate.

# WINE FAULTS

#### WINE FAULTS AND HOW TO IDENTIFY THEM

A wine fault is a character that spoils the  
aromatics, flavour or both. These characters  
may come from winemaking, storage and  
the environmental causes.

-  
-  
-  
-

#### OXIDATION OXIDATION

What it is: When wine encounters oxygen it begins to break down, and too much exposure to oxygen will spoil it. It's the same reaction that occurs when you leave a cut avocado or apple out. This can happen during the winemaking process or in the bottle, when too much oxygen seeps in. How you can tell: Oxidised wine loses its fruity aromas and is flat on the palate, potentially with notes of stewed apple or bitter fruit. It also appears flatter in colour, with red wines turning a brown-brick colour and white wines turning golden. What to do about it: Once a wine is oxidised, there's no going back.

# T A I N

## T

When wine has come into contact with 2,4,6-trichloroanisole (TCA) through the cork or oak barrels  
How you can tell:  
- Smells like wet cardboard, musty newspapers, mushrooms, mouldy basement  
- Other flavours and aromas hidden in background

### CORK TAINT

What it is: When we say a wine is 'corked', it means the wine has come into contact with a chemical known as 2,4,6-trichloroanisole, or TCA for short. TCA usually comes from the cork in a bottle but can also be found in a winery environment, for example in wooden crates or packing material, meaning that even wines bottled under screwcap can be affected by cork taint. Exposure to TCA is harmless at low levels, but it can ruin a wine.

How you can tell: The wine will smell dank, like wet cardboard, musty newspapers, mushrooms or a mouldy basement. These characteristics will also dominate its flavour, with all other flavours and aromas hidden in the background. You can't notice cork taint by looking at the colour.

What to do about it: As with oxidised wines, unfortunately if a wine is corked there's little you can do about it. Your best bet is to try another bottle.

### OTHER FAULTS

Oxidation and cork taint are the most common wine faults you'll find. Some other

faults you may encounter:

**Brettanomyces (Brett):** This is a type of yeast often found in wineries that can grow in wine and produce off-smelling compounds called volatile phenols. Brett is present in many wines; it generally only becomes a problem at high concentrations. You can recognise Brett from its mousy, barnyard or rotten-meat aromas.

**Lightstrike/cooked wine:** A wine is ruined when it's exposed to too much heat. Warm temperatures dull a wine's flavour, and extreme heat will give the wine a stewed, jammy, roasted-sugar aroma.

**Volatile acid (VA):** This is what gives vinegar its acidic flavour and it exists naturally in wine. It's not a problem in smaller quantities and some winemakers use it to develop more complex flavour profiles. But if the bacteria that produces VA gets out of control, the wine will smell of nail polish remover.

**Second fermentation:** Allowing a second fermentation to occur in the bottle is how sparkling wine is traditionally made, but it's not a desirable outcome in most still wines. You'll recognise this from the tiny bubbles in a wine that should not be fizzy, and sometimes a flavour that's slightly off.

Australia's unique climate and landscape

have fostered a fiercely independent wine scene, home to a vibrant community of growers, winemakers, viticulturists, and vignerons. With more than 100 grape varieties grown across 65 distinct wine regions, we have the freedom to make exceptional wine, and to do it our way. We're not beholden to tradition, but continue to push the boundaries in the pursuit of the most diverse, thrilling wines in the world. That's just our way.

Wine Australia  
supports the responsible  
service of alcohol.