

Cellaring Wisdom.

Why, When, Where, What, How and Hints on Wine Cellaring.

Of all the ways we can make good wine taste great, the simplest is to open the most suitable wine at every occasion. We should endeavour to open each wine at its “optimum” – an intangible point in time governed by taste but guided by winemakers and tradition. This requires selecting from a store of wine, otherwise known as a wine cellar.

Characteristics and prices of wine change over time. Consequently wine has always been cellared. Over the millennia cellaring techniques have improved but the reasons to cellar wine remain constant.

Cellaring rules are fully flexible and vary according to your tastes and interests.

This e-book will describe many aspects of cellaring, but the subject is bigger than one small book. Throughout the text are paths to other sources of information, which you are invited to take as you explore this satisfying hobby.

Please pass this document on; forward it to friends or put it on your web site.

Spread the good news about effective wine cellaring!

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► Why should you Cellar Wine. ▲

- All wine is stored between bottling and drinking – It is stimulating to take part in this storage procedure.
- Wine changes its characteristics as it ages. While modern wines are often produced to give satisfaction soon after bottling, the effects of aging can produce fascinating and pleasing changes. In many cases this improves the quality and enjoyment of the wine.
- A wine maker's recommendation for the aging of a wine is only dependable if that wine is stored under the correct conditions
- An abundance of wine types and varieties is available. You have the opportunity to enjoy the most suitable wine for every occasion by storing a broad range of these wines.
- Prices for wine can vary distinctly through seasons and years. With your own storage, you can take advantage of these price fluctuations.
- When unexpected friends turn up you can enjoy selecting an appropriate wine without leaving home.
- There is a pleasure in cellaring which adds to the total enjoyment of wine. For further comment [click here](#)
- Wine cellarers grow immeasurably in wine knowledge and confidence.
- As a wine enthusiast, the best investment you can make is a wine cellar, capable of storing your wine in ideal conditions.

► When should you Cellar Wine. ▲

- Every wine you buy will suffer from a degree of travel shock. Ideally all bottles should be cellared for as long as it takes to alleviate this.
- Wines with a predilection to improve as they age must be cellared to make the most of their aging characteristics
- Wines that are ready for drinking should be held to await an appropriate occasion for opening.
- When a favourite wine is selling for less than normal - buy a case or two, put it in your cellar and gloat!

► Where should you Cellar Wine. ▲

- Wine should be stored in a dark place.
- Wine should not be subjected to vibration.
- Wine will only keep and age gracefully where the temperature is constant.
- Your cellar can be a space within your house or adjacent building. It can be anything from a small cupboard to a well designed underground cavern or it can be a free standing wine storage cabinet.
- At least some of your wine should be stored close to where you are going to drink it. A cellar too far from where you are enjoying your wine fails to provide all the pleasures it should.
- A professional wine storage service can be used, providing you have a wine cellar into which those wines brought home can be stored.
- For a list of companies providing professional wine storage click [here](#) and select "Wine Storage Services".

► What wine should you cellar. ▲

- All wine coming into your home should be placed in your cellar
- Some wine will be opened soon after recovery from travel or within a few months. However some will be stored for many years.
- Much is made of the question of which grape varieties should be cellared for longer periods. In the end it comes down to your taste. To start with follow general recommendations but work on developing your own tastes and rules.
 - Wines which may show the greatest benefit from longer storage include – Cabernet Sauvignon, Shiraz, Pinot Noir, Zinfandel, Riesling, Semillon and fortified wines.
 - Wines which are traditionally opened before extended aging include - Sauvignon Blanc, Pinot Gris, Gewurztraminer, Merlot, Chianti, Malbec, Beaujolais.
- If you are unsure of how long a wine should be held, refer to the winemaker through the notes on the bottle or by contacting the winery
- For further information on grape varieties and cellaring [click here](#).
- For a comprehensive review on how long to keep any wine [click here](#).

▶ How should you Cellar Wine. ▲

▶ Insulation.

- The first essential is to create a storage environment which provides the basics of stable temperature, no light and no vibration.
- In general terms 100mm (4") of Polystyrene is the equivalent to a meter (3ft) of ground. So if you are trying to decide between an above ground construction and an underground cavern, you must be prepared to dig deep for the latter.
- Your cupboard, indoor space or your outdoor construction, must be well shaded well insulated and with the minimum of air movement in and out of your cellar.

▶ Temperature.

- The objective is to provide stored wines with a constant temperature of between 10° and 15° degrees Celsius and a humidity of between 60% and 70%. A settled temperature preserves the wine and high humidity maintains the sealing integrity of the cork.
- Seasonal changes in temperature will not harm your wine, although fluctuations greater than 1 degree a week should be avoided.
- Wines subjected to temperatures over 25°C (77°F) are in grave danger of rapid deterioration.
- Wines stored at less than ideal conditions will age at speeds quite different to those envisaged by wine makers when they offer suggested storage times.
- A [Hygro-thermometer](#) will provide you with accurate information as to both the temperature and humidity ranges within your cellar.
- A well constructed above-ground cellar or a well dug underground cellar will require the minimum of additional temperature control.
- The position of your cellar or your climate may oblige you to introduce a cooling device.
- For a list of companies supplying cellar cooling units [click here](#) and select "Wine Cellar Cooling".
- The introduction of a cooling unit into a constructed cellar will provide complete temperature stability. However care must be taken with the placement of the unit to avoid uneven distribution of the cooling air.
- Regard assembled wine as your best cooling block. A high density of wine bottles will reduce wine temperature fluctuations.
- There are a number of alternative cooling methods being used by enthusiasts, many of which are highly effective. You are welcome to contact the writer for further discussion on some of these methods.
- Consider keeping your long term wines in a professional storage facility if your cellar cannot conform to the optimum temperature ranges.

▶ Racking.

- The objective of racking is to carry bottles securely in a horizontal position, in as dense an arrangement as possible.
- It is important for bottles sealed with corks to be laid down to keep the cork moist.
- Bottles with screw caps can be stored standing upright but generally this is less space-efficient.
- Racking can be individual cells of timber, steel or plastic, simple shelving or bins.
 - Individual racking is the most convenient for selecting bottles. Some racks can cause damage to bottle labels; designs vary in bottle density; price variations are more to do with aesthetics than efficiency.
 - Simple shelving can be built. Spacers of 100mm carrying 20mm x 200mm planks provide dense and low cost storage.
 - Bins carrying 12 or 24 bottles are ideal when large numbers of the same wine are being stored but the resident bottles can be susceptible to destruction if subjected to earthquake movement.
- Wherever possible use single depth racking. Racking which carries bottles two deep can lead to difficulty in finding some wines and unnecessary disturbance of wines moved to reach the wines behind.
- As a rough guide each square meter of racking will carry 100 bottles.
- Avoid using bulky racking systems, such as stacked field tiles; it is wine you are trying to store.
- For a list of companies supplying racking [Click here](#) and select "Wine Cellar Racking".

► Inventory control.

- If you are one of the many who have a desire to grow your cellar, who have the best in temperature control and racking, who have a collection of wonderful wines and a personal way of picking a wine which ranges from the lucky dip system to something more sophisticated, but do not have inventory control, you have not addressed the core of good cellaring.
- A good inventory system is the most important but the least considered element in maintaining a wine investment. A poor inventory leads to wasted wines.
- Selecting appropriate wine from a cellar list and then easily finding it adds to the overall pleasure of wine and cellaring.
- Constant pulling out of bottles, studying the label and declaring “I know it is here somewhere” is not a precursor to happy or effective cellaring.
- Lost and over-aged wines place a cost burden against every good wine you enjoy. Eliminating this cost can only be achieved through [accurate inventory and good bottle location](#)
- The [Vinoté Wine Cellar System](#) overcomes the dichotomy between accuracy and alcohol.
- The Vinoté method uses uniquely [numbered \(and barcoded\) tags](#) attached to every bottle. The wine and associated tag number are recorded in the wine cellar database. This allows wine to be selected and found with ease and most importantly, allows the recording of the wine’s consumption at any sober time after the event, through the retention of the tag even if the bottle has been discarded. This guarantees an ongoing accurate inventory.
- A [barcode scanner](#) greatly improves the speed and accuracy of both entering and removing wine from your inventory.
- Comprehensive [Bottle Tag comparisons](#) and [Wine Cellar Software comparisons](#) will simplify your choice of inventory management.
- For a full summary of the world’s Wine Cellar Software [click here](#)
- Inventory processes such as linking a wine to its racking location or simply believing that you know where your wine is located, ultimately leads to the “Lucky Dip” method of wine selection. The outcome is sure to be a breakdown in inventory control and a sad wastage of wine.

► Hints.

► Planning your Cellar.

- Cellaring of wine is often seen as the preserve of the rich or the connoisseur. However people from all walks of life own good cellars. The common feature is a love of wine and a nose for a bargain.
- If you drink wine you can afford a cellar; if you have space for living you have space to properly store a few wines.
- To determine how large a cellar you need, multiply the number of wines you consume a week by 52 and multiply this by 2, 3, 4 or 5 (being the average aging of the wines you will be storing).
- Your cellar should be designed to hold sufficient wines to ensure that you can produce a suitable wine for most occasions.
- Most cellars, purchased or created, become too small for the cellarer’s needs. Always budget for a cellar larger than you initially think you need.
- A temperature controlled wine cabinet will maintain your wine at the ideal temperature but may lack the ambience and space of a purpose built cellar.
- To view a list of suppliers of wine cabinets [click here](#) and select “Wine Cellaring Cabinets”.
- Make sure your floor is strong enough and consider the cost and capacity before buying a stand alone wine storage unit.
- If your house is large enough to house a cabinet, it probably has a space large enough to convert into a cellar.
- Before starting on your journey of building a cellar, you are well advised to read the book [“Cellaring Wine - Do-it-yourself Solutions”](#) by Tyson Stelzer
- Your tastes will change over time so take care in selecting the wines you plan to hold for a long period.
- Maintain a reasonable balance between wines ready for drinking and those which you plan to age.
- Cellar as many different wines as possible and let your knowledge and palate expand.

▶ **Controlling your Cellar.**

- Cellar all wines properly - irrespective of age.
- Keep your wine safe from your guests' and your own impetuosity by creating an orderly wine cellar and a controlled inventory.
- Avoid the hedonistic approach of diving in to your cellar for a lucky dip.
- Avoid the hoarding instinct of leaving "precious" wines until they become undrinkable.
- Maintain a reasonable balance between wines ready for drinking and those which you plan to age.
- Apply a "drink by", or "peak" year to every bottle in your inventory, making adjustments as you taste one of a group. Then try to live by this stricture.
- [Control your inventory](#). A lost or over-aged bottle is a
- Make the most of barcodes on [bottles and neck tags](#) for fast and easy inventory management.

▶ **Aging your Wines.**

- Avoid opening your recently purchased wine when you get home. Tag it, record it and cellar it. Let the wine get over its travel shock and open it a week, a month or a year or two later.
- There are low priced wines which held for a year or two may improve but aging an inferior wine might simply turn it into an old inferior wine.
- Once your wine is resting in your cellar, leave it alone until you choose to drink it. Avoid moving or turning it.
- Good wine cellarers develop greater wine confidence. You will start buying better wine and buying more wine with self-assurance.
- Temperature fluctuations and warm storage will age or possibly deteriorate wines faster than you might expect. If your wines have been stored in less than perfect conditions, open them early.

▶ **The Pleasures of Cellaring Wine.**

- Seven excellent reasons for spending a few cents per bottle on inventory control are shown [here](#)
- Treat your wine well and enjoy the rewards.
- Give all wines the respect they are due; open them at the right time for the right occasion.
- Don't store your wine in the kitchen or living room. These are generally hot rooms with bright lighting.
- Your cellar should provide a choice of wines to suit any mood, meal or occasion.
- For your enjoyment, embrace the technological advances which have improved all aspects of wine. These include wine making, bottle seals, wine identification, wine cellaring and inventory control.
- Drink your cellared wine from appropriate glasses for greatest enjoyment.
- A recent survey indicated a high level of marital bliss amongst those who have good cellars. Perhaps the two go together!

▶ **The Seven Sins of Cellaring**

1. Not having a cellar at all.
The worst of all sins!
2. Storing wine in a warm or bright place.
Do you really want to ruin your wines?
3. Failing to derive the maximum pleasure from cellared wine.
Open the optimum wine at its optimum time for each occasion.
4. Failing to maintain an accurate record of wine held.
Record every bottle coming in and record each wine opened.
5. Keeping a narrow range of values, varieties and vintages.
There are hundreds of varieties and types – enjoy them all.
6. Owning an over-aged wine or opening an under-aged one.
If you have done this, you have ignored sins #2, #3 and #4.
7. Failing to share your cellar treasures with others.
Wines are made for sharing and enjoying.
An 8th sin has been added –
8. Dying with wine still in your cellar!
If you do this, you may have ignored sins #3 and #7.

Wine Aging Chart.

All wine changes with age. Whether it improves or not is a matter of taste. As a guide to some of the changes that can occur in two wines, here are some typical changes in an average New World Chardonnay and Cabernet Sauvignon. Both wines are from relatively cool climate wine producing regions, which will increase their potential longevity. Both have been stored under ideal conditions..

| | Chardonnay | Cabernet Sauvignon |
|-------------------|---|--|
| Year One | Not bottled. | Not bottled |
| Year Two | Fresh peach, grapefruit, butter, obvious oak. | Not bottled |
| Year Three | Flavours integrated slightly, small gain in colour. | Deep purple, strong ripe berry-fruit, grippy tannins, stong oak. |
| Year Four | Enters a slightly dull patch as fruit fades and bottle development begins to appear. | Deep ruby with hings of purple. Strong berry-fruit flavours now more accessible. Firm tannins. |
| Year Five | Fruit less obvious, more toasty flavours emerging. | Beginning of toasty, forest floor bottle development. |
| Year Six | Strong toasty, nutty, mealy bottle development with background of peach and grapefruit. | Strong development starts to compete with ripe berry flavours. Colour ruby/red. |
| Year Seven | Acidity mellows slightly, colour deepens. | Red colour with savoury earth flavours and the beginning of a beef tea complexity. |
| Year Eight | Still has a vestige of fruit but strong toast, nuts etc. | A slight brick edge to colour, more beef tea, mellow flavours. Sometimes tannins can appear stronger at this stage. |
| Year Nine | Fruit begins to "dry up" and the texture starts to become coarse. | Fruit fading but still evident. Stong bottle development. Tannins may begin to mellow. |
| Year Ten | Bitterness may begin to emerge. | Strongly developed composty flavours. Very integrated. Strong brick edge to red colour. Still has a few years potential for further development. |

With acknowledgments and thanks to [Bob Campbell MW](#)

Temperature Chart.

The following provides temperature guidelines for serving different wine varieties. It is your taste however, which is the final determinant as to what temperature wines are served at. The most common fault is to over-chill a wine and so spoil or hide its true character.

Importantly, the temperatures shown for cellaring should be more strictly adhered to.

An [Infra Red Thermometer](#) is the ideal tool for instantly measuring your wine or cellar temperature.

| Celsius | Fahrenheit | |
|---------|------------|--|
| 100 | 212 | Boiling Water |
| 39 | 100 | Warm Bath |
| 25 | 77 | Maximum Temperature to subject wine to |
| 21 | 70 | |
| 20 | 68 | |
| 19 | 66 | Serve Vintage Port |
| 18 | 64 | Serve Bordeaux, Shiraz |
| 17 | 63 | Serve Red Burgundy, Cabernet |
| 16 | 61 | Serve Pinot Noir |
| 15 | 59 | Maximum cellar temperature. Serve Chianti, Zinfandel |
| 14 | 57 | Serve Tawny Port |
| 13 | 55 | Ideal wine storage temperature |
| 12 | 54 | Serve Beaujolais, Rosé |
| 11 | 52 | Serve Viognier, Sauterne |
| 10 | 50 | Minimum cellar temperature |
| 9 | 48 | Serve Chardonnay, Sauvignon Blanc |
| 8 | 47 | Serve Riesling |
| 7 | 45 | Serve Champagne |
| 6 | 43 | Serve Ice Wines |
| 5 | 41 | Serve Asti Spumanti |
| 4 | 39 | |
| 3 | 37 | |
| 2 | 36 | Refrigerator temperature |
| 1 | 34 | |
| 0 | 32 | Freezing |

Drinking temperature Key -

| |
|--------------------------|
| Room Temperature |
| Slightly Chilled |
| Chilled |
| Cold |
| Cellar temperature range |

▶ The cost of storing 800 bottles. ▲

The following are very rough estimates of the overall costs of establishing a cellar for around 800 bottles, using different cellar alternatives. There will be many variations to pricing according to location, design, reliability and quality. Prices are shown in US Dollars.

| | |
|---|---------|
| An underground cellar | \$8,000 |
| A commercial wine storage unit | \$5000 |
| An above ground cellar with commercial cooling unit | \$3,000 |
| An above ground "passive" cellar | \$1,500 |
| Converted "passive" space in the house | \$500 |
| Professional wine storage for 5 years | \$5,000 |

▶ Acknowledgements. ▲

Cellaring Wisdom is published by [Vinoté](#) and edited by [James Wilson](#). James has committed all the errors and sins of cellaring, but still enjoys the pleasures associated with it and is gradually getting it all together. The learning process was progressed by reading the writings of many experts and sifting the information to suit his nature and objectives. A search of the Web for “Wine Cellaring” will display many of the excellent sites which have formed the basis of this document.

The choice of title was made knowing that wisdom reflects a growth of knowledge. James welcomes discussion and contributions on all aspects of wine cellar construction, cooling, management and enjoyment; you can contact him at james@vinote.com.

You are encouraged to reproduce the document in its entirety by placing it on your web site or forwarding it to friends and other wine enthusiasts.

Selecting quotes from the text is also permissible, providing due acknowledgement is made of the source.

“**Wine Cellaring** – Why, When, Where, What, How and Hints” is available in two forms.

The PDF version can be found at www.vinote.com/cellaringwww.pdf

The HTML version can be found at www.vinote.com/cellaringwww.php

A handwritten signature in grey ink that reads "Vinoté". The letter 'V' is large and stylized, with a long, sweeping tail that curves upwards and to the right. The rest of the name is written in a cursive, lowercase style.

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