



Bottle your own homemade brew with **Phil Wheal**

## MASTERCLASS

# Wine & Cider Making



### Welcome to the wonderful world of BIY...Brew It Yourself!!

As autumn nears and we hopefully have some apples on our trees, currants in the freezer, some maturing root crops and the hedgerows are burgeoning with blackberries, elderberries and rosehips then why not consider learning our oldest preserving technique and making your own wine or cider as a hobby? It's never been easier to get into homebrewing with several equipment and ingredient suppliers in Ireland and an online community with endless tips and recipes. We can make wines from garden produce but also gather many fruits, flowers, herbs and leaves from the wild. Most wines are cheap and simple to produce requiring few ingredients. They do need meticulous hygiene, some attention to detail plus a little patience to get worthwhile results. Cider is simpler still but needs some practice to create satisfying results. Spend as little as €50 in equipment to get started, although two to three times that will see you set up as a capable producer. It's normal to start out by buying one of the grape concentrate kits available or to follow simple recipes and gradually develop your own unique blends as you gain experience.



### ONLINE SUPPLIERS & BOOKS

- [www.homebrewwest.ie](http://www.homebrewwest.ie)
- [www.thehomebrewcompany.ie](http://www.thehomebrewcompany.ie)
- [www.homebrew.ie](http://www.homebrew.ie)
- [www.themottlybrew.ie](http://www.themottlybrew.ie)
- [www.mybeerandwine.ie](http://www.mybeerandwine.ie)

The best available book is still 'First Steps in Winemaking' by the aptly named C.J. Berry, written in 1961, it has loads of great recipes and a month by month plan of what you can harvest for winemaking. You'll never be stuck online for recipes or unusual techniques for developing your own tasty tipples though.



Yeast & Ingredients



Fermentation buckets, demi-john, syphon tube, sieve bag and corkscrew machine



Hydrometer

### What's In A Good Wine?

True wine is made from nothing but the juice of grapes as they contain the perfect blend of flavour, sugars, acids, tannins and only need the right yeast to be added. Homemade country wines will not have the perfect blend and need added ingredients. Blackcurrants, for example, will have a distinct flavour, have high acid and tannin but need around 1.2kg of sugar to create the perfect blend. A flower wine such as elderflower provides nothing but the familiar heady smell and flavour but has no sugars, acids or tannins so they are added to make a balanced wine. We also have to add chopped raisins or grape concentrate to make a flower type wine.

Here is a checklist of the key ingredients, available as inexpensive natural or purchased items which will complete the type of wine or cider you are making.

- ☑ **YEAST** - type is important in the quality of your finished wine or cider. You can use baker's yeast but it cannot tolerate alcohol levels of more than 10% and will die off once your brew reaches that point. Yeasts are available for cider and wine, even specific types from well-known vineyards. It's best to use red wine yeast for red skin fruit, champagne yeast for sparkling wine, etc. You will also need yeast nutrient to keep your yeast nourished while it does its work. Typically added at a teaspoon per gallon; it's available online and is very inexpensive.
- ☑ **SUGARS** become the alcohol content of your wine and how much or little are left when the yeast has done its work, determine how dry or sweet your finished wine will be. Sugars used should be either dextrose based brewing sugar or plain white granulated as they impart no flavour. Natural and browns will leave a rum taste behind.

- ☑ **ACIDS** affect wine quality and if they're lacking fermentation will be poor and the finished product insipid. Add them in the form of lemon juice or proprietary citric acid which is the acid in citrus fruit. Other common acids are Malic and Tartaric. All are cheap and available online.
- ☑ **TANNIN** gives wine a zest and presence on the tongue and improves its keeping qualities, especially in flower or grain wines. It's high in red-skin fruits but also in oak leaves and black tea. It's also available as powdered grape tannin from homebrew suppliers.
- ☑ **PECTIC ENZYME** - jam makers love pectin as it sets the jam. It's a nuisance in winemaking as it creates a visible cloudy haze which you can also feel on your tongue. Pectic enzyme such as 'Pectolase' or 'Rohapect-P' break pectin down during fermentation and also help to extract more flavour. These enzymes are effective, harmless and save homebrewers from often time consuming and expensive filtering.

These are the ingredients you put in with the fruit, vegetable or flower of your choice and will cost you as little as €1 per 6 bottles of your favourite tipple. The more experienced may want to stock other clearing agents and pH altering agents such as chalk when you get more adventurous.

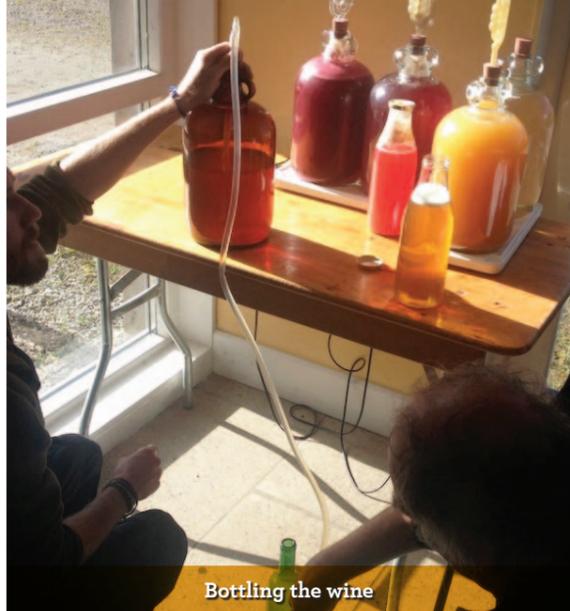
### Equipment Required

To get your own winemaking going you will need the following essential equipment, all of which is available from online companies. Some items are standard kitchenware:

- 1 Large stainless steel boiling pan (15 litre/3 gallon)
- 1 or more 10litre / 2 gallon clear or stabilised white plastic buckets for initial fermentation. I find commercial size food containers perfect. Don't use coloured plastic as it often reacts with yeast fermentation.



Redcurrant wine fermenting



Bottling the wine



Pressing apples into a pasteuriser

- Glass fermentation jars known as 'demi-johns'. Each hold 4.5 litres (1 gallon) or 6 bottles of wine. Accumulate as many as possible to increase your production as these containers are used for both the main fermentation and improvement and storage phases before you bottle (or drink!) your wine. If you want to start wine on a larger scale or make a lot of cider you can buy plastic 25 - 30 litre (5 gallon/40 pint) bins with built in fermentation locks for cider making or bulk wine making.
  - Fermentation locks with matching rubber bungs. It lets gases out and stops the spoilage organisms getting in. One for each demi-john you have. You will also need several solid rubber bungs for the improvement (racking) stage of your wine when it is no longer fermenting.
  - Large polythene funnel, measuring jug and a sieve bag.
  - Plastic syphon tube. To move liquid off the sediment and during bottling.
  - Wine corks & bottles plus a corking machine.
  - A Hydrometer. Essentially an inexpensive glass float with measurements along the side that used at its most basic tells you when your brew has finished fermentation. More advanced use allows you to figure out the alcohol percentage of your brew on completion or how much sugar to add to up the alcohol level. Usually comes with an instruction booklet.
- This basic kit is all you really need though the more you get involved you will probably want a pH meter, thermometer, bottle and demi-john cleaning brushes plus a thermostatically controlled heating belt or tray if you want to maintain your fermenting brew at its optimum temperature (mid 20s C). You may want to keep adding to your demi-john collection to boost your capacity for partying.

## Hygiene & Sterilisation

Nothing is more important than ensuring that all your equipment is meticulously clean which can be done with boiling water but on glass items you have no choice but to use a sterilising solution. In winemaking we use a solution made with 'Campden' tablets which produce sulphur dioxide. Very cheap and easily bought online, it's a fairly unpleasant agent but is essential to kill off bugs in the corners of bottles and fermentation jars. After use rinse thoroughly with cold water to remove any residues. If you don't maintain sterile conditions in your winemaking at best you can produce a lot of vinegar and at worst some very unpalatable smells and substances best not discussed in polite company!

## The Process

**STAGE 1** –First make sure all your containers and utensils are thoroughly sterilised.

**Fruit and flower recipes.** Crush or chop the fruit content, then place this pulp and your sugar into a container or bucket and pour on your boiling water. Cover with clean cloths.

**Vegetable or Grain wines.** Boil your main ingredient for a specified amount of time to release sufficient flavour into the correct amount of boiling water. Timing must be precise. If you don't boil long enough you don't extract enough flavour and if you overdo it you will find the liquid full of starches and proteins that produce a visual cloudy haze and a grittiness on the tongue that are very off-putting and hard to eradicate. Pour the liquid onto your sugar in your brewing bucket and cover with clean cloths.

For all wines any additional ingredients such as acids, tannins or pectic enzyme can be added when the liquid has cooled to below 30C then stirred in and covered again.

Once the liquid temperature is down below 27C you can sprinkle on the correct wine or cider yeast. One sachet is enough for up to 25litres. Don't conduct fermentation in any form of metal container or let metal utensils come into contact with your mixture once yeast is added as it will leave a taste. Stick to plain plastic, glass or ceramic vessels. Fermentation should be obvious within a few hours. Keep your brew covered in a warm place at 18 - 28C. Avoid places with big temperature fluctuations. Yeast doesn't like too much variation. If you can't provide these conditions then buy thermostatically controlled mats or belts to keep your mix at the right temperature. Stir once a day with a clean, odourless plastic or wooden spoon.

**STAGE 2** - After 3 - 5 days of vigorous fermentation it will be time to strain your brew into demi-johns or a larger fermentation bin, leaving behind all but the liquid contents and fit the airlock. Do this in a hygienic environment, keeping insects away and making sure that all equipment is sterilised. You'll need an assistant. One person pours while the other holds a straining bag inside a funnel placed atop of your demi-john. You must not force liquid through the sieve. Let it drain in its own time. Fill only to 3-4cm from the neck of the demi-john or lid of the large plastic bin and fix the fermentation lock with enough water in it. You should start to see bubbles moving through the lock within 30 minutes, as fermentation continues in the new environment. Place your containers back in their warm place or on heating mats where they can stay until fermentation is over. This will be when no gasses are moving in the air lock over a several minute period or if you invest in a hydrometer you will be instructed



## SOME OF THE BEST?

A personal list but weighing up ease of production, flavour and cost;

**Fruits** - Red or Blackcurrant, Blackberry, Peach, Apple, Gooseberry.

**Flower** - Elderflower, Meadowsweet, Gorse, Dandelion.

**Vegetable** - Parsnip a.k.a. 'Tanglefoot', Carrot and ...seriously...Pea Pod!

**WARNING** - be very careful in selecting which flowers you choose to make wine. Some types are highly toxic when concentrated in wine, e.g. borage, clover, daffodil and....despite the song...lilac!



on how to use it make sure fermentation is finished. This can be anything between 6 weeks for some fruit wines but up to 5 or 6 months for grain types. Some wines will already be clear and drinkable, others will be cloudy. You will also see a deposit of dead yeast and other wastes on the bottom of your jar (known as lees).

Now is the time to carefully syphon your young wine off the lees, into another clean vessel in order for it to clear and improve. This takes between 2 and 6 months depending on type. You store your wine in a demi-john fitted with a solid cork and keep it in a cooler space between about 10 -12C if possible. This phase is known as racking. In some cases, particularly with grain, veggie and flower wines you may find more deposit forming on the bottom of your container as the wine continues to clear. This means you will have to repeat the racking process for a second time until your wine is clear and shows no sign of producing more sediment. To the new brewer this can all feel like it needs intolerable self-restraint and until you start to stockpile supplies it tests your patience. If you have no patience then currants, gooseberry, some kits and cider are quick and very palatable almost immediately without racking at all. Though they all improve if kept for a few months.

Finally, you will be ready to bottle your wine. Ensuring all bottles and corks and tubes are thoroughly sterilised syphon wine into bottles and allow around 2cm of air space below the cork. Cork immediately. Make sure reds are kept in coloured glass unless you plan to keep them in the dark or they will lose colour. Enjoy!

**Phil Wheal** teaches and co-ordinates the FETAC/QQI level 5 horticulture course at the Organic Centre in Co. Leitrim, managing fruit, nursery and apple juice production. He also works privately in consultation, design and installation of orchards, organic, edible and forest gardens. Contact 0876530686 or philwheal1983@gmail.com He will be delivering the annual Wine & Cider Making Workshop at the Organic Centre on Saturday 8th October

## BLACK/REDCURRANT WINE

Currants 2kg | Sugar 1.7kg | Water 4.5litres | Red/Bordeaux Wine Yeast + yeast Nutrient 1tsp of each | Pectic Enzyme 1tsp

Put the currants into a large container and crush. Boil up the sugar in the water and pour while still boiling onto the currants then stir. When cooled to around blood temperature or 25° to 30°C add pectic enzyme and stir. Cover. After 24 hours add the yeast and nutrient and keep closely covered in warm place for 5 days. Then carefully strain into a fermentation jar and fit air lock. Let it stand for 2 to 3 months for fermentation to cease and for the wine to clear. Syphon off into clean, sterilised bottles. No need to rack.

## ELDERFLOWER WINE

Fresh elderflowers 500 ml/100g or 20g of dried flowers (can be bought online) | Sugar 1.5kg | Chopped Raisins 250g or 150ml of white grape juice concentrate | Lemons 3 or 2tsp of citric acid | Tannin 1 tsp or 1 tbsp of black tea | Water 4.5 litres

Pour the boiling water over the flowers, then add sugar, chopped raisins or concentrate and lemon juice/citric acid. When cooled to 24°C add a white wine or champagne yeast and yeast nutrient. Cover well and leave in a warm place for 4-5 days, stirring daily. Then strain slowly into a fermentation jar and air lock. Leave to ferment for 3-4 months. Syphon off into a clean fermentation jar and leave it somewhere cool (10° - 14°C) to further clear for another 2 months. Syphon off into clean, sterilised bottles.

## BLACKBERRY WINE

Blackberries 2kg | Sugar 1.5kg | Water 4.5 litre | Red Wine Yeast + 1tsp Yeast Nutrient | Pectic Enzyme 1 tsp

Pick fruit on a sunny day. It should be ripe and dry. Wash well. Place in a plastic container and mash thoroughly. Pour over the boiling water. Stir well and leave to cool to around 21°C and add pectic enzyme and one day later the yeast and nutrient. Cover closely and leave for 4- 5 days, stirring daily. Strain through a sieve onto the sugar and stir until all is dissolved. Pour into demi-john filled to the shoulder and fit the air lock. Keep the remaining liquid in a smaller bottle plugged with cotton wool. When the fermentation is slowing down ( around a week) so none will blow through the air lock top up with the spare liquid and ferment out. It should clear and you can then rack for 2 months before bottling.

## CYSER

A cider/mead combination. More costly but phenomenally delicious and potent! 4.5 L Apple Juice | 2 kg Honey (best you can afford) + 500g Sugar | ½ tsp each of citric acid/yeast nutrient/pectic enzyme | Champagne Yeast

Heat juice to 50°C. Add and dissolve all ingredients except yeast in a fermentation bin. Cover for 24 hours. Add yeast and move to a warm place (20°-27°C) for 48 hours for initial fermentation. Strain into demi-johns and fix fermentation lock. Rack off the lees into another demi-john after 4 weeks when it should be bubbling less than once per thirty seconds. It should finish fermenting and clear within another 2-3 months. Try to restrain yourself and bottle it for another 2-3 months before indulging. Good luck! Mull it with cinnamon...outrageous.

If you don't maintain sterile conditions in your winemaking at best you can produce a lot of vinegar and at worst some very unpalatable smells and substances best not discussed in polite company!