

Cider Making Made Easy.

Suggested Equipment Needed For Starting The Fermentation

- Wine/Fruit Press & Pulpmaster/Crusher
- 30 litre Bucket with lid, grommet and airlock (several are useful)
- 30 litre Bucket or 25 litre Fermenter with Cap, Grommet, and Airlock (not essential, but very useful)
- pH Meter (really good investment) plus storage & calibration solution or PH strips
- Siphon and 'U' Tube
- Thermometer
- Hydrometer
- Steriliser
- Mixing Spoon

All the items below come in our Complete Cider Ingredients pack (minimum quantity this will do is 200 litres).

- Apple Yeast (for Cider and Apple Wine)
- Apple Nutrient (for Cider and Apple Wine)
- Apple Tannin (for Cider and Apple Wine)
- Malic Acid
- Campden Tablets
- Precipitated Chalk
- Pectolase
- Potassium Sorbate
- Finings
- Acesulphame K Sweetener

How many apples do we need?

As a general rule you will need in the region of 9 kg (20 lbs) of apples to produce 4.5 litres (1 gallon) of juice.

Before you start it's a good idea to try and secure a good mix of different apples.

For the ripest apples (which will have the best flavour and the largest amount of juice) wait until they fall from the trees, then (if you are not ready to use them immediately) they should be spread out on either a plastic sheet or better still a sack cloth and then cover them either with again a sack cloth or perhaps a chunk of carpet. In this pile they will continue to ripen smelling great until you are ready to do your pressing. If you are going to leave it any length of time then I would suggest that you turn the apples regularly and remove any brown or rotten ones (or at least storing them separately). Make sure the apples / pears don't touch either if keeping anytime.

Balance of the Fruit

The balance of the fruit is important especially the acidity. The best way is to purchase a pH meter which we sell. Don't use the garden types, as they lack the accuracy required. I can't stress how important it is to get this right and what a good investment this will be. PH papers also do the same job.

If you don't have one then we would suggest pressing and then tasting the juice and then balancing. Ideally we would be looking for about 70% dessert apples (this gives the sweetness) and 30% cooking apples (this gives the acidity). However the chances are we will have to work with what we have got. See below "adjusting the taste".

Preparing the Fruit

Firstly discard any mouldy or badly bruised fruit. Secondly remove soil and surface slim by giving the apples a jolly good washing. Cut out any bad areas and remove any rotten or heavily browned ones. Thirdly quarter the apples, again removing any bad bits. Don't be too fussy and don't worry about the core and pips.

Crushing the Apples

Several options here, we can use a 10-12 cm square timber beam about 2 metres in length to batter the fruit in a bucket (very much like hard work). To make life slightly easier we can use a Pulpmaster (supplied by us) which is like a cutting blade you fit on the end of a drill. This is also not particularly easy, but it does the job and doesn't cost a fortune. Finally, the best approach is to use a proper crusher supplied by us.

When crushing, be careful not to over do it. The finished apples should have some substance to them, and liquid juice should not be present. If it is you have pulped them too much.

Pressing the Apples

We would recommend that you load up (about $\frac{3}{4}$ full) the crushed apples into a large coarse straining bag (we sell these) and then place this in the centre of the press. This will mean you only get the juice and you will leave all of the pulp behind.

Turn the press down onto the fruit until you feel real tension. As soon as you do, don't keep turning but leave this in position for a few minutes. You will see the juice will start to run. When the juice stops then tighten again and leave. The juice that comes out should have one crushed campden tablet per 4.5 litres collected, placed at the bottom of the container before or as the juice starts to run. This will prevent oxidisation (browning of the juice) and bacterial spoilage. Remember you must let the press do the work - it's a lot easier! If you're not worried about the juice browning (or are you drinking it), and want it to be natural, leave the campden tablets/powder out.

Adjusting the taste

Acidity

As mentioned earlier the best way is to use a pH meter or strips. You are looking for a pH reading in the region of 3.6 to 4.2 pH.

Increasing the Acidity

If the reading is above 4.2 pH then you need to add one level teaspoon per 5 litres (1 gallon) of Malic Acid (this is the natural acid that is in apples). Add to the juice mixing well, leave for at least 15 minutes for this to work into the juice and then retest the pH. Repeat until the desired level is reached.

Decreasing the Acidity

If the reading is below 3.6 pH then you need to add one level teaspoon per 5 litres (1 gallon) of Precipitated Chalk. Add to the juice mixing well, leave for at least 15 minutes for this to work into the juice and then retest the pH.

Repeat until the desired level is reached.

If you don't have a pH test then you will need to do this by tasting the juice after pressing and adjusting as above. Remember it is very easy to add too much Malic Acid because of the apparent sweetness of the juice that will play on your taste buds. It's really hard to get this right so always add less than you think. You only just want to be able to taste the acid (lemon taste). You can always add more after fermentation has finished. If it tastes right and you would drink it, chances are it will make a good cider.

Increasing the Tannin Level

Tannin is the taste we associate when we drink a strong tea. We want it present but we don't want it to be an overpowering presence. Add approximately half a level teaspoon per 5 litres (1 gallon) to increase this taste.

Pectolase Powder

If Pectolase is added at the start it will improve the taste in the cider as they help to bring out flavours and without this addition you won't have clear cider. Add one teaspoon per 5 litres (1 gallon). If you have a haze in the cider at the end you might need to repeat the adding of Pectolase.

Alcohol Levels

The first thing we need to do before the start of fermentation is to take a hydrometer reading of the juice. To do this, place the hydrometer in the juice and we will see a reading where the hydrometer is level with the liquid. We can then use this reading to work out how much alcohol will be present after fermentation. See the table below for reference.

SG Reading	Final Reading (end of fermentation)	Approx ABV (Alcohol By Volume)
1060	1000 or less	8%
1055	1000 or less	7.5%
1050	1000 or less	6.5%
1045	1000 or less	6%
1040	1000 or less	5.5%
1035	1000 or less	4.5%

To increase the start gravity add caster sugar (or white granulated sugar) and dissolve well. For cider we are looking ideally for start gravity in the region of 1040 to 1045. Any more alcohol than this will spoil the balance. Do not get carried away trying to make it too strong. To reduce the SG add water.

Fermentation

Start the fermentation as soon as possible but no longer than 24 hours after pressing the juice. Use food grade plastic buckets, fermenters or glass jars. They must be clean and sterile.

Adjust balance of acidity, tannin and sweetness as discussed earlier.

Add the apple yeast and 2 grams per 5 litres (1 gallon) of Cider Nutrient to the fermenter and be sure to use a good quality cider/apple yeast like we sell. Don't get carried away by the idea of natural yeast & bread yeast. This does not produce good cider.

Leave to ferment at a temperature between 20-27°C for about 5 to 14 days or until your hydrometer is showing the fermentation has finished. A constant cool temperature is much better than one that fluctuates. The fermentation time will depend on the room temperature and the initial starting gravity. 5 to 14 days is just a guide. The slower the fermentation

the better the cider will taste. It is really important not to exceed 27°C.

When the fermentation has finished (the gravity reading on the hydrometer will be the same for a few days and will be under 1000 SG) siphon off the yeast into another clean sterilised container.

For Flat Cider: Adding Stabiliser/Preservative and Clearing

When the fermentation has finished we recommend that you add one Campden Tablet per 5 litres (1 gallon) and one gram per 5 litres (1 gallon) of Potassium Sorbate. This will help prevent infection and from restarting to ferment.

The cider should then be degassed (stirred vigorously to remove the carbon dioxide given off during fermentation). We would then suggest adding the finings to clear the cider. Once clear, siphon off the sediment, and leave in glass containers. Make sure the containers are full and have no air space at the top which can cause infection. Taste it and if it's young and a bit sharp then leave it to mature. Ideally you should fit a safety stopper to the container to allow for any breathing. After one month we suggest you have a taste. If the cider is maturing well then leave (if it's thrown sediment, which is likely you might want to siphon off the sediment into a clean sterilised container and top up with cold water). At this stage it might be a good idea to sweeten the cider which is most likely, you should use our Acesulphame K sweetener (as these are non fermentable sweeteners). Alternatively you can use granulated sugar or purchase Sucralose from a supermarket (which is an artificial non fermentable sweetener but it must be Sucralose).

Some people like to keep the cider as natural as possible so don't like to add Stabiliser, Campdens and finings but from our experiences this will help protect the cider from oxidising and prevent any refermenting. It will also allow you to add sugar to sweeten. If you don't want to add the Stabiliser, Campden, and finings then should you wish to sweeten the cider which is most likely, then we would suggest you should use our Acesulphame K sweetener (as these are non fermentable sweeteners). Alternatively you can purchase Sucralose from a supermarket (which is an artificial non fermentable sweet-ener but it must be Sucralose).

For Sparkling Cider: After Fermentation

We would recommend that you siphon the cider into a clean, sterilised container. You can now add any necessary adjust-ments like extra acid or sweetener. Use malic acid to increase the acidity (will give the cider a sharper taste), and use Ace-sulphame K sweetener, as this is non fermentable. Alternatively you can purchase sucralose from supermarkets but only buy this brand. Don't add more sugar as this will ferment.

Once you are happy with the taste you may Bottle/Barrel your cider. For fully carbonated Cider (like a Magners or Strongbow) you will only achieve this by bottling. If you are looking for a slightly sparkling Cider (which would be like a Real Ale and my preferred option) then we would suggest barreling the Cider.

Bottling

If this is a short term (say you are keeping this 4-6 weeks) then clear PET plastic bottles (the type lemonade, coke etc comes in) are fine. If it's more than this then use green or brown PET bottles, glass beer bottles or grolsch style bottles. This is essential as the green/brown colour prevents the transmission of UV light which will ruin your cider over time (brown is more effective in this regard).

Transfer the cider into the bottles and add one rounded teaspoon of sugar per litre for a slight sparkle and two rounded teaspoons per litre for a more heavily carbonated drink. Seal the bottles and transfer to a warm place for 3 to 5 days (this will give you a secondary fermentation which is essential to condition the Cider and provide the necessary carbonation

in your bottles) and then move to a cool place for storage and to let the clearing take place. If the cider has been stabilised or preserved then this will prevent the option of a secondary fermentation.

Barreling

Transfer the cider into the Barrel and add 125 g (5oz) of sugar dissolved in a little hot water and give the barrel a shake. Seal the barrel and transfer to a warm place for 3 to 5 days (this will give you a secondary fermentation which is essential to condition the Cider and provide the necessary carbonation in your bottles) and then move to a cool place for storage. If the cider has been stabilised or preserved then this will prevent the option of a secondary fermentation.

Sweetening the Cider and Pouring

Nearly all commercial ciders are fermented using additional sugar which gives it a sweet taste when drunk. The chances are you cider will be very dry (and can seem undrinkable) unless you add sweeteners we recommend. This is quite natural. When you open the bottles you will need to pour the cider carefully so as not to disturb the sediment which will be thrown. Enjoy your cider!

Perry

The Pears should be dealt with in very much the same way as the apples. They do ripen earlier and once they have they have no keeping qualities.

They are not great for blending different types of fermentation together so it's important to get the balance (acidity, tannin and sweetness) right at the start of the fermentation.

Apple Juice for Drinking

For a good balance a 70% sweet apple and 30% cooking apple works well. Once you have pressed the juice this will keep for 4-5 days in a fridge. For longer keeping then either add preservative, Vitamin C (Ascorbic Acid) which will allow keeping times of up to 3 weeks (this is such a shame), or better still store in plastic cartons (old milk containers are ideal) and freeze immediately after pressing. This juice just tastes so good.

Vintage Cider

You will need some special apples for this purpose. Only certain types of apples will produce "Vintage Cider" like Ashton Brown Jersey, Brown Fair Maiden of Devon, Broxwood Fox Whelp, Dabinett, Harry Masters Jersey, Kingston Black, Major, Medaille Dor, Sercombes Natural, Somerset red Streak, Stoke Red, Sweet Alford, Sweet Coppin, Yarlington Mill to name but a few. The process will be just the same as described above.

Apple Wine

Apple wine can be made in much the same way as cider. The main differences are

Acidity Level: We would recommend the acidity need to be 3.3 to 3.5 pH. We would also suggest for wine that you should use Tartaric Acid as this will give the best results. Don't add Precipitated Chalk.

Fermentation: Add 4 grams of our Apple Nutrient to 5 litres (1 gallon). The fermentation will take more nearer 14 days but will depend on temperature.

Alcohol levels need to be much higher. We would recommend that you have a start gravity of 1080 which will produce a wine of about 11.5% ABV. So add as much sugar as is necessary to reach this.

We don't believe that the apple wine should be sparkling so don't pursue this option.