

# HOW TO MAKE HARD CIDER

## INSTRUCTIONS

### Make a Starter

The day before you brew your cider, make a starter. To make a starter, open a half-gallon bottle of room-temperature apple juice and pour out a few ounces. Pour the contents of one yeast packet into the bottle, reseal it and shake for a few seconds. Within five or six hours, you should see a bit of bubbling within the bottle. Once you do, release the pressure within the bottle, reseal it and put it in the refrigerator overnight. Get it out a couple of hours before you start the next morning.

### Fermentation Stage (15 days)

1. Sanitize all equipment, using Professional Brewer's Wash
2. Pour the starter with yeast into the sanitized fermentation bucket and add the remaining cider (~ 5 gallons). Stir the mixture with spoon to aerate
3. For a 6 gallon batch, add 3 tsp yeast nutrients ( $\frac{1}{2}$  tsp per gallon) and  $1\frac{1}{2}$  tsp pectic enzyme ( $\frac{1}{4}$  tsp per gallon).
4. Seal the lid and affix the airlock & fill airlock w/ water
5. Place the bucket in a room or closet where the temperature is 65 to 75 degrees

Let it Ferment. Within a day or two you should see the airlock start to bubble. This bubbling should subside (interval between bubbles exceeds 2 minutes) within two weeks, signifying an end to the primary fermentation. It is now time to transfer (known as rack or racking) the cider to a secondary fermentation vessel, typically a 5 gallon glass carboy where it will sit for 3-4 weeks to clarify & age. If possible, it's best to "cold crash" the cider overnight, to cause the yeast to fall out of suspension and gather at the bottom of the fermentation bucket. Cold crashing is when you refrigerate the fermentation bucket. If this can't fit in your refrigerator, you can also just put the bucket outside overnight, assuming it will be cool (between 32-60 degrees) during the night.

### Clarification Stage (3-4 weeks)

1. Sanitize all equipment, using Professional Brewer's Wash
2. Use an auto-siphon to siphon the cider from the fermentation bucket, into the 5 gallon glass carboy. Be careful to limit the amount of yeast/ lees you transfer by keeping the auto-siphon just slightly above the accumulation of yeast at the bottom of the bucket.
3. Seal with a sanitized stopper & airlock, place it back in a dark and cool location
4. Let it age & clarify for 3-4 weeks

At the end of the clarification stage, it is time to either bottle or keg your batch.

# HOW TO MAKE HARD CIDER

## **Bottling** (~ 4-6 weeks)

If you want to bottle, there are some decisions to be made. Cider can be enjoyed still (un-carbonated) or carbonated. If you want your cider to be un-carbonated, bottling is easy. Most likely, the fermentation process has caused the yeast to consume all available sugars in the cider, so yeast will go dormant and eventually die off. As long as no sugars are present, you can bottle immediately, but should be aware that your cider will be dry to the taste and unsweetened (like a dry white wine). If you wish to carbonate the cider in the bottle (called bottle conditioning), you'll need to add some sugar to the cider at bottling time, which the yeast will then consume over the next 4-6 weeks. The by-product of yeasts' consumption of sugar is Co<sub>2</sub>, which is then trapped in the closed bottle. This causes the carbonation of the cider. Step 3 below speaks to how much sugar to add to do this (**do not over add sugar as this can cause bottles to explode unexpectedly**).

While this provides the carbonation desired, it will still likely leave your cider dry to the taste, as all or most of this added sugar will be consumed by the active yeasts remaining in the bottle (note, this process will slightly increase the alcohol content as well). The only way to reliably sweeten bottles without risking exploding bottles is to use artificial sweeteners, such as: stevia, truvia, etc. While this works, this may create undesired tastes. If you are going to do this method, I would suggest you do some googling to determine what you feel is the best approach, based on what you are trying to achieve.

Here's the process for bottling:

1. Sanitize all equipment and bottles, using Professional Brewer's Wash
2. Siphon your cider over from your carboy to the bottling bucket.
3. Pour  $\frac{3}{4}$  of a can thawed apple juice concentrate into bucket or .8 cups corn sugar (per 5 gallon batch) for carbonation purposes
4. Stir slowly with a sanitized spoon to mix thoroughly
5. Sweeten to taste using Stevia. Dissolve 1 cup into 1 cup water, then add to taste.
6. Bottle and cap it and let it sit for 4+ weeks at room temperature to allow for carbonation.

## **Kegging** (~1 week)

The alternative to bottling is to use kegs where you will force carbonate the cider, using a Co<sub>2</sub> tank and you can then either serve directly from the keg or you can bottle from the keg. Using this method, assuming you always keep the cider refrigerated (under 40 degrees), any sugar added (either corn sugar or regular fresh apple juice) will not be consumed by the yeast, as they will remain in a dormant state when

# HOW TO MAKE HARD CIDER

refrigerated. This is my preferred method, as you get away from artificial sweeteners and can control the carbonation level of your cider much better.

To keg, do the following...and you should also review the link at the bottom of this section to get a thorough understanding:

1. Sanitize all equipment (incl keg), using Professional Brewer's Wash
2. Siphon cider into bottling bucket
3. Back-sweeten with either fresh apple juice, frozen apple juice concentrate or corn sugar to increase the level of sweetness to your desired level. A hydrometer can be used to target a specific level of sweetness. I prefer somewhere between 1.008 to 1.012, depending on the type of cider I am making.
4. Once desired gravity is achieved, siphon the cider into the sanitized corny keg (ball lock style)
5. Seat the lid properly before the bail is closed. To do this, turn the Co2 on, and set it to 10-12 PSI. Put the Gas-In Quick Disconnect onto the Gas-In Body Connect of the keg while simultaneously pulling up on the bail of the keg lid. The lid might move a second or so before finding the seal, but it should sit correctly relatively fast.
6. Once the lid is sealed and held up by the gas, set the bail of the lid.
7. To purge oxygen out of the air space in the keg, pull up on the pressure relief valve while the gas is hooked up. Perform this purging ~ 3 times
8. Chill the keg with the Co2 connected for ~ 4-5 days between 35-38 degrees with your Co2 regulator set for 12-14 PSI.
9. Taste test for carbonation after 5 days.
10. At this point, if you wish, you can bottle directly from the keg using a standard picnic tap, as long as you keep the bottles refrigerated until used.

Kegging reference document:

<http://www.morebeer.com/themes/morewinepro/kegging.pdf>